

TOWARDS A THEORETICAL FRAMEWORK FOR

British and International Economic History

EARLY MODERN ENGLAND, A CASE STUDY



SUDHA RAGHUNATH SHENOY

Towards a Theoretical
Framework
for British and International
Economic History:
Early Modern England.
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Sudha Shenoy (1943–2008)

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Early Modern England.
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Sudha R. Shenoy

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PART I: THE ANALYSIS

CHAPTER 1

The Development of the Analytical Issues: Summary and Overview

I

OF THE CLASS OF SOCIAL — inter-individual — formations that are the unintended results of human action and of historical development, language is perhaps the most widely-known and accepted. The common law comes next — case-law as it has evolved over time, quite separate and distinct from legislation; together with social custom. But other social formations are also found in this class — formations that are recognised as such only by the older Austrians and their analytical predecessors. These formations include moral rules; the division of labour, prices, money, wage-rates, other ‘economic’ phenomena; the overall market order or ‘catallaxy’; that ‘capital structure’ of investment chains which yields a given range, quantity, quality, etc. of final outputs; and so on.

Of this class of social — inter-individual — phenomena, only language is studied analytically, through linguistics. And only the *older* Austrians — Menger, Mises, Hayek, and their analytical precursors — especially Coke, Hale, Mandeville, Hume, Smith, Burke, Sir William Jones, Wilhelm von Humboldt, Ferguson and Dugald Stewart, saw that other formations, such as law, catallaxy (the ‘economic’ order), the capital structure, customs, moral rules, prices,

money, etc., also belong in this class and are therefore analysed in exactly the same general way.

Now all these formations are actually observed only as concrete historical developments, of course — we see and study only specific languages; the English common law and similar systems of case-law, such as Roman law; those intricate and highly complex investment chains that progress throughout and link together all the developed areas and most parts of the rest of the globe; particular sets of customs and moral rules; etc. But additionally, on their abstract, analytical side, these historical phenomena are also unintended orders. They are all therefore members of a key, indeed an absolutely crucial, class of social phenomena. The realisation that such a class exists requires a thorough knowledge of its particular historical units. Only *after* such a general realisation is achieved can the next step be taken — to inquire into the common general characteristics of its members, and how they are to be studied *analytically* — as distinct from historically. The object here is, of course, to help identify the members of this class, *as* members, and *thus* to identify general features, as also, for ‘economic’ phenomena in particular, interrelationships and interconnections all otherwise invisible in the historical detail. Thus historical happenings and developments that cannot be seen, immediately and obviously, to form a coherent structure, are linked together through the analytical lenses that analytical study provides. Where such a structure is already seen, as with language and law, there analysis brings out additional key features, again otherwise completely invisible. If such study is *not* undertaken, then crucial and critical aspects of the historical reality are not even realised to exist, let alone actually apprehended.

Thus the analytical investigation of this class is really an — indispensable and crucial — adjunct or auxiliary to *historical* research. But such analysis is *non-historical* (in Mises’ words); it is the common analytical characteristics of the social phenomena that are studied; — these formations are *not* investigated as unique historical developments. Since the analysis is of the general, abstract aspects of the historical phenomena, the theory is usable only as an analytical tool for historians; — it is *not* (repeat, *not*) a self-contained, self-sufficient intellectual system, complete in itself. *Thus no academic department (currently) can really be home to this general analysis of the class of unintended orders.*

This analysis developed gradually between the late sixteenth and late twentieth centuries. The common law was the first to be recognised as an historical development which was also of a particular *analytical* type. Language was next seen as the same type of formation, together with customs, habits, technical skills and practices, and the division of labour. Money came next, then other economic phenomena, and lastly the two major ‘economic’ formations

of the ‘catallaxy’, (the ‘economic’ order) and the ‘capital structure’ (the various investment chains leading to final consumption in any particular historical context). The analysis of the class as a whole began explicitly only in the late nineteenth century and continued in the twentieth.

Part I (chapters 1-6) of what follows gives an extended account of how: *a.* each of these formations came to be recognised as an undesigned, historically-developed social order *b.* it came to be seen that they all belonged in a single class *c.* they are to be traced in people’s actions and *therefore* in the historical reality. ‘Economic’ phenomena particularly are analysed as social — inter-individual — developments on the same general lines as other unintended orders *d* this analysis provides analytical tools for historians. **Part II** (chapters 7-10) outlines the development of the capital structure in early modern England, beginning with the range of final goods and services turned out, and tracing through the main investment chains.

II

Chronologically speaking, the analytical and historical issues discussed here were first recognised in the late sixteenth century. It became necessary then to characterise, in general and analytical terms, the general nature and development of the English common law, *after* it had been developing for some 500 years. But the common law is not the most widely known instance of these analytical issues; that position belongs to language. We shall begin therefore with language as the most widely accepted concrete example of the theoretical and historical questions involved.

Language: In the real world there are only specific languages, such as (at the end of the twentieth century) English, Chinese, Arabic, Hindi, Swahili, Spanish, German, Russian, French, etc. All these are historical phenomena — the particular historical outcomes of particular historical circumstances and developments over a specific time-period and a specific geographical area. But to see them as *only* specific historical developments is to *mis*apprehend these languages completely: they also have a general analytical structure. This general and analytical insight is not obtained, however, through the study of a specific language or languages: they do not come with little labels tied round their necks saying, “You need linguistics as well as history to understand me completely”. Linguistics is a technical and specialised discipline, quite distinct from the historian’s apprehension of specific languages as specific historical developments.

Obviously, historians cannot become experts in linguistics, but to comprehend these historical phenomena it is necessary to recognise that languages *do*

have an analytical skeleton requiring highly specialised study; the historical flesh is built around the analytical bones. Failure to see this is to miss totally *the* key feature of these historical developments, the internal *analytical* framework on which are built the outer, immediately visible, concrete historical circumstances. These circumstances, it must be stressed, are the actions of actual human beings:- to study language is to study a phenomena which has already developed, over millennia, in and through the real actions of millions of actual people. Languages are manifested in peoples' daily usage; thus the professional student of linguistics is articulating and investigating an exceedingly complex phenomenon actually found in people's actions, extending and changing over thousands of years.

It was only after innumerable specific languages had developed over several millennia that some observers began to realise that there was something else here, something requiring general and abstract *analysis* in addition to, and as distinct from, historical study. At first, language was assumed to be a deliberate invention. Only later was it gradually realised that what had been already recognised for common law, was also true of language; it too had grown historically through the actions of many generations. Like law, language too was orderly, but it had *not* been designed. So its order was *not* immediately apparent; it required deep study to bring this out.

Thus the study of linguistics is the (eventual) study of the formal analytical structure of real languages: their grammar, syntax, morphology, phonetics, phonology, semantics, etymology, etc; — all these being manifested in people's actual usage of actual languages. It must be emphasised here that this general linguistic study is quite separate and distinct from the biological basis of the general capacity for language. Such an abstract capacity, for language in general, may be indeed genetic (*pace* Chomsky). Thus a general linguistic capacity may well underlie each and every one of the thousands of real languages actually found in the late twentieth century and in earlier periods. But linguistics is the study of the analytical framework of actual languages — their general linguistic structure, in terms of their phonology, syntax, semantics, etc. Investigation of any purely biological capacity for language is quite distinct — another field altogether.

It is only from a knowledge of real languages that linguistics can develop and can continue to develop:- no real, historical languages, no linguistics. And the order which is thus manifested in people's actions is *not* that of a previously-drawn-up blueprint — there are no genes for English, Hindi, French, Russian, Chinese, etc. The orderliness of a language is that of an historically-grown phenomenon, an order which is learnt by doing and changed the same way, an order which is manifested in the particular real actions actually undertaken.

As mentioned above, language was thought at first to be invented or designed. This view continued to be held widely through the eighteenth century, most notably by Rousseau. But even in the later seventeenth century, some, like Mandeville, were beginning to see that language, like other social formations, had evolved historically. Among the common lawyers, Sir Matthew Hale recognised language as another instance in which rules and orderliness were manifested in usage — ie in people's actions in using language. Then, about a century later, Sir William Jones, Chief Justice with the East India Company in Calcutta, laid the foundations for the systematic study of linguistics, from a comparative study of the classical Indo-European languages — Sanskrit, Old Persian, Greek, Latin. He showed that all of these gradually evolved over time, through changes in usage, from the root Indo-European language, long since extinct. Wilhelm von Humboldt, also legally trained, built significantly further on these foundations in the early nineteenth century ¹.

The Common Law

Chronologically speaking, as stated earlier, the common law was the first to be recognised and analysed as a formation which had evolved through people's actions over time, and which therefore contained more wisdom than any one generation or individual. The sequence of such recognition and analysis which the study of language later followed, was as outlined above: the law developed first, for nearly 500 years or so, in and through people's actions and activities — ie the various agreements, informal and formal, concluded in the ordinary course of affairs, and the varied solutions that lawyers devised for their clients' practical problems as they arose. Legal training consisted in attending the courts to observe and listen to the course of those disputes that actually reached this stage. Students stood in a special "crib" — a wooden cage, following the arguments and noting the procedures. Some of these cases were recorded. These provided examples of the various actions and activities, changing through time, that caused conflicts serious enough to reach the courts, and the general principles and facts that judges relied on in their decisions.

Lawyers could then study these decisions as well ². Thus as a system of case-law, the common law developed (and develops) through practice; legal and judicial expertise is of a practical kind — finding legal solutions for practical problems, and discovering the general principles involved in settling practical disputes.

Only after some five centuries or so of such historical development did it become necessary (in the later sixteenth and early seventeenth century) to

analyse and articulate the *type* of orderliness that the common law did in fact manifest. The context was two-fold: firstly, as economic activity expanded and diversified, with interregional exchange rapidly becoming more significant, the legal profession also expanded dramatically. Thus it was necessary to characterise the law for students' benefit. Secondly, as the volume of (mostly unenforced) legislation grew, philosophers and also the sovereign naturally identified 'law' with the directives and orders that a duly-constituted superior authority gave to subordinates and subjects. In opposition to this, the common lawyers saw that the common law was an *unintended* order which had developed over many generations. Therefore, its orderliness was anything but obvious — rather it was well concealed. Immense study and deep thought were needed even to realise that this orderliness existed. Only after long immersion in particular cases was it possible even tentatively to set out the general principles on which the common law was formed, to see that behind the various particulars there lay an intricate system of interdependent rules, that themselves changed through time as circumstances changed.

Sir Edward Coke (at the end of the sixteenth century) and Sir Matthew Hale (in the late seventeenth century) saw that the rules of the common law were not and could not have been designed by a single mind. Rather, many minds contributed to their development over time, distilling and incorporating the practical lessons learnt over many generations. Hobbes argued to the contrary. He held that law was and could only be the orders given by a duly constituted authority to government subjects. There was no 'law', only legislation and commands enforced on the populace. Hale argued vigorously that law had developed through the interactions of many minds through time, so deep reading and thinking were needed before its principles became clear.

Edmund Burke, David Hume and Dugald Stewart developed this analysis further. Hume, in particular, emphasised that the rules of the common law were systematically interconnected, so that any single rule by itself was intelligible only as part of an entire system. Hume further developed the key insight — that the outcome of any one case could be totally different from the overall outcome of following all the rules in the system as a whole ³.

The account given above of the general aspects of language is standard and is also generally familiar. The account of the common law summarises drastically the historical process through which common law rules evolve. — Now, the distinction between common law and statute is generally familiar; and most of us are at least vaguely aware that the common law in some sense grew over time. But beyond this, the further differences between legal positivists and other legal theorists are less familiar outside the legal discipline. Most legal positivists hold that *all* legal rules are in the nature of orders issued by

Authority to its subjects. Some positivists hold that the State, within its overall framework of directives, has refrained deliberately from issuing orders in certain areas. In these areas, the State has permitted its subjects to develop legal rules. Other legal thinkers, including legal historians, see a sharp distinction, if not an opposition, between the ‘vertical’ relationships of legislation, which legalises the orders given by officials to government subjects, and the evolved rules of the common law, which can be traced only to ‘horizontal’ relationships between private parties.

So far only language and law have come to be generally accepted as being both historically-developed and orderly phenomena. It is normally agreed that languages require both systematic analysis *and* historical study, while law too is seen to somehow mingle both history and orderliness. We now turn to other social phenomena that share the same general characteristics as law and language but are *not* ordinarily noticed to be such at all. Chronologically -: custom, habit, practical skills and the division of labour were next, after the law, to be recognised as historical developments that embodied the practical knowledge of innumerable people.

Skills and the Division of Labour

Mandeville saw that practical skills, customs and habits developed cumulatively over generations. The combined practical knowledge they contained was acquired, augmented, modified and transmitted on through practice — learning by doing. No practitioner of course could have any idea of the scientific, mathematical, geometrical or other principles involved. Thus all these practices are far more complex and sophisticated than their practitioners. He cites the examples of steering a boat or ship, soap-boiling, dyeing and ship-building. This last brings together a variety of specific skills, that have been improved and refined over generations, through practice. Production of a piece of scarlet shows how the division of labour in effect unites the skills and knowledge of a number of occupations, both obvious and not-so-obvious: not only woolcomber, spinner, weaver, clothworker, scourer, dyer, setter, packer, but also millwright, pewterer and “chymist”, and the producers of the various “Tools, Implements and Utensils” used in these various operations. Important inputs came from far distant areas: wool from Spain, mordants and dyestuffs from the Rhineland, Hungary, Russia and the East and West Indies — thus adding the skill of the seafarer to the process. Mandeville includes law and language amongst the practices that develop and improve through continued use over time ⁴.

Finally both Mandeville and Adam Ferguson recognised the key analytical issue: that people manifested complex *rules* in their everyday actions, with no conscious recognition that this is what they were doing. Mandeville referred to custom and habit, and Ferguson, to language.

Social and Economic Formations

In the late eighteenth century, certain other economic phenomena came to be recognised as the orderly and cumulative outcome of the interconnected actions of innumerable people. Hume analysed the balance of payments and its adjustment in these terms, while Smith, like Mandeville, noted that the ordinary day-labourer could never meet all the people whose actions contributed to the production of the ordinary consumer goods he purchased. A century later, in the 1870s, Menger made two key analytical breakthroughs, which Mises and Hayek extended and systematised in the twentieth century. We begin with the first of these fundamental insights, and then see how Mises and Hayek built further on it.

Menger points out that when people start considering how to explain social phenomena, they treat these phenomena as deliberately organised through conscious agreement — as ‘pragmatic’, in his terminology. But (he says) there are large numbers of social formations, useful in the highest degree, that are *not* designed at all. Menger now explicitly articulated this general category for the first time — the unintended results of historical development⁵. We may note that *only* from a knowledge of these phenomena — their historical nature — is such a general categorisation possible.

Menger emphasises that both law and language are historical developments; neither is ‘pragmatic’ — ie designed or legislated into existence. Among German analysts of language he underlines Wilhelm von Humboldt’s fundamental role; Humboldt recognised a structured regularity in language “analogous to that of organic nature”. Menger also brings out very clearly and explicitly, the opposition between Burke’s analysis, on the one hand, and the views of the Younger German Historical School on the other. Burke (says Menger) belongs with the historical school of law — he realised that law is an unintended and undesigned historical growth. But the Younger Historical School takes the opposite position (Menger goes on)⁶ — Menger does not specify here what this is, so to see why he puts Burke and the Historical School at opposite poles, we may briefly set out the latter’s position.

According to this School, all law is deliberately created through legislation. Each historical era is an overarching macro — entity which shapes the actions of its human beings. Thus this historical entity shapes all political, social and

economic developments occurring in its period, so society and economy are likewise things-in-themselves, collective beings established through the design of Authority or through explicit agreement amongst all the people concerned. — Clearly this approach, as Menger indicates, offers no explanation for the emergence and development of social phenomena. But such an explanation is precisely what Burke aimed at: a “full understanding of existing social institutions”⁷.

With Burke and the common lawyers, Menger too sees law as an undesigned historical growth, developing gradually from unstated custom to wider, interrelated, and more complex legal rules. Again with the common lawyers, Menger recognises that legislation — “statutes of power” — often “spoiled the law”. And, diametrically against the Historical School, Menger sees that social formations are built up in and through individuals’ actions. These actions — the elements of social phenomena — are known directly, the phenomena themselves have to be reconstructed mentally. Thus historical developments are the complex and conjoint outcome of many different influences, so many different disciplines have to be called on to unravel these disparate influences⁸. As he succinctly puts it:

“*history...has the task of making us understand all sides of certain phenomena...theories have the task of making us understand only certain sides of all phenomena...*”⁹.

Thus Menger for the first time:

1. identifies the *analytical* problem — the study of social phenomena that are the unintended historical results of individual action pursuing individual aims;

2. indicates how this analysis is to be tackled: by building up from the directly known elements — the actions of individuals;

3. points out the relationship between the analysis and the complex phenomenon it studies: social theory can cover only certain aspects of historical developments. Other theories have to be called in, as needed, to study other aspects. It is the *historian’s* task to see historical developments in the round; social theory is an auxiliary analytical tool in this endeavour¹⁰.

In addition to law and language, Menger now places in this same category: moral rules *and* economic phenomena generally:- prices, money, markets, wages, interest, rent, the division of labour, occupational specialisation, the location of new settlements, trade customs, etc. All these “have come into existence in exactly the same way” — as the unintended outcome of individual actions pursuing individual ends¹¹.

To expand a little on Menger's statement: All these phenomena are *not* produced by design or intent; nevertheless, they appeared in and through people's actions; and these formations develop thus over a period of time — long or short, according to the particular phenomenon being considered. Like languages, all these formations are historical in nature: they are particular circumstances of time and place, taken from a specific historical context — particular trade customs, particular prices of specific quantities of certain goods, etc. And again like languages, these economic formations also have analytical structures, requiring analytical tools to recognise and investigate them.

Money as an Unintended Historical Development

As one concrete instance, Menger analyses the evolution of money. First, we may note that for historians and economists, the emergence of money is not particularly problematic: people are fully aware of all the advantages of money, thus they bring it into existence. As economists see it, barter has so many obvious *disadvantages* that people generally agree to accept and use money. For practically all historians, the convenience and simplicity of coinage are so immediately and glaringly obvious to government officials that they invent coins. Officials then use coins in making government purchases and payments and decree that taxes too shall be paid in coin. Thus people — government subjects — come to use money.

Now Menger too begins with the problems of barter. But he does not see these difficulties as being solved through either a sort of social contract or an invention. Rather the question he asks (and answers) is: How do people, in the same acts through which they pursue their individual aims, *also* develop this highly useful institution? — since it cannot be part of their individual aims, but develops nonetheless. Money, in other words, emerges as a new *practice* which gradually spreads from its first practitioners to others who copy the innovation. Initially, some individuals notice that certain goods are more readily exchanged than other goods. These individuals then split (some of) their bartering into two separate transactions: first, they barter for the more widely accepted goods. Then they exchange these commodities for the goods and services they really want. Other people then notice that this practice produces more satisfactory results more quickly. They too adopt this new practice. Thus some commodities come to be valued for their monetary usefulness in addition to their non-monetary uses. In due course, as the practice of indirect exchange spreads, these goods come to be valued more for their usefulness in facilitating indirect exchange; their non-monetary uses come to be treated as secondary or minor. Thus money emerges as the unintended result of the pursuit of other ends altogether: 'money' is a change in the content of people's actions: the

gradual development of a new means which facilitates the pursuit of ends and widens the ends achievable. Of course, no-one could or did leave diaries or other documents outlining this process. Menger provides rather an analytical schema, the logic of the changes involved. *Which* particular goods fall into this general category depends on the specific circumstances of the historical situation being examined; Menger cites a huge variety of concrete instances, from a very large number of historical contexts. And to round off: all transactions do not become monetised at once, of course; only some do so. How far monetisation proceeds is also a matter of the historical context under study.

For historians, this analysis suggests the following questions, when the *pertinent* historical circumstances are being examined:- What is the relative importance of autarky/barter/monetary exchange in this specific context? Which commodities have both monetary and non-monetary uses? — The point here is to direct attention to aspects of people's actions — ie to aspects of the various sources — not otherwise seen.

Mises versus the German Historical School

Now: how does Mises build further on the foundations that Menger and others laid?

As with Menger, Mises too opposes the Younger German Historical School. The doctrines of this school, as Mises expresses them ¹², deny that there are any regularities in people's actions — regularities resulting from the scarcity of means relative to ends pursued; there is only the constant flux of history. This means there can be only empirical laws, derived through induction from the historical data, and applicable only in particular historical periods: “the laws of price determination of one epoch are different from those of another”, as Mises puts it. Thus, historical materials provide “building stones”, in Schmoller's phrase, for the construction of theory, which likewise is confined to “delimited historical periods” (Mises' words) ¹³. To achieve this objective, history is approached *without* theory. The analogy here is with art history: just as there are differences in artistic style in different eras, so there are various economic styles, according to period.

1. Mises provides specific criticisms of these views:

a. In art history, objective physical differences in art objects, architecture, etc, provide the basis for distinguishing different styles of art. But the goods produced in the various periods of economic history do *not* fall into distinct economic styles in line with such objective physical characteristics. A ‘good’ is defined *subjectively* as a means of satisfying wants ¹⁴. — It is evident that Mises here follows Menger's definition of a good.

b. To say that historical laws are specific to an historical epoch is circular, Mises points out ¹⁵. Why do the historical laws of one epoch differ from those of another? Because they come from different epochs. And how are epochs distinguished from one another? By the different historical laws that prevail in each. In short: historical laws differ because their epochs differ, and epochs are different because they each have different historical laws.

2. Mises also criticises the effect of the Historical School's doctrines on historical research as "nothing short of grotesque". Such research has declined into "dilettantist constructions" and is "almost useless". Mises attributes this to the failure to use reliable theory; instead, historians used unexamined, everyday ideas and popular fallacies ¹⁶.

In other words, Mises rejects the Historical School precisely because it "failed ... in the province of social and economic history...". This school treats history as a source of historical propaganda for political purposes, whereas for the student of human action, "history... is a means of furthering knowledge". To help historians to achieve this aim, Mises builds up a systematic analysis of action in general.

3. Because Mises' analysis followed and develops Menger — as we shall see — it systematically opposes the views of the Historical School. Menger recognised the complexity of historical phenomena; Mises draws out the implications: "Historical events are always the joint effect of... various factors and chains of causation.... History needs to be interpreted by theoretical insight gained previously from other sources". In looking to the areas covered by theory and history, Menger saw that theory dealt with certain aspects common to all social and economic phenomena, while history dealt with all aspects of certain phenomena — ie it looked to the whole of a particular historical phenomenon. Mises further deepens and expands this insight. He also clarifies this field of analysis: "Human action... constitutes the subject-matter of all investigation in the social sciences, both historical and theoretical..." ¹⁸. Menger saw that social formations emerge from individuals' actions; Mises shows extensively how this happens.

Organism and Organisation

In his social analysis, Mises follows Menger. Mises places on the one hand, a "living social organism", formed on the natural principle of mutuality. On the other hand is the "lifeless machinery" of an organisation, instituted by authority and expressing but a single will, as with an army unit on parade. When the organising will disappears, the organisation falls apart. Thus a human in need of transport, harnesses horse and cart together. When the human need is over,

this composite separated into its elements. An organisation resembles a social organism to the extent that an artificial flower resembles a living, natural one (says Mises) ¹⁹.

Like Menger, Mises observes that when people first consider the matter, they see society as an organisation, following the analogy of, for example, an arrow, which is obviously made by someone. The realisation that these are ‘organic’, grown social phenomena, is a great scientific, ie analytical, advance ²⁰. ‘Organic’ socioeconomic formations are the outcome of an age-long historical and evolutionary process; Mises counts here: language; “our civilisation, the product of a long evolution”; law; the market economy; the development of the division of labour; of indirect exchange; and accounting. He says explicitly of each that it evolved over long periods of time ²¹. Both history and society are the outcome of human activities, but neither is, or can be, planned or designed in advance (Mises continues). History consists of “a succession of events that nobody anticipated”, while market society is “unwittingly created” over generations. Law, too, emerges as “the remoter consequences”, unknown and unknowable, of the actions of individuals concerned with immediate problems and issues ²².

With Menger, Mises recognises that history is the complex outcome of many different influences. Historians must therefore use various non-historical disciplines in their work. But all historical events are the actions of human beings; “[h]istory is the record of human actions”. Mises sets out to develop the *other* side of this coin: the abstract, general analysis of human action. In doing this, he extends and amplifies Menger’s penetrating insights, systematically and substantially. Thus Mises acclaims Menger’s analysis of how money emerged, as a prime example of ‘praxeological’ reasoning — the general study of human action ²³. — Again it cannot be emphasised too often or too strongly, that it is only from a thoroughgoing and extensive knowledge of actual historical developments that such an abstract analysis can be conducted successfully: Concrete historical experience has to be rigorously and systematically separated from the abstract, universal and timeless aspects of people’s actions, — this, precisely in order that historical experience might be comprehended accurately.

Menger saw that the unintended results of historical development — law, language, markets, prices, morals, etc — appeared through the actions of people aiming at their own ends. Mises now systematically analyses people’s actions *in general* to show how this happens.

The Development of Society²⁴

Mises asks the key question: how does society itself — the most basic social formation of all — emerge and develop in people's actions? As a necessary preliminary, Mises first denies that society is *a.* providential — this puts it beyond explanation, *b.* the outcome of a social instinct — this is a non-explanation, *c.* a rationally-designed social contract — this cannot happen because society is an historically-grown phenomenon, *d.* a great anthropomorphic superhuman being — Mises asks, where is this? All we can actually observe are people's actions.

Mises emphasises that collective entities — church, nation, etc — *are* real: they *do* affect history. But they are invisible; — it is only in the changing content of people's actions that we find social — inter-individual — processes, eg the division of labour, and social — inter-individual — wholes, eg different types of societies.

Mises outlines the genesis and development of society thus: Human society *per se* is made possible because of the greater productivity of the division of labour, and people's recognition of this fact. — Both of these are features of experience, facets of reality. — The division of labour is extended as and when people apprehend the improved results, and value these above the changes required to obtain them. Thus ideas guide action — the idea of bartering precedes the act of barter. As the division of labour is extended — from semi-autarkic household to clan, tribe, region, nation, the world: — skills improve; tools and machinery are developed, improved and increased in quantity; new occupations appear; final outputs increase in quantity, range and quality; population grows, as infant mortality falls and the length of life increases.

Mises goes on: Thus the division of labour is *the* social tie; it is interdependence and mutuality; social cooperation. It is unique to humans, along with reason and language. All three are inter-individual — social — phenomena. To say people are human is to say they are social beings.

Society — the division of labour — is the great means through which everyone obtains their aims by serving the aims of others. Society appears and grows as people follow the rules of social cooperation in their actions — the rules of morality and of justice. These two are the other side of the coin of social cooperation. Both sets of rules are thus among the means that people utilise to reach their goals.

Mises is emphatic that people's actions always occur in a specific historical context: People are born into certain historical circumstances, the result of the actions of past generations. People modify these circumstances and thus provide the historical context for those who follow. People always associate with

one another in forming various cultural, religious, political and other social groups. Thus people associate themselves in a variety of ways; they influence one another and are influenced by each other. Ideas are part of this historical inheritance, as are the particular ends pursued and means utilised. Thus people act overwhelmingly on habit and custom. All these are gradually and continuously modified, as someone innovates or changes their ways and/or expresses a new idea, and others then imitate and repeat what is said and done: repetition and imitation are fundamental to social evolution. Thus the division of labour is extended through habit and custom, *not* as a deliberate decision to do so.

Since society is the division of labour, Mises outlines the wide-ranging consequences of this fact: Civilisations are specific historical expressions of the division of labour. They grow as social cooperation is extended; stagnate when their ideas and actions effectively stop its extension; and decline as the division of labour regresses. Thus history does *not* move in a straight line. The great Eastern civilisations, of China and India, developed first: their cultural achievements were matched by their material well-being. The Greeks learnt from the East; but these civilisations eventually simply marked time. Roman civilisation rose to an extremely high level, with extensive specialisation and great technical progress, but then the division of labour decayed, population declined, and the use of money almost disappeared. A Muslim civilisation flourished, while the West were still barbarian, but it too levelled off after the thirteenth century. Thus the West is a latecomer. Western civilisation grew because the material means were provided through long-term investment; and the latter developed on a large scale because, over a very long period, the political and legal rules that developed checked predators while facilitating continued investment.

Barbarian groups, such as Vikings or Huns, eventually disappeared or joined the fabric of social cooperation.

The Analysis of Historical Phenomena ²⁵

Thus the phenomena to be analysed are obtained through historical experience: they are the actual actions of actual people. These historical developments are complex in nature; many influences, all *analytically* different, combine to produce them. Thus previously-developed or obtained concepts or theories are needed to analyse these complex historical phenomena. Before looking at the historical source materials, one must already know, for example, what 'war' and 'peace' mean. Only then is it possible to grasp the import of the documents, to recognise what they portray. For most of their purposes,

historians find simple concepts are adequate. But with complicated developments, as with reparations, more complex theories are needed. Here if historians rely on the obvious, they link together the wrong events and cannot see the key interconnections and causations.

Historians, in short, need the aid of a range of *non*-historical disciplines — the natural sciences, logic, mathematics and praxeology, the study of human action in the abstract. Each of these disciplines, including and especially praxeology, analyses only *one* aspect of the complex whole. If historians use the wrong theories, or misunderstand them, their research is not fruitful; — again, they make the wrong connections and/or miss crucial relationships.

Since all actual, ie historical, actions of human beings *are* some particular concrete form of action *in abstracto*, all historical — real — actions are classifiable into some general category or other of action. Therefore praxeology — the general study of action — is *the* key analytical tool for the historian, the student of concrete human action, ie what people actually thought, said and did.

The systematic analysis of action begins with the recognition that it is the presence of a human mind which turns physical movements into actions, physical objects into means utilised for a purpose. Other minds can and do grasp this *general* subjective meaning infused into these physical phenomena, because these minds are human too. Without these praxeological categories, Mises points out, there is only meaningless movement, but neither buying nor selling. There is no money; only metal disks with some stamp on them. Mises emphasises that the real world contains only things, as studied by the natural sciences. A thing becomes a means only when people think of it and use it as such.

Particular concrete actions that are observed for the first time are grasped — comprehended — when they are classified in the correct general category. Thus Mises uses Sombart's example of the traveller from Germany's "high capitalism" who encounters the people of some remote tribe. Their "strange behaviour" suddenly becomes intelligible when he realises they are exchanging goods. This traveller has never seen this particular type of activity before; he is familiar only with the concrete actions found in his own historical environment, embodying a vastly-extended division of labour. It is the general abstract category, the general meaning of exchange, which he uses in *both* cases to obtain the sense of the happenings, no matter how radically different they are, *in concreto*. These subjective categories, be it noted, are *not* obtained from experience; rather it is they that enable us to *have* the experiences — to make sense of them.

We may expand somewhat on the basis of this example, to identify some of the issues raised when action is studied in the abstract and to draw out some of the key implications of such a study.

a. The traveller has no doubt whatsoever that there *is* a meaning to the activities he sees: these are people, therefore there is *some* sense to their actions. He knows he is not wondering about stones, plants, insects, animals, or other natural phenomena.

b. In ‘comprehending’ the meaning of people’s actions, the traveller has grasped the latter’s *general abstract* aspect. The historical *content* of these actions — the baskets, pottery, cloth, pigs, goats, chickens, grain, vegetables, etc — carried (or driven) around, the people involved — all these are known to him. It is the abstract *meaning* he puzzles over — ie the classification of these activities. When this general meaning is ‘comprehended’, it suddenly illuminates everything.

c. The category of ‘exchange’ helps to make sense of actions in *both* the tribal area *and* in highly-developed Germany — ie in both vastly-different historical contexts. — But the category cannot, of course, give us the historical material to be classified — only historical study and research can do that.

d. Thus, to be of any help to historians, the categories of human action must bring out *only* the abstract general aspects of people’s actions, filtering out, as it were, all local, historical content. For example, if the traveller had meant by ‘exchange’, that a banknote had to be part of the transaction, or if he had looked for a commodity such as gold, silver or cowries — he would never have ‘comprehended’ what was happening. It is because the category of ‘exchange’, like other categories of human actions, is devoid of all historical content that it can serve to classify and therefore illuminate what people actually do.

e. How can a category of action give such knowledge? For the same reason the traveller is sure that all these peculiar activities really mean something: because all these actions of all these people in both Germany and the tribal area, and indeed in all historical contexts, *are* all actions of human beings — using what they see as a means to achieve what they think is worth striving for. Exchange is a category of human action; in the two historical contexts mentioned here, people undertake actions that can be classified as exchange. In their study of various historical contexts, it is for historians to see what actions occur that fit into this category. (In some contexts, there may be none).

f. Now the traveller, as noted, already has in his mind the general categories of human action. The tribal people, being human, clearly act — ie use means to achieve ends. In doing so, the content of their actions are such as to fit into the abstract category of exchange — ie they manifest this principle in their actions.

Thus while the traveller consciously pokes about in his mind to find some way of apprehending what the tribes-people are doing, the latter, of course, simply act — they do not seek to articulate what they are doing. But their actions do make sense in terms of the categories of action.

In addition to comprehending the tribes-peoples' actions in terms of general classifications, the traveller also exercises the historian's specific tool — 'understanding' or *verstehen*. This he uses to grasp the content of people's actions — the specific concrete circumstances of the tribes-peoples' historical context as well as the one he came from. Such understanding is gained from historical experience, from life in society with others. The aim is to grasp people's valuations and plans, and it is practised by everyone, from infants to statesmen (says Mises).

g. The traveller is not a professional historian or student of human action. He does not know that he both 'comprehends' his fellow-beings' actions in terms of general categories *and* has an 'understanding' of the concrete historical content of these actions. What professionals do is more systematic and organised. They too, being human, have inchoate, unsystematic, unrefined, inconsistent general ideas about action, and the ordinary information about those particular circumstances they live in, that everyone has about their own situation.

Mises continues: To obtain analytical tools, the categories of action, these ordinary ideas are refined, organised, systematised, clarified, thought through. The essential and the universal are separated from the historical, and everything is traced back to, and finally anchored in, the most fundamental and universal category — human action.

For professional investigation, the field of human action, of volition, is the field studied through history and praxeology. On the other side of the boundary lies the natural world, investigated by the natural sciences. This world includes human reflex actions and bodily processes, investigated by neurology, physiology, etc. **(i)** 'Action' covers a failure to act where this was possible — because such a failure influences the course of events. **(ii)** Even those suffering from emotional or mental disorders 'act' — they are neither animals, nor are they a collection of neurological reflexes. But in the opinion of those without disorders, the 'actions' display the use of wildly unsuitable means and the pursuit of 'bizarre' ends. **(iii)** Motives are *not* part of the analysis of action, and 'ends' mean whatever people find worthwhile. For one person, a donation to a church may be a prudent precaution. For another, it may reflect a genuine faith. In both cases, the analysis of the action is the same: material means are used to pursue *non*-material ends, for which other ends have been given up.

(iv) ‘subjective meaning’ of any action is *not* the psychology involved. A purchase may be made randomly, impulsively, indifferently, or after careful consideration. While the emotions are different in each case, the *action is the same*: it is a purchase of a particular quantity of a particular good, at a specific time and place — and therefore the further consequences and effects are identical in all cases. Whether a purchase is followed by elation or regret is *analytically* beside the point; what matters is what *action*, if any, is undertaken. As Mises puts it, “[e]conomics begins where psychology leaves off”²⁶.

h. Thus with systematically-developed categories of action, *professional* ‘comprehension’ of people’s actions becomes possible. This is in fact the aim of elaborating these categories. Historians, of course, develop professional information about the contexts they study, and they exercise a professional ‘understanding’ of historical phenomena. This is an appreciation of the uniqueness of the circumstances, of the concrete actions involved. It is *not* empathy. ‘Understanding’ comes in after the non-historical disciplines have done their share in elucidating the historical materials. Mises is emphatic that praxeological comprehension is quite separate from historical understanding; *both* must be exercised to grasp the historical reality.

When it comes to the general aspects of action, historians have the choice of relying on the unexamined common sense ideas that everyone has, or utilising the systematically worked out praxeological categories of action. We may see what help the category of ‘exchange’ offers the historian. This category suggests various questions about the historical context that help to bring out any possible inter-relationships amongst people’s action. Thus, some of the questions that *might* be asked of the context under study: what kind of exchange is going on — direct or indirect? Intermittent or regular? Local/regional/long distance? How important/significant is each category actually present? Which goods largely enter which category? Why? If money is used, what sort is it? How obtained? *Who* is involved in *which* kind of exchange? Why? Which customs/attitudes/ideas/legal and moral rules/etc promote/hinder *which* kind of exchange? Where/how did they originate? Are they getting stronger/weaker/changing? Under what influences? — Depending on the context, some or many of these questions may be irrelevant and others may be more helpful. — It should be clear that the category of exchange, because it is a category of human action, *can* serve to arrange the historical materials coherently, while bringing out any interconnections and interrelationships surrounding exchange.

This working out of the ramifications of exchange can be done only as *part* of the study of the particular circumstances of a particular historical context. This exercise brings out aspects, otherwise invisible, of people’s actions,

and therefore adds to the historian's 'comprehension' of this specific situation. Praxeology is truly auxiliary; it *cannot* be a self-contained isolated discipline, because it studies only *one* aspect of the many-faceted phenomena — historical actions of real people — being investigated.

Thus it is the complexity of the real phenomena of study — historical developments — which necessitates that praxeological categories be worked out as a separate auxiliary to the study of history. As history *is* the actual concrete actions of real people, praxeological categories *are* an aspect of this historical reality — they are the various sub-categories of the most universal aspect of all, human action itself. They are, as it were, classifications-in-waiting; historians have the option of pulling them out to illuminate various aspects of the actions being studied. But precisely *because* praxeological categories constitute an assisting discipline, they can only be developed from a thorough involvement in, and knowledge of, the kinds of things that people have done through the ages. Praxeology cannot emerge from a total ignorance of and complete isolation from, the results of professional historical research. Praxeology requires just as intense an interest in people's actions over the millennia.

Two points remain: *a*. As the historical actions of people are real, the general category of action is also real, as it covers all actions of all people. Therefore, the implications — *when accurately drawn* — are likewise real: they constitute a systematic compendium of the abstract aspects of people's actions. So precisely because people's actions *are* real, the whole is "apodictically true", in Mises' well-known but inevitably misunderstood phrase.

We noted above that unfamiliar or new historical circumstances are 'comprehended' when they are fitted into the appropriate category of human action. The question naturally arises, what if a new category of action is needed to 'comprehend' the new/unfamiliar action? — The solution to this problem lies in going back to the ultimate category — action, and re-working all the implications to see what was missed. To repeat, what is deduced from this universal category, is only a set of classifications of the abstract, general aspects of people's actions. The most crucial distinction of all *is* between the general and the historical side of people's actions. A Cro-Magnon using a stone tool and an American in June 2001 using a computer are both acting: both use means to achieve ends. The difference is in the historical *content* of what they are doing — ie the historical contexts of which they are a part. The praxeological categories prompt a series of questions about these contexts: What sort of means are being used — means that provide direct satisfaction, or indirect means? If the latter, then what other indirect means are also being used? — and so on. — Of course, a Cro-Magnon could not — so far as we know — have raised these questions: but this brings us back to our starting point: the

development in history of such complex social formations as law, language, the market order, the capital structure; the gradual recognition of the existence of the last two and the realisation that they all represented problems of both analysis *and* historical study; and therefore the *ex post* development of the analytical tools needed, to show how these and other phenomena manifested themselves in the actions of people without the latter's realising what was happening.

To continue with the remaining issue: **b**. Prices, quantities, statistics, numbers generally: All these are features of the specific concrete means that people use in a specific historical context. A price in the historical reality is always a specific sum of a particular kind of money exchanged for a particular quantity of a particular good or service in a specific historical context. Thus quantities and statistics are historical data, generated from the actions of people in a specific historical setting. — The categories of action help us to separate means from ends, and to ask systematic questions about the historical materials. These categories pick out *one* aspect of people's actions. The particular characteristics of the means utilised are historical data, not general aspects of action.

Thus the development of the 'scientific' approach in neoclassical economics is an historical question. — From around the mid-nineteenth century, the development of economic activity accelerated around the world, throwing up vast amounts of numbers — prices and quantities. Simultaneously, the natural sciences also grew vigorously. And, from the later nineteenth century onwards, government officials in the developed countries began assembling reams of statistics. Thus from around the 1950s onwards, neoclassical economists could apply sophisticated quantitative techniques to the mountains upon mountains of quantitative and statistical data that people's activities had generated in this particular historical context. The object of the exercise for the neoclassicals, was of course to be 'scientific'. — Historians, by contrast, are interested in particular facts of particular historical contexts. Quantitative or statistical materials from a specific context are historical sources like any other — eg documents, buildings, landscape features, archaeological materials, etc; and the quantitative information is simply information about that context, to be used in its study.

Now to Hayek's extension of what Menger and Mises had built:

Hayek vs the Historical School

I. As with Menger and Mises, Hayek too opposes the historicism of the Younger German Historical School. This School's views became popular (he says) because their economic theory is that of the man-in-the street. In effect

they deny any inherent regularities in the economic system; there is only (they say) a succession of independent events²⁷.

As against this, Hayek points out: We learn about the actions and intentions of people from the documents they produced. These are intelligible only because everyone has the same mental — logical — categories in their minds. If not, historical study is impossible — it would be like writing about an ant-hill. Theory is thus independent of the historical context: “There can be no different theories for different ages”, although various parts of the theoretical structure would apply under various conditions. The same explanation of the *general* process of price formation is usable for prices in all historical contexts, although, of course, actual prices are historical data. In studying social phenomena, theory is “quite...indispensable”; it is erroneous to say “that the study of society is nothing but history”. Hayek sums up: although theory and history “have distinct tasks, neither is of much use without the other”. What has happened is that:

“the name ‘historical school’...has been usurped by the mongrel view better described as historicism....which is indeed neither history nor theory”²⁸.

It may be noted that Hayek expressed these sentiments from 1933 (“The Trend of Economic Thinking”) through to the mid-1950’s (“The Dilemma of Specialisation”).

Social Theory and Historical Facts: From the outset, Hayek was well aware *a.* that “social theory” studies data that are historical in nature, and *b.* of the issues that are involved. I collate his early comments and observations made before he turned to these wider issues: *i.* Statistical indices fail to capture key aspects of reality, eg changes in the capital structure. *ii.* Theory provides a framework for fitting in concrete assumptions about people’s actions. *iii.* Theory studies a constantly-changing object. *iv.* The trade cycles that have to be explained are historical phenomena. *v.* In the social sciences, complex phenomena can never be observed twice under identical conditions. *vi.* The ultimate goal of all economic analysis is, of course, to explain the economic process in time, [ie] a chain of historical sequences²⁹.

When Hayek explicitly examined the issues, he showed how the “social sciences” — a term he is not happy with — face the kinds of problems that occur with the study of historical phenomena in general (in “The Facts of the Social Sciences”, November 1942). Certain historical formations or “social wholes” are of the greatest importance, both for the analytical issues they present and their key historical role; Hayek follows Menger and Mises in his listing: language, law, bodies of law, legal systems, institutions, societies, morals,

customs, the market, “economic life”, money, the price system. (This list is taken from the article mentioned above and from his series on “Scientism and the Study of Society”). With Menger and Mises, Hayek agrees that social theory and history cover the same field:

“since history and social theory are based on the same knowledge of the working of the human mind, the same capacity to understand other people, their range and scope is necessarily coterminous”³⁰.

The Study of History: Hayek emphasises that the study of historical phenomena requires a combination of analytical disciplines. For the study of “concrete phenomena...the historian will regularly have to use generalisations belonging to different theoretical spheres”. To investigate any individual social happening requires not only several disciplines but also a knowledge of particular facts. There cannot be any separation between social theory and the study of society: we “must be our own practitioners”, and acquire a “familiarity with particular circumstances”. Students of society also need wide experience of human nature and human affairs; they need to be steeped in great literature and their cultural inheritance, the wisdom of the past³¹.

Thus the study of historical — social — phenomena is the study of particular, individual, unique, concrete happenings, resulting from a wide variety of influences. Therefore, “the theoretical construction” is not only very “remote from reality”, the distance is equally long to “the explanation of the particular”. That is partly because, as we have just seen, other disciplines have also to be called on. But much more importantly, the complex nature of the historical material means that

“the task of recognising the presence in the real world of the conditions corresponding to the various assumptions of our theoretical schemes is often more difficult than the theory itself...”³².

To *recognise* “the presence of the conditions to which the theory applies” requires “the ready perception of patterns or configurations”. This is “a special skill which few acquire”, and only those to whom “the theoretical schemes have become second nature”. Assimilating “a ready-made pattern of significant relationships” helps the practitioner to develop “a sense for the physiognomy of events”. Thus in the study of history, “[w]e cannot state simple, almost mechanical criteria by which a certain type of theoretical situation can be identified”. There is no “mechanical test” to ascertain “success or failure” in the “selection and application of the appropriate theoretical scheme”. Thus utilising theory in the study of society is “an art”³³. — We may now see why Hayek has said, since 1944, that an economist who knows nothing else is a very dangerous person.

Hayek, Mises, Ideal Types: Following Menger and Mises, Hayek describes the social sciences as “empirically deductive sciences”. In the study of social phenomena, “the essential basic facts which we need for explanation...are part of common experience, part of the stuff of our thinking”. In this field “the elements of the complex phenomena...are known beyond...dispute”. Starting from the “known empirical elements”, theorists proceed to “find regularities in the complex phenomena which direct observation cannot establish”³⁴.

In his well-known article on “Economics and Knowledge”, Hayek raised the question, can we use the Pure Logic of Choice — analysis of the interrelated actions of one individual — in explaining “social processes”? As he eventually makes clear (p. 47, fn 12), Hayek is dealing *indirectly* with Mises’ arguments in the latter’s *Epistemological Problems of Economics* (1933, pp. 76-91) (Hayek refers directly to this work only once — on equilibrium). Mises there denies Max Weber’s conclusion that economics is concerned with ‘ideal types’, ie historical generalisations drawn from particular historical situations. Mises applies his usual steam-hammer to show that economic theorems — the categories of action — are universal and *non*-historical.

Hayek points to the fact of ‘divided knowledge’. People interact spontaneously, but each individual has only a limited and fragmentary knowledge of particular limited circumstances. How can people’s plans, based on such “bits of knowledge”, be made compatible? How can “the combination of fragments of knowledge existing in different minds” produce the orderly results we do observe? The answer: “experience creates knowledge”. As people try to fulfil their plans, they find they have to modify them to various degrees. In the very act of trying to implement their plans, people both acquire and communicate knowledge, and change their actions. Thus the assumptions “that people do learn from experience and about how they acquire knowledge” are empirical propositions, “questions of fact” relating to “what happens in the real world”. In other words, the Pure Logic of Choice does cover all possible situations — but, to analyse “social processes”, the logic has to be qualified with the use of such “ideal types” that we “regard as specially relevant” to those real world conditions we are interested in³⁵. Thus economists and sociologists may be reconciled.

Hayek says Mises congratulated him on the article, but didn’t change his argument. In fact, on this specific point (and on another — see below, ch. 5), Mises *did* change. In *Human Action* (1949, pp 59-64 of the 1966 edition) Mises *does* include a detailed section on ideal types and how they are used in historical study. He shows very clearly how these historical constructs differ from praxeological categories, and also how the two are related.

Social Facts are Subjective: In his series of articles on “Scientism and the Study of Society”, summarised to some extent in his article on “The Facts of the Social Sciences”, Hayek asks, what is the nature of the historical facts the student of society deals with? Physical facts have ready-made boundaries; they are “natural units”, as for example, “flowers...butterflies, minerals,... light-rays, or even forests or ant-heaps”. Now, any historical context consists of an infinitude of happenings. How do we mark off “facts” that have no physical borders?³⁶

“The classical Greek language or the organisation of the Roman legions, the Baltic trade of the eighteenth century or the evolution of common law,... — these are all historical facts where no physical criterion can tell us what are the parts of the fact and how they hang together”³⁷.

The answer: historical facts are *constituted* by implicit or explicit theories that link particular happenings together: thus the terms state, battle, town, market, trade, commercial activities, army, etc, are coherent sets of “intelligible relations” connecting a host of individual activities together. In short, these terms “refer to a complex of relationships which, when made explicit, constitute a ‘theory’ of the subject”. We use these theoretical constructions in identifying and organising the historical particulars, to “tell us what is and what is not part of our subject”³⁸.

Most interrelationships of the type listed above are extremely simple: “the interconnection of [the] parts are [sic] readily visible”. So in the sources, “the theorising is usually done for us...”. Now people also form theories about complex social formations and economic processes. Systematic study requires that these ideas be revised and replaced with more appropriate concepts. To treat these popular notions as evidence that there are real corresponding structures is conceptual realism. Most “popular concepts of social wholes” are really “vague and indistinct suggestions” of possible connections amongst certain phenomena. Other popular notions have to be made more precise for professional use. In some cases, “popular usage has succeeded in approximately separating the significant from the accidental”, so these constructions can be utilised. And sometimes only “systematic study” can reveal “entirely new structural connections”, hitherto unknown, so there is no ordinary term for this newly-recognised whole³⁹. Pictures of the more complex structures have to be built up laboriously from known elements — people’s actions.

Thus theoretical pictures are constructed from “the human actions we observe [,]...”. From these “elements...the social sciences build patterns of relationships between many men”. People’s actions involve objects, so these have to be included in any grasp of their actions. Such things as “tools, food,

medicine, weapons, words, sentences, communications, acts of production...” that people use or undertake, are really, in a sense, the *attitudes* or *opinions* that people hold towards them⁴⁰. These ‘objects’

“can be defined only by indicating relations between...a purpose, somebody who holds that purpose, and an object which a person thinks to be a suitable means...”⁴¹.

As he sums up:

“...in the social sciences things are what people think they are. Money is money, a word is a word, a cosmetic is a cosmetic, if and because somebody thinks they are”⁴².

The converse is also true: to classify something (as money or food) means people will *act* towards it — will use it — in the way indicated by the classification (people will spend the money and eat the food)⁴³.

Thus the social reality consists of people’s attitudes and opinions — ie their actions; — classifications — food, money — identify how people will act towards the objects classified. Such categories, in other words, are subjective. Daily experience shows that these categories — abstract subjective meanings — are common to all minds. We

“cannot directly observe [meanings] in the minds of...people but... we can recognise [meanings] from what they do and say...because we have ourselves a mind similar to theirs”⁴⁴.

In short:

“the object of our study has a mind of a structure similar to our own. That this is so is no less an empirical fact than our knowledge of the external world”⁴⁵.

And so in observing people’s actions, we *add* the meaning “from the knowledge of our own mind”. This “connotation” is, in effect, a general abstract category; its “denotation” is completely open, since it consists of all the external things that are and will be, classified here, based on the meaning that human minds attribute to them. Thus the connotation renders familiar what is otherwise unfamiliar — a blowpipe is a weapon, cowries are money — ie this is the meaning of the actions of the people concerned. Where there is no mind behind the phenomena, with categories similar to ours, there we observe physical facts⁴⁶. In short,

“social phenomena can be recognised by us and have meaning to us only as they are reflected in the minds of men”⁴⁷.

It follows that

“we can derive from the knowledge of our own mind in an ‘a priori’ or “deductive”...fashion, an (...in principle) *exhaustive* classification of all the possible forms of intelligible behaviours”⁴⁸.

The Analysis of Complex Phenomena

Complex social formations are also part of people’s actions. In social formations such as law, language, the market, etc, people’s actions display regularities but these “are not the result of anybody’s design”. That is why they present an analytical and theoretical problem, which deliberately arranged outcomes and materials do not. In addition, these undesigned orders are of the greatest instrumental value to human beings, and they embody more knowledge than anybody possesses⁴⁹.

These formations are mentally reconstituted and studied only by systematically and patiently following up the implications of the interactions of individual efforts. Often we can “only learn to see [,] the unintended and often uncomprehended results of the separate...yet interrelated actions of men in society”. People’s actions “are motivated by ideas”; the latter thereby “become the causes” of social phenomena. For example, when people’s opinions change about a particular commodity, its price follows suit. So too, certain ideas lead them to regularly carry on exchanges amongst themselves; “the aggregate of all their actions” then constitutes an economic formation. Such “opinions and beliefs” as lead people to those actions that produce social “wholes”, are “constitutive” ideas, “conditions of the existence” of these formations. But of course people’s ideas *about* their activities and context are like popular, uninformed views about any topic⁵⁰.

History and Theory

Historians are faced with unique complexes of events, and so “[historians] cannot avoid constantly using social theories” — ie theories about interrelations amongst people’s actions. Where these interconnections are relatively straightforward (as with “towns”, “battles”, etc) historians’ unexamined ideas will “spontaneously” picture the resulting simple structure. But complex phenomena do not declare themselves; they are only seen through the appropriate analytical lenses. Those actions that historians actually find in the contexts they study, can be fitted together into “social complexes” only if historians make use of the “schemes of structural relationships” that theory provides ready-made. Without such developed theories, historians may implicitly use contradictory or unsustainable reasoning in their accounts⁵¹.

Historical work, in short, “presupposes theory”. The inter-individual phenomena it studies — whether simple, such as “trade”, or complex, such as “law” — consist of “persistent [systematic] relationships” connecting “ever-changing elements”. Thus the abstract pattern which links together real activities may be simple, and so present in everyone’s mind, or more complex, and therefore have to be explicitly worked out: In all cases, “[s]ocial theory is logically prior to history”. And that theory is itself “a technique of reasoning”, a system of classifications and analytical constructions, consisting of logical implications of certain abstract types of interactions amongst people. This type of theory can “only [be] tested for its consistency”; it “can...never be verified or falsified by...facts”. In the particular cases that historians study, they can only check whether the — abstract — conditions specified are present *in concreto*. Thus it is the particular historical context — the problem under study — which ‘selects’, as it were, those theoretical schema that help to illuminate the interconnections amongst its happenings. To use Hayek’s example, the student of the Arctic tundra rejects tropical biology, while the student of tropical agriculture rejects Arctic climate studies⁵².

6. Complex Phenomena and Falsifiability: Hayek systematically analyses the general class into which phenomena such as law and language fall, in “The Theory of Complex Phenomena”. Such complex formations are composed of *a.* a complex structure of interrelationships, *b.* a vast variety and range of particular facts, *c.* complex interactions amongst the components over very long periods of time. As a result one can articulate only the general principle of their formation — state the type of pattern found. But it is impossible to reconstruct in detail all the specifics of their development. Hayek had earlier used the simple example of such a social process, the formation of a path through wooded or difficult territory. Each person who followed the same route made it easier for others who came after. Thus a pathway developed. The principle of the process can be stated, but not the specific details. Other paths in other areas are formed on exactly this same general principle, but in each case their concrete details are unique. Complex phenomena are more elaborate instances of such a process. Those phenomena whose structure can be specified completely in a few formulae are, by comparison, “simple” phenomena. Many of the objects that the exact sciences study are “simple” in this sense. — Hayek tells us that this contention was “bitterly resented”⁵³.

In his Nobel lecture, Hayek points out that with complex phenomena, there are too many concrete data to be stated in detail. So it is only possible to specify a *pattern*, and to check for its presence or absence in a particular situation. Hayek says he is nevertheless “anxious to repeat” that pattern-predictions “can be falsified and...therefore are of empirical significance”. Earlier

in the same lecture, however, he shows that while a wrong theory, which links total spending with the level of employment can be verified statistically, the correct theory — that total employment depends on the structure of *relative* prices and wages — cannot be tested quantitatively. — As there is a “correlation between aggregate demand and total employment”, there is “better ‘scientific’ evidence for a false theory”, whereas the “valid explanation” cannot be statistically tested. That is because the ‘correct’ prices and wage rates embody the “particular information possessed by every one of the participants in the market process”⁵⁴.

Hayek explains: This means we cannot predict the *actual* prices and wage-rates that will ‘maximise’ employment. We can only give an account of the process through which these prices might be obtained. This picture relies “on facts of everyday experience”, and the “logical correctness” of our reasoning and conclusions. We know fairly well in ‘qualitative’ terms, how supply and demand are reconciled “in different sectors of the economic system”; the conditions of success; and possible obstructive influences. And so we know that, to raise employment, relative prices will need to change and some labour shifted. Thus we can give the *general conditions* for a certain type of pattern to establish itself, a pattern which will increase employment to the maximum possible⁵⁵. Hayek says explicitly that a pattern-prediction can be made only with respect to a specified setting:

“...The kind of theory which I regard as the true explanation of unemployment [has] somewhat limited content because it allows... only very general predictions of the kind of *events*...we must expect in a given situation”⁵⁶.

Hayek now adds that such a contextually-restricted sort of pattern-prediction does meet Popper’s scientific criterion of falsifiability and “empirical significance”. This “empirical theory” can be falsified if, simultaneously: the money supply were constant; wages rose generally; employment remained steady⁵⁷.

Falsifiability and History

Some comments are in order.

1. Here and here alone, Hayek is endeavouring to meet a pre-determined criterion, which defines a ‘scientific’ procedure. All he says about his example is that it can meet the criterion of ‘science’ which Popper has set out. In all his previous analytical work, as we have seen, Hayek develops analytical tools — theoretical schema — to assist historians in identifying and examining the complex undesigned orders that appear in people’s actions. Hayek’s falsifiable

example is part of an historical setting, of course, but it is addressed to natural scientists, who centre their focus on falsifiability.

2. Now: we know that in the particular context Hayek outlines, only pattern-predictions can be made and falsified, because this context contains complex phenomena that help to shape its happenings. We know that these complex phenomena exist and function here because historians have already studied the context and established the major influences at work. Historians are able to recognise the workings of such complicated social formations because professional students of society have provided historians with “ready made” theoretical schema, developed as a separate exercise.

We may now note the differences in focus of scientists and philosophers, on the one hand, and historians, on the other. Scientists and philosophers are solely interested in falsifiability and *consequent* “empirical significance”. For historians, the context itself is all that matters — how it is made up, the various channels of causation and their ramifications, the interconnections and interrelationships amongst people’s actions — in a word, the *reality* of it all: what people are saying, doing, thinking, and the consequences thereof.

3. And so, from the historian’s standpoint, what Hayek’s example says is: ‘If unemployment is rising in the context under study, look at the conditions under which prices are formed. Is there anything which suggests the ‘wrong’ prices are being established?’ — Since history is always a ‘mix’ of influences, historians will, of course, routinely examine other relevant areas: eg foreign trade, technical and industrial change, the weather, changes in labour skills, etc, etc — The specific context Hayek uses plainly contains a complex economic order and pricing structure, involving millions of people. So the historian would try to keep these complex interconnections in mind when going through the specific historical circumstances under review. — And the problematic mix of occurrences which Hayek mentions? Historians would shrug: history *is* particular and therefore untidy, messy, full of sharp corners, with bits and pieces sticking out every which way. For the historian, this mixture is just another part of the investigation into the specific influences at work in that specific context. It may be emphasised that no single theory can of course cover an entire historical context. So once again the historian would ask — what else was also happening in this context? (for example, with the capital structure).

Two Kinds of Order: With Menger and Mises, Hayek too recognised that social ‘wholes’ are either deliberately instituted or they develop spontaneously. At first, in “The Trend of Economic Thinking”, he adopted Mises’ terms for these two types — “organisation” and “organism”. Then he likened the analysis of social complexes (ie ‘organisms’) to “some problems of

theoretical astronomy”, rather than “those of...the experimental sciences”⁵⁸. Later he repeated the comparison:

“The problem of how galaxies or solar systems are formed and what is their resulting structure is much more like the problems which the social science have to face than the problems of mechanics [...]”⁵⁹.

A few years earlier, in *The Constitution of Liberty* (pp. 66 ff), Hayek had pointed out that people acted on complex rules, without any realisation that this is what they were doing. He evidently put this insight together with the astronomical simile, when he introduced the term *cosmos* for all complex social phenomena. Mises had earlier reiterated that society was the great means for all individuals to accomplish their purposes; Hayek saw that a *cosmos* developed as people acted on ends-independent rules — ie rules that were solely instrumental, and he termed such a rule, *nomos*. An organisation he called a *taxis* and the corresponding ends-oriented, organisational rule, *thesis*. Earlier, in his 1939 pamphlet on “Freedom and the Economic System”, Hayek pointed out that legal and moral rules evolved over the centuries from the more concrete to the more abstract. He generalised this insight: the *cosmos* evolved as people acted more and more on *nomoi* rather than *theses*⁶⁰.

Hayek examines in some detail the implications of following rules — ie manifesting them in action. People act not on one or two isolated rules, but on a system of interrelated rules. Each rule has to be placed in the context of the system from which it comes, in relationship to the other rules. Following rules creates order in our lives individually; certain *types* of rules create an overall order in interaction with others. Individually, people know only particular limited circumstances, and only as these arise. People’s actions on the basis of their several knowledge are integrated into an overall order as they follow the same set(s) of social rules. When people act on ends-independent — means-oriented — rules, the result is an abstract order. The detail of such an order is ‘created’ by the specific circumstances known to its members. As rules evolve over time, knowledge is precipitated into them. — Hayek emphasises that people can act on rules more complex than they could possibly articulate. People are not even aware that they do this⁶¹.

The foundations of human civilisation were laid when people gradually dissolved the boundaries of the hunting band to include others, in larger and larger groups. The growth of peace and exchange made this possible. It meant interacting with people on the basis of common *rules*; the hunting band was held together by common *ends*. Instinctive solidarity had to be suppressed by following the new rules. As rules were widened, the relevant ‘group’ widened until today it covers the globe. As the exchange order expanded, so did population. World-wide exchange is necessary just to maintain all the people who

now participate in it. This economic order “opens up vast new opportunities for the efforts of individuals”. Hayek emphasises the complexity of the existing economic order and its function as a means for people to achieve their ends ⁶².

Group Selection

The social order did not develop in a straight line, of course. Social groups all followed different sets of rules. Some groups were more ‘successful’ than others — ie their members achieved their purposes better. These groups expanded as new members joined, or else other groups modified their rules to approach the successful ones. — Many have suggested that Hayek abandoned individualism in this theory of ‘group selection’. This criticism assumes that ‘individuals’ are blank, solitary, self-sufficient atoms wandering about in a vacuum and bouncing off each other if they happen to meet. — Hayek defines a group as individuals who follow the same rules of action, such that an (inter-individual) order results ⁶³. Thus people’s *actions* produce groups.

Hayek’s observations are certainly of the utmost value for historical research. They point to the *types* of social and economic rules found in different historical contexts, and the *kinds* of orders that result. This in turn offers better insights into the *kinds* of cultural achievements found in various contexts, the *kinds* of interaction amongst peoples, etc.

The Common Law

Finally, Hayek emphasises the nature of the common law: an evolved body of ‘complex’ rules, developed through solving the practical problems faced by private individuals in their several pursuits. Common law rules are prime instances of *nomoi*. The development of such abstract rules gradually creates a larger and larger delimited sphere for the individual. The effects of the common law appear only as its rules are adhered to as a matter of principle, irrespective of the outcome in single cases. The market order develops as the other side of the coin from the common law. Legislation is not only a latecomer, it is “more far reaching in its effects even than fire or gunpowder”. Legislation is an ends-oriented instrument to provide legal authority and legal instruments for the activities of government officials and democratically-elected politicians ⁶⁴.

Menger, Mises, Hayek

We may note here a very few of the links and complementarities amongst Menger, Mises and Hayek.

Mises noted that reason, language and the division of labour were the three quintessential human characteristics — they made people human, separating them from non-humans, including their non-human ancestors. Mises also saw that the division of labour, specialisation and exchange, constituted *the* social bond which produced society from individuals. Hayek focussed on this crucial transition — from the hunting band to the beginnings of the development of human society and civilisation proper. The critical change occurred when early humans for the first time placed salt or other goods at their tribal boundaries, hoping for a return (Hayek's example). Thus Hayek follows Mises in seeing: the growth of exchange as the foundations of civilisation; population growth as the consequence of wider exchange; and the international economic order as absolutely vital to sustaining this population. Hayek deepens and extends Menger's analysis (and that of earlier investigators) of the common law as an historical evolution. Menger, Hayek, most common lawyers and legal historians, all share the same unflattering, if not hostile view of legislation.

Lastly: in his extensive analysis of the implications of acting on rules, Hayek develops a central category of human action.

III

Two Economic Formations Discerned

In Menger's second and most critical breakthrough, he discerned *two* economic formations for the first time. He analysed both and named one but not the other. The first economic formation which he observed and analysed, but without naming it, was the capital structure; we deal with it below. We begin instead with the second economic formation, which he termed, the 'national economy'.

From the 'National Economy' to the Katallaxy

The nub of Menger's analysis is that this formation *cannot* be a "pragmatic" or designed creation. The 'national economy' is comprised of units that are economies proper — firms, households, individuals. *Within* these units resources are allocated according to a specific hierarchy of ends. But these units are themselves the elements composing another, larger formation, which develops on a totally different principle. This formation is *not* an economy writ large — ie a superhuman but anthropomorphic entity, allocating the resources it controls singly, according to its own single scale of ends. Rather, the formation termed the 'national economy', is both spontaneous and orderly, and

therefore altogether more difficult to apprehend. — Menger stops there; Mises and especially Hayek take the analysis to a much deeper level.

Mises: The Market Process

Mises is emphatic that the market order or process is found in reality, whereas equilibrium — the “evenly rotating economy” — is “unreal”, “imaginary”, and “self-contradictory”. It is achievable only in a dead world. As social cooperation, the division of labour are extended, the market process develops, in the growing interaction of all those who participate in the division of labour. Their complex interactions form the price structure of interconnected prices as also other market phenomena, such as the range and features of mass consumption goods, all likewise interrelated. Thus price formation is a social — inter-individual — process, as is the emergence of other aspects of the market process, eg the incomes that participants receive. Everyone contributes, but where large numbers are involved in the market process, there obviously each individual’s single influence is correspondingly tiny. To break up this market process into separate parts mentally is artificial, though it may be unavoidable for the sake of comprehension⁶⁵. Mises insists, “The market is...the foremost social body”⁶⁶. Analysts must keep their gaze fixed firmly on the economic system as a whole, on the interconnectedness of all economic phenomena:

“The catallactic problems cannot become visible if one deals with each branch of production separately.... It is impossible to study labour and wages without studying implicitly commodity prices, interest rates, profit and loss, money and credit, and all the other major problems. The real problems of the determination of wage rates cannot even be touched in a course on labour”⁶⁷.

Mises clearly sees the entire market order as a single unified inter-individual — social — process; subdivisions are mental contrivances to obtain a better mental grasp. Thus Mises’ viewpoint is analytical; as such it goes far beyond the immediately and glaringly obvious: numbers of businessmen dealing in a *single* output, or some large ‘faceless’ corporation which ‘dominates’ those small businessmen who deal with it as well as the hapless consumers of its product(s). He who runs may read such patent ‘facts’.

Mises on ‘Competition’

Consistently with his analytical focus on the market order, Mises uses the term ‘competition’ to signify particular aspects of this “cooperative system”⁶⁸, the market process.

a. Jobs are imbedded in production processes that survive only so far as they eventually contribute to the production of final outputs that people purchase⁶⁹. Mises points to:

“the complicated structure of the social cooperation of hundreds of thousands of specialised jobs and performances”⁷⁰.

Under “the perpetually changing conditions” of the historical reality, ‘competition’ is the process which both selects people for various jobs *and* removes them from those ever-changing jobs⁷¹.

b. Scarcity inescapably limits the number of production units in any line of production. So ‘competition’ means “the opportunity”⁷² to provide final buyers with cheaper/better/alternative/additional goods and services for their several requirements. Since people purchase a variety of goods and services, all outputs ultimately compete with all other outputs to be amongst the range bought. This “catallactic competition”⁷³ pervades all production processes: the prices that entrepreneurs expect for the various final outputs are transmitted through the various intermediary entrepreneurs into the prices of all intermediate goods and all factor prices.

Mises is quite scathing about the non-analytical outlook of businessmen and union officials — their inability to undertake the type of reasoning needed to recognise the general interconnectedness of market phenomena. He says: “It is time these amateurs were unmasked”⁷⁴.

There is no room here to convict Mises of thinking in terms of neoclassically-perfect markets and the like. For Mises the analytical unit is a real phenomenon: the complex social processes of the economic order, the outcome of the actions of all participants in the division of labour.

Hayek eventually names and analyses more explicitly the economic formation which Menger first noted and Mises then went deeper into. From the outset, he is quite clear that equilibrium is at best only a “foil”, not a description of reality. He refers to equilibrium prices as “hypothetical”; equilibrium itself is unreal, “imagined”, “fictitious”, a “pretence”, it “can never be reached”⁷⁵. Hayek starts rather from a recognition of the “interdependence of economic phenomena”, and the existence of a “highly complicated organism” — the economic system. No one devised this integrated organism; it resulted from the “spontaneous interplay of individuals”. The pricing system likewise grew up “spontaneously...long before we understood it”⁷⁶.

Then in discussing the “social wholes” that are found in human action but are not consciously designed or deliberately created, Hayek includes language, the market, money, the price system, morals, legal systems and societies. — As we saw earlier, this list is clearly taken from Menger; and Mises too analyses

society, law and the market economy as historical developments. — Among the complex phenomena examined by the social sciences Hayek includes the market and the “complicated social structures as those which we find in economic life or law, in language and in customs”⁷⁷.

Hayek traces through the consequences of a single economic change — a rise in the price of a natural resource — to show how people throughout the entire economic system eventually alter their actions in response to the price rise. As the people most directly affected by the price modify their actions, reducing their usage of the resource and increasing their utilisation of alternatives, others, who also use these alternatives, in turn find they too have to change what they are doing, and such adjustments spread until all production and consumption activities are altered to a greater or a smaller degree. As Hayek puts it: “The whole acts as one market...”⁷⁸. Thus Hayek also sees the analytical unit as a unitary, “immensely complicated” formation; to subdivide this is simply an imaginary exercise:

“The conception of the economic system as divisible into distinct markets for separate commodities is after all very largely the product of the imagination of the economist...”⁷⁹

With Mises, Hayek analyses the functions of the price structure as an inter-related and interconnected whole. Price changes cannot be merely local; a change in one price is transmitted to all other prices. Thus everyone adjusts to circumstances they cannot ever know and participates in production processes without realising it. The results of price changes — positive and negative returns, capital gains and losses — bring about interlinked changes throughout the economic system. So as circumstances change and people adjust their actions, — firms, plants and industries expand and contract, relocate and/or re-equip themselves; many die out and new ones are established⁸⁰. — It will be noted that neither in Mises nor in Hayek do we find an isolated, self-sufficient price, whizzing about in a vacuum.

Hayek on ‘Competition’

When it comes to competition, Hayek is quite emphatic he is analysing a real competitive process, which pervades economic activity, as *opposed* to the notion of perfect competition/competitive equilibrium. What the latter discusses “has little claim to be called ‘competition’ at all”. The description of a static state of perfect competition assumes away the “essential characteristics” of the competitive process which is actually operative in reality; “this moving force of economic life is left almost altogether undiscussed”. Hayek underlines the “absurdity of the usual procedure of starting...with a situation in which all

the facts are supposed to be known". But if everything is already known, then to analyse this is "wholly uninteresting and useless"⁸¹.

With Mises, Hayek sees that the real issue is how best to serve consumer requirements:

"The real problem is...by what commodities and services the needs of the people can be most cheaply satisfied"⁸².

Finding the answer to this gives *ipso facto* the best use of any firm's equipment and the skills of its personnel — both are always historical, ie the outcome of a particular sequence of past events, and past such adjustments⁸³.

So the facts to be discovered are: What things are goods? — ie are regarded subjectively by people as means to their several ends — How scarce are such goods?⁸⁴ What are the lowest costs of producing these goods, "in the given historical situation"? Seeking out the answers to these key questions is

"always a voyage of exploration into the unknown, an attempt to discover new ways of doing things better than...before"⁸⁵.

Because people's knowledge and needs are "ever changing", and because "human skills and capacities" are infinitely varied, it can never happen that "many people [offer] the same homogenous product or service" and that large number of goods and services are of "an identical character"⁸⁶. Rather what we see in reality is

"a continuous range of close substitutes, every unit somewhat different...but without any marked break..."⁸⁷.

This great "variety of near-substitutes" changes rapidly. Suppliers of services 'compete' for "reputation or good will": buyers discover through experience which particular supplier will meet their personal requirements⁸⁸.

The function of the market as a whole is to transmit changing information — to consumers about alternatives and about consumer requirements to producers. Thus because the competitive process spreads information, it "involves continuous changes in the data". Nothing can be once-for-all: there is constant adaptation to changing circumstances. Where the division of labour is highly extended, there knowledge, changes in it and such adaptation, are equally widely dispersed. In such a situation, price changes tell people what to look for — what new uses of things to search out, and what new things to produce: there is "constant experimentation with improvements". In sum, the "chief guidance which prices offer is...*what to do*" [italics in original]. By the same token, some expectations are disappointed — ie it is continuously found that some activities are unviable as circumstances change: some innovations, some uses for goods, some goods and services themselves, are *not* demanded.

So relative incomes in different lines of production must also change commensurately. — Hayek notes that statistics *cannot* provide any information on the price and income changes necessary⁸⁹.

Thus the facts that ‘competition’ discovers are inherently temporary — in the nature of things, they will soon change. ‘Competition’ therefore is a *continuous* process of discovery of the kaleidoscopic circumstances of time and place. In sum, the competitive process is “a succession of events”: manufacturers who ‘currently’ produce more cheaply than others, or produce better goods or those more in demand, are overtaken by others, who are in turn overhauled, and so on⁹⁰. The process is orderly because it is anchored in the continuing production of final outputs for final buyers.

We may note here that Hayek, like Mises, is illuminating a key facet of the complex interrelated process of production which includes all members of the division of labour. Hayek points out that, historically speaking, the successful societies have relied on this type of ‘competitive’ process to order their productive activities. Therefore, this discovery process is most valuable where it has been the least implemented — the less developed areas⁹¹, and, we may add, the post-Soviet territories.

The Catallaxy

Hayek now analyses the general features of the overall market order more explicitly, to demarcate it from economies proper. He also names it, for the first time ever. Households, enterprises of all types in all sectors, and the government are all economies. An economy pursues a single hierarchy of ends; it manifests a single view of what is more and what is less, important. Its resources are allocated according to this single scale of values, and its results are likewise assessed by a single scale. Thus an economy is an organisation like an army, for example; its orderliness is created by following a unitary hierarchy of ends⁹².

Economies proper interact spontaneously to product an overall market order which is given the same name, and called ‘the national economy’; — but it is “fundamentally different”. This order is “a complex structure or network composed of countless interrelated and interlaced economies”. It is “brought about by the mutual adjustment of many...economies”. As a spontaneous formation, “[t]he market order serves no...single [set] of ends”. Rather it is “a multipurpose instrument” — it “serves the multiplicity of separate and incommensurable ends, in all their variety and contrariness, of all its...members”. The totality of these ends cannot be known, of course, to anybody. This order also utilises the knowledge of all its members in its functioning. As it is a *cosmos*, an ends-independent order, it is

formed when people act on the ends-independent rules of the common law, of property, contract and tort. Through exchange in the market order, its members can all achieve their several aims, with no need to have any ends in common⁹³.

The contrasts between an economy proper and the overall order formed from such economies, is so great that Hayek feels it is “a great misfortune” the same term is used for both. — Hayek assumes here that people *can* see the existence of two separate and distinct types of order in the social reality, but this is not the case. — That aside, Hayek calls the market order, the “catallaxy”, from the ancient Greek verb meaning “to barter, to exchange” and also “to admit into the community, to turn from enemy into friend”. — Now more than once, Hayek has mentioned the profound impact that *Socialism* made on him. The term “catallaxy” is another piece of evidence. In the book, Mises recognises the higher productivity of the division of labour as the ordering principle which makes society possible. As he puts it, this greater productivity of the division of labour “makes friends out of enemies, peace out of war, society out of individuals”. The complete congruence with the term Hayek has coined is evident. Hayek acknowledges that Menger was the first to see that economies and the national economy were formed completely differently and were in fact two distinct kinds of orders⁹⁴.

Hayek points out that it is anthropomorphic to think of the “economy” as distributing incomes and the like. Incomes are distributed in an organisation, in accordance with its single hierarchy of values. This cannot happen in a spontaneous order, which is an instrumental formation. People view the market order *as if* it were an organisation, assessing it by how it achieves some single hierarchy of ends. But this is fallacious. Hayek emphasises that the catallaxy represents a continuous process of adaptation to ever-new circumstances. People in contact with this new situation change their actions, thus prices change and others adapt what they are doing. Thus the whole structure adjusts constantly to new developments. In the course of adjustment, some incomes are raised and others are lowered — *by exactly the same process*. People are not aware of the ultimate concrete circumstances that produce this result. They are, of course, happy to accept a rise in income, because they deserve it, but not a fall, because they don’t. But their real incomes — the flows of final outputs — can be maintained, never mind increased, only because other people *have* accepted a decline in their relative incomes, with the continuing changes in circumstances. Hayek thus emphasises that a catallaxy is *not* an economy, an organisation, but an overall order which enables people to cooperate in the production of the final outputs they all purchase. Finally, Hayek, with Mises, underlines the fact that the catallaxy is the “only overall order that comprehends nearly all mankind”⁹⁵.

The Capital Structure

We now turn to the capital structure. Menger, as noted, never uses this term. He begins his analysis with the range of consumer goods produced in any setting and asks: in order to turn out these goods, what are the production processes that must be undertaken in preceding time-periods? (Or — what is the same thing — how and when will the production processes under way “today” yield final consumption outputs?) He terms final outputs, ie those that are directly usable, “goods of the first order”. Those goods that immediately produce consumption outputs he calls “goods of the second order”. These last are produced by goods of the third order, and so on, to the goods furthest removed from final consumption — in that particular context ⁹⁶. Menger gives the example of bread production. Going through this instance will help bring out key features of this economic formation.

Table 1.1 Higher Order Goods in Bread Production (simplified) Context: DCs in the Twentieth Century Goods of the:	
1st order:	bread in the pantry.
2nd order:	bread; retail shop/area, shop fittings, labour, wrapping paper, bags; etc.
3rd order:	bakers’ labour, ovens, trays, fuel, flour of various types, yeast, water, salt, any other ingredients.
4th order:	(to produce flour) wheat*, labour, operations of flourmill*.
5th order:	(to produce wheat) suitable agricultural land, agricultural labour, seeds*, fertilisers*, insecticides*, herbicides*, fungicides*, operation of agricultural machinery*. (to maintain mill machinery) labour, materials. (to produce flour mill equipment) factories, labour, machinery, steel, other materials, etc. (to construct/maintain mill buildings) bricks*, labour, scaffolding, cement, tools, equipment, etc.
6th order:	(to produce seeds) agricultural land, labour, agricultural machinery*, fertilisers, insecticides, herbicides, fungicides. (to produce bricks) kilns, brick earth, labour, tools, etc. (to produce fertilisers etc. used to grow wheat) plants, equipment, labour, chemicals*. (to produce agricultural machinery to grow wheat) factories, labour, machinery, steel, materials, etc.

7th order:	(to produce chemicals for 6th order plants) chemical plants, equipment, labour, materials. (to produce agricultural machinery used in seed production) factories, labour, machinery, steel, materials. (to produce fertilisers etc. used in producing seeds) plants, equipment, labour, chemicals.
NB: Power, transport, legal/accounting services are general purpose inputs used in all stages.	

Some comments are in order, to bring out significant features of the investment chain sketched here.

1. The classification of goods into successive orders, refers to the ways in which people use these capital inputs. It does *not* refer to anything inherent physically in the good itself. In the simplified investment chain just set out: **a.** Agricultural land, labour, machinery, fertilisers, etc, are fifth-order goods when they produce wheat, but sixth-order goods when they help to produce seeds. **b.** The factories, equipment, labour, steel and materials used in producing agricultural machinery are goods of the sixth-order when the agricultural machinery is used as a fifth-order good, to produce wheat. But when the agricultural machinery is used in the production of seeds, this machinery becomes a sixth-order good, and the factories, labour, equipment, steel, etc, used to produce it become seventh-order goods. **c.** Steel, in *this* investment chain, is used as both a sixth- and seventh-order good. But it is also a fifth-order good — when it is utilised (with other inputs) in factories turning out flour-milling equipment. **d.** Beyond the relatively few goods listed above, there are goods of even higher orders — eg steel mills that utilise coal, iron ore, other materials and labour, to produce various iron and steel products; coal, iron and other mines, using mining machinery and labour; factories turning out steel-making equipment, mining machinery, and other types of machinery, using their own specialised equipment, steel, other materials, and labour, and so on. All these help to produce a wide range of final outputs, of course.

In sum: Capital goods are classified into orders according to where these goods stand in the investment chain(s) leading to the final output(s) all these capital combinations jointly produce. The order in which a good is classified gives its relationship to the final good(s) which *that* investment chain turns out.

2. In the production chain sketched out above, each successive order contains a number of different *combinations* of capital goods and services. Some capital goods are more versatile — they are usable in several different combinations (or links in various investment chains). Other goods are less versatile,

they can be used in fewer capital combinations. The various capital components have to be used in the 'right' combinations and proportions to form a link in an investment chain. All the successive links in any investment chain have to be in place, in order to produce final outputs. That is, all the various capital combinations in all the successive orders have to be present and functioning properly for first-order — final consumption — goods to be turned out. For example, goods of the fourth-order — a flour mill, wheat, etc — cannot directly produce bread in the kitchen breadbox. This capital combination can turn out only one of the capital inputs — flour — required to produce bread. Other third-order goods — bakers' labour, ovens, fuel, water, yeast, etc — must also be present, in the appropriate proportions, together with second-order investments in suitable retailing facilities.

3. The entire production process which eventually yields first-order goods, takes time to do so. The goods being worked on in successively higher orders are successively transformed into consumer goods successively further into the future. Thus, in the simplified picture above, the third-order goods of flour, water, yeast, salt, etc, will — after combination with other third- and second-order goods — become bread in the shop in a relatively short period of time. Wheat now being converted into flour — a fourth-order good — will become bread a little further into the future. Wheat now growing in the fields — a fifth-order good — will eventually appear as bread at a period yet further still. The seeds now being set aside will turn into bread in a period still further removed. The chemical plants now producing fertilisers are contributing to the eventual appearance of bread in a period even further forward... and so on.

Thus, to produce and utilise goods of successively higher orders is to provide for consumption requirements over periods that stretch correspondingly further into the future. Menger points out that it was through using goods of continuously higher orders that humanity could move from hunting-gathering through settled agriculture and the development of crafts and then industry, to the global economic system of the later nineteenth century. Concomitantly, he emphasises, sparsely-settled areas became densely-settled — ie population grew dramatically.

We may compare the investment chain producing bread in the DCs in the late twentieth century, with that yielding millet 'bread' in rural Northern India in the mid-twentieth century (Table 1.2). There are far fewer higher-order goods, far fewer capital combinations, there is more autarky.

Table 1.2 Higher Order Goods, Rural North India, Mid-Twentieth Century Goods of the:	
1st order:	poor quality millet ‘bread’, flat, unleavened.
2nd order:	mud ‘stove’ + twigs or charcoal + brazier, millet flour, light griddle, housewife’s labour.
3rd order:	stone handmill, millet, housewife’s labour.
4th order:	poor quality agricultural land, poor quality seeds, underfed bullocks, wooden plough, farmer’s labour, hand implements.
5th order:	(for plough) carpenter’s labour, wood*, hand tools.
6th order:	(for wood) woodcutter’s labour, hand tools.
7th order:	(for woodcutter’s tools) blacksmith’s labour, hand tools, tiny charcoal furnace, small quantities iron. These are 5th order goods when making agricultural implements. These are 6th order goods when making carpenter’s tools.
NB: Not many goods of higher orders — even iron is from a charcoal furnace. This investment structure can turn out consumer goods for only a season or two ahead.	

4. The general analysis of the production structure — the classification of goods into sequential orders — is an analysis of how people act. It, therefore, provides historians with an absolutely essential insight — an indispensable analytical tool, which brings out *analytical* aspects of the data from any particular historical context, — aspects *invisible* otherwise. This analytical schema enables historians to trace through and recognise interconnections and linkages amongst people’s actions — inter-relationships that can be seen only with the aid of this analytical lens. Thus historians can see further into the historical circumstances than they could without this analysis.

Input-Output Tables Compared with The Production Structure

To underline the subjectivist nature of Menger’s analysis, we may briefly consider a bare listing of the main characteristics of an input-output table. In such a table — *i.* the ultimate unit is the *industry or industry group*, *ii.* *physical flows of goods* are charted amongst industries defined in physical terms. The picture is of goods moving themselves from one industry (or group of industries) to other industries (or groups of industries), *iii.* only *statistical and quantitative* data and *indices* can be used.

With the production structure:

1. The analytical unit: the *actions of individual production units* (firms, etc). It is in and through the ways in which people use goods that the investment structure emerges and develops. 2. The starting-point: What is the *range of final outputs* produced in *this* historical context? Specific consumer goods and services are the components of this range. 3. Final aim: Tracing through the *investment chains* that yield this range of final goods and services, as also its individual component goods. 4. Successive links in investment chains are composed of *combinations* of different investment goods — both ‘fixed’ and ‘working’ capital — plus services. To ‘complete’ these links, the ‘right’ combinations of these goods and services, in the ‘right’ proportions are needed. For final outputs to be produced, *all* links in the production chain must be ‘completed’ down to the point of final consumption. 5. With regard to individual investment goods, whether ‘fixed’ or ‘working’ capital, the question is: where does this good stand in relation to the final good(s) which it helps to produce? Which combination(s) of investment goods is this good capable of joining? — In this respect, investment goods have varying degrees of versatility: some can join many different capital combinations — ie various links in many investment chains. Others are capable of forming only fewer such combinations, ie fewer such links in fewer investment chains.

Mises on Capital

We now turn to Mises’ analytical contribution. We saw that Menger took a range of final outputs and then analysed the investment chains that produced these outputs. Mises elaborates and deepens this insight extensively. He emphasises that capital is *not* a magic modelling clay, capable of endless and cost-free reshaping into any desired form. Capital consists in “concrete capital goods”. Like Menger, Mises describes the capital structure, but without this term. He says explicitly that the production process being analysed encompasses all participants and production units in the economic order: there is a “social process of production”. He too analyses and classifies how people use goods — whether as direct means of “want-satisfaction”, — goods of the first-order, or as indirect such means — goods of the second, third, and higher orders. Such capital goods may be classified according to their “distance” from the final outputs they help to produce⁹⁷.

Goods of higher orders — capital goods — are used in combination with other such goods and current inputs. Some capital combinations turn out final outputs directly. Other such combinations produce “intermediary products” which in turn have to be utilised in combination with other capital goods and

versatile resources, and so on, until we reach the capital combinations that produce final outputs, goods of the first order.

Thus the capital investments in these successive orders form production processes, which may be ‘lengthier’ or ‘shorter’ in relation to the output of first order goods. In ‘lengthier’ processes, capital combinations are utilised in orders that are successively further removed from final consumption, as compared with ‘shorter’ processes. Capital accumulation makes it possible to utilise lengthier and lengthier processes. Such processes *1* turn out larger quantities of final outputs, *2* produce consumer goods not available through shorter processes, *3* increase the productivity of the factors utilised, *4* enable provision further into the future ⁹⁸.

Only to the extent that they contribute to the production of final outputs do capital investments have any value. This value of course varies with their usefulness in this respect. Where no such contribution is possible, these goods are just worthless junk. In short, capital investments — when they *are* capital — are only way stations en route to the final destination — the final yield of final outputs ⁹⁹.

Capital goods are run down and used up in the process of production, ‘circulating’ capital more quickly than ‘fixed’ capital, of course. As people’s circumstances and ends change, various investments lose their value altogether. Mises is emphatic that in the historical reality, capital goods do *not* automatically maintain themselves intact, as if led by an invisible hand. Such phenomena are a feature of the “evenly-rotating economy”, because this imaginary construction makes the unrealistic assumptions necessary for this outcome. In reality, someone has to decide specifically how far each investment is to be repaired and maintained, how far it is to be run down, and what other investment, if any, is to be built up instead ¹⁰⁰.

Mises makes it clear that the various production units in the economic order — farms, factories, workshops, plants — are each individually only a tiny part of the entire process; only a fraction of the whole occurs in each ¹⁰¹.

We come now to the question: how do people utilise these means? Mises points out that people generally prefer consumption in the nearer rather than the more distant future. So after their immediate needs are satisfied, people use their resources to provide over some definite future period, which *in their own regard*, is the nearer future; they do not look beyond. Capital goods are the means for this purpose. Different people aim at providing for different such time-periods: Many stop with one or two days forward. Others wish to provide for the coming weeks, months, or years. Still others aim at the welfare of their grandchildren and later generations.

Thus “time-preference” is all-pervasive. It “is an essential element in human action”. It enters into

“every choice and every action. There is no man for whom the difference between sooner and later does not count. The time element is instrumental in the formation of all prices of all commodities and services”¹⁰².

The composite time preferences of all consumer-savers taken together thus determine 1. how existing capital goods are used, and their maintenance and repair, 2. the ‘length’ and types of production processes that will continue to be utilised or be brought in. All these in turn determine 3. the types and quantities of capital goods produced and the investments made.

In lengthening or shortening production processes; changing the kinds of final goods produced; changing the techniques applied, etc — capital goods are used in ways different from those originally intended. Thus *in relation to* whatever new circumstances they are utilised in, capital investments have a range of versatility. In every new situation, they become usable for a wider or a narrower range of purposes; in many different or fewer production processes than previously. As circumstances change, some investments are rendered useless, others become usable again, or less/more usable than before. As Mises puts it: “convertibility is graduated” — ie existing capital investments have different degrees of versatility, and these change with circumstances¹⁰³.

As quantities of investments increase and their range widens, it becomes easier to implement lengthier processes of production. Once this is done, people can achieve their ends at a point closer in time. With fewer capital goods, and a narrower range, people would have to accumulate them over much longer periods, in order to lengthen production processes further. Thus existing capital goods bring people closer in time to their goals. But because resources are always scarce, these goods are also a “conservative element”: scarcity requires that the abandonment of goods and processes be minimised to the extent possible. This means adapting existing investments as far as feasible, to new production processes and for new purposes, — which in turn means adapting both processes and ends where possible¹⁰⁴.

Actual capital investments are historical in nature: they reflect the circumstances of the time when they were made — the technology, natural resources, ends pursued, time preferences, labour skills. The above considerations bring out the various abstract general features of actual investments.

The investments found in the Western developed countries in the mid-twentieth century and later, have been built up over centuries. *i* Previous generations saved and invested to such effect that production processes were

repeatedly lengthened. *ii* Political and social conditions did not repress large-scale saving and investment. *iii* The world economic order which developed faster in the nineteenth century, enabled large quantities of capital goods to be transferred to the capital-importing developed areas — North America and Australasia; and also to the less developed countries. Thus all areas now benefit from the actions of past generations — all have more resources to obtain their several ends.

Finally, Mises agrees with Menger that saving and investment enable civilisation to develop: these material resources also facilitate the achievement of *non-material ends* ¹⁰⁵.

Thus Mises extends substantially the analysis of people's actions — in utilising capital goods, ie indirect means for obtaining ends in various time-periods. Mises unfolds the abstract general categories for classifying people's actions in utilising these indirect means, and the means themselves. Mises also separates the abstract aspects of real capital goods; these goods are historical facts of a particular historical context. And Mises analyses the production processes that people engage in while using capital goods — processes that now run through the entire economic order.

Hayek's Contribution ¹⁰⁶

Hayek built further and very systematically on these foundations. He now named the economic formation which Menger and Mises both examined; Hayek called it the capital or the production structure. From the outset, Hayek makes it clear that the production processes summarised under this term, subsume and run through the particular investments made in all the firms involved. This is because the production process goes right down to final consumption as the finishing point. The starting point is the production stage furthest removed from this final consumption point. Hayek analyses the following issues far more closely:

a. the division of the capital structure into “stages of production” that are closer to/further from the final consumption stage. The heterogenous capital investments used in these stages, in the form of both ‘circulating’ and ‘fixed’ capital, are *complementary* to one another in the production process. All investments are thus linked into the one production structure. Some investments are more versatile — usable in a number of production stages. Others are more specific, — they can be used in fewer stages of the production structure.

b. people's preferred time shape of consumption as the driving force which shapes and reshapes the production structure, bringing its time shape into line with (consumer-) savers' changing preferences.

c. how production processes are changed in ‘length’ — made ‘shorter’ or ‘longer’. ‘Lengthening’ involves the shifting of versatile resources into stages further removed from final consumption and building up the capital combinations in these stages, and then in subsequent stages of production. This process requires a temporary dip in the *rate* of flow of final outputs until all the links are completed down to final consumption, after which consumption improves: larger quantities and a wider range of final outputs, improved in quality, are now produced. Many outputs are dropped and new products added. Final outputs are also now available in later time periods than before.

d. Capital goods are the elements forming the production structure, which is the overall means that people use to produce that range of final outputs over the time-periods that they want, in composite. The analytical issue therefore is *not* the simple physical replacement of these goods. Rather it is to adjust the use and the output of capital investments to form that interlinked production structure corresponding to people’s desired time-shape of consumption. The latter is the rationale of the changing heterogeneous capital goods produced.

e. The key issue now is: How are all these widespread production activities coordinated? How do the appropriate people get answers to the following — crucial — questions: Which particular capital investments should be produced? In what quantities, types, etc? Where to install them? Which investments should people stop producing? Which should they produce more/less of, or transfer — where? Which new capital goods should be produced, in what quantities and types, and where do they go? Which capital combinations should be continued/discontinued/changed? Which investments should be shifted to which combinations? Where? Which *new* combinations should be produced or formed? Where? — and so on.

Mises noted that all prices included time-preferences in their formation. Hayek extends, deepens and systematises this insight to include all rates of return (negative and positive) and all capital gains and losses. All these vary according to *a.* where in the production structure each investment is utilised, *b.* where else in the structure it could be used as circumstances change, *c.* the relative ease/difficulty of combining it with other investments in different capital combinations. Hayek also analyses the various systematic changes in relative prices; returns on different investments; and in the values of various capital assets that occur as the production structure is ‘lengthened’ or ‘shortened’. *d.* Hayek is quite clear that actual production structures are historical happenings — capital investments reflect the particular circumstances in which the investments were made and are used. In the historical reality

“We start with an assortment of non-permanent resources, which is the result of a particular historical development...”¹⁰⁷.

Historical circumstances can be “foreseen only very imperfectly”, so the “historical process [consists] of a succession of unforeseen changes”. For this reason “the character and composition” of “the capital that exists” has been built up “by constantly reusing accumulated real assets for new purposes that were not foreseen”. Thus “the equipment which is given at any moment is always the inheritance from [such] a past...”. As a result the kinds of production goods that happen to be available have “never been built up consistently...”. This means that existing capital investments are composed “in large part of items which it is either impossible or unprofitable to reproduce”. This in turn influences the “particular form”, kind and “composition” of the investments that “will be undertaken”. In short, in the historical reality, “what we really have to deal with is a process of continuous change”¹⁰⁸.

But it is always possible to ask of these heterogenous and changing investments: which final good(s) do they contribute to? Which other capital goods and investments do they combine with? Where does this capital combination stand in relation to those final outputs it helps to produce? Thus general categories and classifications of human action are the key to analysing the ever-changing historical reality in a systematic and orderly fashion.

Summary and Comments

Thus Menger classified goods into successive orders in relation to first-order — consumption — goods. These categories clarified how people used these goods. Mises worked out the implications of people’s actions in utilising indirect means — capital goods — to reach their goals. Mises also set out the abstract general features of these indirect means — their “convertibility”, etc. Hayek named the economic formation involved — the capital/production structure — and went much further and deeper into all these aspects. Chronologically: Hayek’s work was published almost entirely between 1928 and 1941. Mises’ key article on ‘Inconvertible Capital’ came out in 1931. Thereafter Mises’ analysis of capital was published in *Nationalökonomie* (1940) and in *Human Action* (1st edition, 1949). Thus in point of time, Hayek in fact wrote on capital mostly before Mises did.

It is appropriate here to compare the analytical and historical issues involved in the study of human action — the study of what people actually did, with the comments on, and criticisms of the older Austrians, made by three major philosophers of economics. This comparison will underline the point that *these analytical and historical issues are completely independent of*

neoclassical economics; there are *no channels through which even their existence can be suspected* by economists. I then go on to McCloskey's contention that economists and historians are both story-tellers.

To facilitate the comparison, I recapitulate a list of the main issues found in the works of the older Austrians. *These issues are unknown in the natural sciences.*

What History Does, Natural Science Does Not Know

It is worth comparing the study of the social world with that of the natural world. The latter does *not* contain the actions of human beings — ie human history is *not* studied by natural scientists. Therefore, natural scientists have no professional knowledge of history or of the kind of issues involved in its investigation — as raised and discussed by the older Austrians. Natural scientists have *no* professional way of learning the following:

a. Historical happenings are complex outcomes of many different and separable influences.

b. Historians therefore need to consult several disciplines in their study.

c. All history is the actions of human beings — if not, it is a field of the natural sciences. Historical facts are identified by time and place, and people involved. Any fact *not* defined thus, belongs to the natural world.

d. Historical facts consist of particulars linked together by regular interconnections and therefore discerned through theoretical lenses. Most analytical schema are extremely simple and common to all minds — eg the terms “towns”, “trade”, “battle”, etc. These perceptions are so straightforward that people, including historians, don't realise they are in fact referring to a continuing set of interrelationships, with changing components — ie a scheme of classification. But with more complicated social structures, involving the interactions of vast numbers of people, the theoretical schema — the abstract picture — has to be separately built up and then handed over to the historian. This schema can give only the general principle of operation of this complex structure; the details depend on the specific historical context — ie the *concrete* actions of the people in whose actions these phenomena appear. With such complicated phenomena, historians who rely on the visible and immediately obvious will miss crucial relationships and make the wrong connections.

e. Law, language, morals, customs, habits, prices, interest rates, money, the economic order, *et hoc genus omne* — are all the unintended results of historical development. They appear in people's actions, as an additional aspect or feature, as people act on “ends-independent” or “means-oriented” rules.

Complex phenomena embody the information about particular circumstances available to all their participants. They are instrumental, enabling participants to achieve their several aims.

f. Apart from “ends-independent” social formations, there are “ends-oriented” organisations or social structures, built around specific ends or a hierarchy of status: tribe, caste, manor, club, company, etc.

g. Only *after* law, language, the economic order, customs, etc had developed historically did people recognise they presented *both* a problem for analysis *and* a subject for historical investigation.

h. Ideas guide people’s actions — ideas held implicitly. They lead people to act on certain rules and drop others. What people regard as valuable/less valuable — their ends, whether material or non-material — ultimately form prices.

i. Thus human actions are *subjective* in nature: they are the meanings attributed to physical movements and things. These meanings are *not* psychological or emotional; they refer to abstract categories. ‘Money’ is a general category covering all means used in indirect exchange. *What* things are so used and *whether* they are so used — depends on the meanings of the actions of the people involved. We are not looking here at the emotions or psychology of these individuals, but whether their actual actions fit the classification, indirect exchange.

j. The classifications or categories of human action are common to all human minds; they provide meaning to the physical phenomena involved. What people *actually* use as means, eg as money; what they *actually* value as ends — what they actually buy — are concrete historical circumstances of time and place.

Thus the categories of human action, the analytical schema for complex phenomena, cover only *one* aspect of the historical reality.

k. Historians study particular facets of specific historical contexts, from the residues left behind by the people whose actions resulted in that context and its happenings. These residues are documents, buildings, landscape features, furniture, artifacts, etc. People’s actions also give rise, in certain historical contexts, to quantitative and statistical materials. These are historical data giving information about that context. In their studies of people’s concrete actions, historians utilise the abstract categories of human action. Now, as people already interact with one another, they already have in their minds not only general ideas about action but also an ‘understanding’ of their fellow-humans’ motives, plans, etc, as also of the particular circumstances in which they act.

— The abstract categories of human action are systematic, refined, clarified, precise, as compared with people's ordinary everyday concepts. Historians' professional 'understanding' of the uniqueness of particular historical developments is a professional exercise.

Scientists and human action

It is quite clear from the above listing that with respect to the study of human action — whether history or the general categories, praxeology — natural scientists would have to be classed with lay-people. This is most unfortunate, since scientists are, of course, highly trained in scientific techniques. But it would have to be said that when it came to analysing human action, studying people's concrete actions, scientists still use ordinary commonsense ideas, and have the ordinary person's (non) appreciation of historical developments. It must be emphasised that *only* professional students of human action are aware of this difference between professional and lay ideas; natural scientists and lay-people are totally unaware of this. Similarly, professional historians know full well that they have to acquire a professional historian's 'historical sense'; lay-people have no idea what this is. And historians would certainly appreciate the general sense of what the older Austrians said about the general analysis of human action, though of course the writings of the older Austrians are almost totally unknown to historians. But to natural scientists, all these professional issues concerning the study of history are a closed book.

This means that philosophers of science too can have no channel through which to learn what is involved in historical study, in the study of human action. Moreover, Popper and others have said there is no difference in the methods of the natural and the social sciences. The implication from this is that whatever issues are raised and discussed for the natural sciences, are, by the same token, issues too for the social sciences, in exactly the same way. This then reinforces the first block, to learning about the investigation of human action, the study of history.

Neoclassical economists model themselves after natural scientists and follow the methodological prescriptions of philosophers of science. Thus neo-classical economists are even further removed from even the remotest possibility of learning about the issues involved in studying human action. Moreover, since they stand firmly facing natural scientists and philosophers of science, that is the *only* direction from which neoclassical economists could begin to hear about human action. (For McCloskey see below). And philosophers of economics must, of course, follow those they study.

Professor **Blaug**, for one, finds in Mises “an anti-empirical undertone wholly alien to the very spirit of science”. A positivist lens means that to Blaug, Mises can only be saying that “even the verification of assumptions is unnecessary in economics”. Naturally Blaug finds this to be a “travesty of classical methodology” and definitely “not a restatement”. To his positivist eye, “Mises’ statements of radical apriorism are so uncompromising they have to be read to be believed” and Mises’ views are “so idiosyncratic and dogmatically stated we can only wonder...they can have been taken seriously by anyone”¹⁰⁹.

For T.W. **Hutchison** the natural sciences constitute the sole possible archetype both of systematic inquiry and of real-world phenomena. Thus it cannot even be hoped that the precision and the regularity found in the natural world could even be approached, let alone matched, in the social world. However (he says), one can certainly try to approach the standards of inquiry of the natural sciences. As Hutchison puts it:

“There is no reprehensible ‘pretence of knowledge’ in *trying* to follow the criteria, and uphold the standards of the natural sciences, as far as the material allows”.

It is not pretentious to “[try] critically to see how far the material permits one to go”, — in economics, this “has not been completely negligible”.

Hutchison further underlines how far economic materials fall short of the standards set by the natural world:

“it has always been vital...to emphasise how the study of economics simply has not provided laws on a par with those of some natural sciences; ...it is only epistemologically realistic to recognise how unlikely it is that the material with which the economist deals will yield ‘laws’ on a par...with those of physics”.

But because of the “modern pretensions of mathematical and quantitative economics”, it is especially necessary to “insist...on these limitations and on the dissimilarities between the material of the natural and social sciences”¹¹⁰.

We may point out here that since the natural sciences do not study the social world, such a positivist framework systematically blocks off any channel through which the historical nature of the social world might be glimpsed or even perhaps apprehended. Therefore, Hutchison has to stop with the immediately obvious: that social phenomena are not those of the natural world; he cannot go beyond.

For Hutchison, the natural sciences set the limits within which the social sciences can develop. Thus he finds it

“erroneous and misleading to suggest that the general propositions of economists and sociologists can derive...greater necessity or reliability

from... introspection [so that] they are somehow...more securely and authoritatively based than the natural sciences”¹¹¹.

This, says Hutchison, is “vaguely formulated and somewhat pretentious”. As he sees it,

“an infallible inner voice informs [subjectivists] of the laws of social economics”.

This procedure means that these propositions are “dogmatically protected against testing”. Such propositions “have never been specified with sufficient lucidity and precision” for “critical appraisal”¹¹². Mises in particular

“fails to spell out just how...from his *apriori* axioms regarding... speculative actions,...non-trivial conclusions of ‘apodictic certainty’ can be obtained which relate to real world conditions of uncertainty and ignorance”¹¹³.

Hutchison draws out the dire implications of trying to diverge from the natural sciences: it would be

“disastrous to refuse to recognise, or try to uphold, *any* common epistemological criteria or standards...shared by natural and social scientists alike...That way lies permissive chaos [followed by] the dogmas of mob rule [and then] the dictatorship of some genocidal...boss, such as ‘the great scientist’, Stalin”¹¹⁴.

He insists that

“the ‘pretence of knowledge’ lies...in claiming for economics a precision and reliability similar to or even greater than those of the natural sciences, and in claiming the power to which such success would entitle one — if it ever were even approximately achieved”¹¹⁵.

It may be noted here that Mises was once asked, “What would you do if you were appointed economic dictator?” His immediate response: “I would resign”.

Comment

The above summary of some of the major comments on the older Austrians shows that neoclassical philosophers of economics are all fully acquainted with the problems and the issues of work in the natural sciences. But these philosophers, by the same token, demonstrate they can have no idea of the issues involved in the study of human action — both general and historical.

Caldwell's Sympathetic Criticisms

Bruce Caldwell, although highly sympathetic to the Austrians, and despite the title of his methodological work, remains nevertheless squarely within the positivist reference-framework¹¹⁶. In this framework, the natural sciences are the archetype of all systematic inquiry into the real world. Therefore, the older Austrians are assumed to proceed likewise. And so Caldwell can only see in Mises' work an apriorism which in effect floats in a vacuum, lacking all connection whatsoever with the study of human action, both in its concrete/historical and abstract/theoretical aspects. Because he still refers to the positivist framework, Caldwell can only see in the position of the older Austrians a particular stance towards "empirical testing"; all else is filtered out.

As he puts it:

"Neither the testing of the assumptions of a hypothesis, nor the comparison of its implications...with the data, are considered useful..."¹¹⁷.

The Austrians (he says) hold that

"such testing is unnecessary because the postulates or actions of economic science are known to be...a priori true"¹¹⁸.

Caldwell sees the Austrians as saying: Since from true premises true conclusions follow, what should be evaluated are "verbal chains of logic rather than the predictions of the theory". But in any case, such predictions are "admittedly unfalsifiable". They follow nineteenth century writers and Robbins:

"empirical studies should only be used to decide whether a particular theory is *applicable* to a given situation"¹¹⁹.

Caldwell offers some highly sympathetic criticisms of what he sees as some key elements in the Austrian position as thus outlined. An examination of some of these should help to bring out and to underline particular aspects of the study of action. A "primary postulate" (says Caldwell) is that "all action is purposeful ...". One counter example (suggested by Nozick): conditioned behaviour — this is *non-purposeful*¹²⁰.

Some comments to illustrate the *analytical* significance of action:

a. Mises demarcates the field of action by excluding that which has to be studied by the natural sciences of physiology, biology and neurology. Then people's *actions* are all those that fall into the category: using means to achieve ends. He emphasises that psychology and praxeology deal with *analytically* distinct and separate areas.

b. When looking at what a 'brainwashed' person, eg from a religious cult, is doing: *i* Is this a physiological reflex requiring an explanation from neurology?

ii Or can we see that this person — a young female — is using means to achieve ends? — Suppose she obeys orders to sell pottery and give all the money to the cult leader, who dominates all his followers psychologically and emotionally. In her actions we can discern the use of means — making and selling pottery — to obtain an end — giving money to the cult leader. — Now suppose she is not in fact ‘brainwashed’ but believes implicitly in the cult leader and therefore gives him the money from selling pottery. — In *both* cases her actions affect production processes *identically*: clay, etc are produced, and whatever goods and services the cult leader buys are also produced.

Now it is historians who deal with the particular and the specific, so their narratives would *have* to differ according to the actual circumstances of the case. Psychology and emotions are a significant part of the concrete situation here. But it is also crucial that historians should know that what affects production are this girl’s *actions and actions alone*: her manufacture and sale of pottery (her use of means) and her giving the proceeds to the cult leader (her achieved end).

c. Someone who undergoes hypnosis to receive a post-hypnotic suggestion to deal with a problem is using means (submission to hypnosis) to reach an end (handling a problem). Someone who participates in stage hypnosis is using means (undergoing hypnosis) to obtain an end (the experience; diverting the audience). There is action, not automatic reflexes or physiological processes.

d. Mises has already seen that people act on custom and habit, and on legal and moral rules. These, he points out, are *means* that people utilise in trying to obtain their several ends. Custom and habit *do* change: as some people modify what they do, and others then imitate them. As Hayek also points out, exchange between hunting bands originated with a few individuals acting on a new rule, with others then following. From Coke through Mandeville to Menger, Mises and Hayek, the whole object of the exercise has been to analyse the character of just such social formations. As Mises has observed, people participate in an exchange order by following custom and habit; and participation in such a worldwide order *is* the *means* whereby they achieve their ends — Mises reiterates often that society is a means.

Caldwell raises the question of “competing systems whose postulates are claimed to be *a priori* true”. This creates “the dilemma” of adjudicating amongst such systems. The Austrian literature contains “no discussion of theory choice”, and so “no grounds are offered on which to base a choice”. Caldwell points to the ‘classical-Marxian’ system propounded by Hollis and Nell. Their fundamental axiom is “the reproduction of the economic system”¹²¹. Since the system wishes to maintain itself, it ensures that the necessary productive functions are continuously performed, by people who replace one

another. — In other words, when people engage in production and exchange, they are actually doing whatever is necessary to maintain and reproduce an economic system which uses people to perform the required tasks.

This is precisely the issue between the Historical School and Menger, Mises and Hayek. Menger's point is that people and their actions are directly known, they are empirical. Mises points out that in the Historical School's view, people do not act. Instead, a large anthropomorphic being acts and plans exactly as people might have done, had they been acting beings. Thus people are mistaken when they think they act. They do not: it is an overarching being who actually manipulates them for its own purposes. Mises and Hayek reject this approach because it is animistic. Mises points out that the thinking and planning of any such super-being would hardly be accessible to ordinary human beings¹²².

Caldwell also asks

“...why stop at the level of the acting human agent; why not press on to chemical, biological and physical levels?”¹²³

Mises of course considers and objects to this approach as well, because human action has meaning. As he points out, the physiological view in effect

“[imputes] all manifestations of the human mind to the material — physical, chemical, biological and physiological — events that have brought them about”.

Mises presses the approach to its logical conclusion: it follows that, with “perfect knowledge”, it would be possible to

“show how the material factors have necessarily produced in the man Mohammed the Moslem religion, in the man Descartes coordinate geometry, in the man Racine, *Phaedra*”¹²⁴.

As against this, Mises insists that there is an unbridgeable gulf between ideas and material, bodily factors. Ideas have meaning; they can also be shown to be correct or incorrect¹²⁵. This cannot be said of physiological processes.

McCloskey: Economics Is History

D.N. McCloskey argues that “history is what [economics] is”¹²⁶. Both economists and historians “[try] to do the same thing...namely, to tell plausible stories about the past”¹²⁷, which is “how we make sense of what has happened”¹²⁸. Economists and historians practice “simulation...the telling of hypothetical stories disciplined by fact”. Examples are “simulation of the American economy in recession or of the Midwest in the railroad age”. So too

“this historian of medieval English law” imagines what lay behind particular legal rules “by 1300”. And so:

“Like an engineer or applied economist, he practices the trick of simulating the important possibilities disciplined by expert knowledge of the social structure”¹²⁹.

Economists “[muck] about in...computer centres”, historians “[think] stories through and [check] to see if they square with historical facts laid up in archives”¹³⁰.

A comment:

a. Historians, to repeat, study particular historical contexts. These contexts separate themselves because of changes in the *content* of people’s actions. Thus the residues left behind — ‘the sources’ — are specific to each context. Each collection of sources requires a specific array of skills to even learn how to use them, never mind the problems ahead. So historical expertise has to be in the specific sources of a specific context. There are *always* gaps and holes in the sources, always infuriatingly at key points, and of course much that was commonplace at the time never gets recorded — why do it? Thus it is only from a thorough knowledge of the surrounding fabric of particulars that one can *try* to fill in gaps or clear up obscurities. Knowledge of the context means the ability to say, “No, that could not have happened: people didn’t think that way/certain things hadn’t happened yet” or “Yes — that fits in with whatever else was going on at the time”. From a study of a substantial range of sources, D.W. Sutherland (the historian McCloskey refers to) investigated certain of the legal developments that occurred in a particular period in medieval England. His work added to and modified what others had done for the same and related developments in that period. Historical fiction (“simulation”) is not history.

b. McCloskey says “Applied economics...is the economic history of the recent past”. Certainly the quantitative and statistical materials are produced in a recent historical context. But for economists, the object of the exercise is to put a ‘*theory*’ through its paces, — dates are merely identifying labels for the various data-sets.

c. McCloskey suggests that “facts” can be simply found resting in archives, rather like billiard-balls in a rack. Let us see what Prof G.R. Elton says:

“When, some years ago, I studied the enforcement by Henry VIII’s government [of certain Reformation measures], I had a variety of historical evidence at my disposal — statutes, proclamations, circular letters, propaganda treatises, court records, official and unofficial correspondence. All of it posed various problems of interpretation and assessment; none could be simply transferred from the record to the

account, as indeed is always the case”¹³¹. (Historians have to know the *context*).

Conclusion

Thus in the social world, the reality is historical — the particular facts of time and place, a complex of specific happenings, the actions of particular people. The older Austrians directed their analysis to this reality. I hope all the foregoing has made it clear that in the older Austrians we see the latest, most far-reaching and systematic extension of a line of analysis stretching back 400 years. The investigators in this line gradually identified and examined key social formations, and developed the analytical tools needed by historians to recognise these formations and comprehend their workings in the historical reality.

FOOTNOTES CHAPTER 1

1. See ch 2 for a more complete account and for references.
2. J.H. Baker, *An Introduction to English Legal History* (London: Butterworths, 3rd ed, 1990). Ch 11.
3. Again see Ch 2 for a fuller account and references.
4. Bernard Mandeville, *The Fable of the Bees*, ed F.B. Kaye (Oxford: Clarendon Press, 1924). Customs, skills, habits: Vol II, pp. 140, 141, 142, 144, 187, 322. Shipbuilding: Vol II, pp. 142-43. Dyeing: Vol II, p. 145. Scarlet: Vol I, pp. 356-57. Language: Vol I, p. 257. Law: Vol I, pp.
5. Carl Menger, *Problems of Economics and Sociology* (Urbana: University of Illinois Press, 1963) pp. 130-73.
6. Menger, *Problems*, pp. 174-75 (law and language); p. 175 fn 91 (“analogous”); pp. 174-77 (Burke).
7. Menger, *Problems*, p. 177.
8. Menger, *Problems*, App. VII (law); quotes: p. 229 (“statutes”), p. 232 (“spoiled”); pp. 225-229 (from custom to law) pp. 229-232 (legislation). Auxiliary: p. 46. Theoretical sciences and reality: pp 62-63. Theory and history study same phenomena: p. 68. History is complex: p. 75. Many disciplines: pp. 77-78.
9. Menger, *Problems*, p. 79.
10. See fn 8.
11. Menger, *Problems*, pp. 130, 133, 146-59. Quote from p. 158.
12. Ludwig von Mises, *Epistemological Problems of Economics* (Princeton N.J.: Van Nostrand 1960), pp. x, xii, xiv, xvii, chs 1, 2, esp pp. 58-59, pp. 137-38; *idem*, *Theory and History* (New Haven, Conn. Yale University Press 1957) pp. 199-205, 208, 215.
13. *Epistemological*, p. 26 (“the laws”); p. 9 (“building stones”), p. xii (“delimited”).
14. *Epistemological*, p. xi, *Theory and History*, p. 204.
15. *Theory and History*, pp. 201-202.
16. *Epistemological*, p. 101 (“nothing”); p. 105 (“dilettantist”); *Theory and History* p. 292 (“almost”). Overall: *Epistemological*, pp. 101-102, 105, *Theory and History*, pp. 292-93.
17. *Theory and History*, p.

18. *Epistemological*, p. vi (“Historical”); p. 79 (“Human”).
19. Ludwig von Mises, *Socialism* (London: Cape 1950), pp. 295-97. Mutuality, authority: p. 296. “Living organism”, “lifeless machinery”, p. 295. Army unit, horse and cart: p. 295.
20. *Socialism*, p. 296.
21. Language: Ludwig von Mises, *Theory and History* (London: Cape 1958) pp. 228, 231-32. “The social edifice”: *Socialism*, p. 297. “Our civilisation”: Ludwig von Mises, *Human Action* (Chicago: Regnery, 3rd rev. ed., 1966), p. 506. Law: *Socialism*, pp. 43-47, 512-513; *Human Action*, p. 654 (“Property rights...are the outgrowth of an age-long evolution”). The market economy: *ibid* pp. 265, 267. The division of labour: *ibid*, p. 468; Ludwig von Mises, “The treatment of ‘irrationality’ in the social sciences” [1944], repr. in Richard Ebeling (ed) *Money, Method and the Market Process* (Norwell, Mass: Kluwer 1990) p. 33. Indirect exchange: *Human Action*, p. 506. Accounting: *ibid*, p. 262.
22. History: *Theory and History*, pp. 196, 378 (quote). Society: *Human Action*, p. 188. Market society: *ibid*, p. 319 (quote). Law: *Socialism*, pp. 512-513 (quote, p. 573).
23. Ludwig von Mises, *Human Action* (Chicago: Regnery, 3rd rev ed., 1966) pp. 405-408; *idem*, *The Ultimate Foundation of Economic Science* (Princeton NJ: Van Nostrand 1962) p. 45 (“history”). Two branches of human action: *Human Action*, pp. 30, 59; *Epistemological*, pp. 1, 68, 79; *Ultimate*, pp. 41-46. Complexity of history: *Human Action*, pp. 31, 41, 49, 51; *Epistemological*, pp. 29, 99; also pp. 99-100; *Theory and History*, pp. 208-209.
24. I summarise here arguments developed at greater length in Ch 5, where full references are given.
25. See fn 24.
26. *Epistemological*, p.
27. “Trend”, pp. 22, 24, 31.
28. “Scientism” pp. 76, 77, 78 (documents); pp. 76, 77, 79 (mental categories); p. 79 (no different theories); p. 75 (“quote”); “Dilemma”, pp. 123, 124 (“study of society”); Scientism, p. 73 (“have distinct” and longer quote).
29. Scientism, p. 79, *Money, Capital*, pp. 17, 20, 64; “Present” p. 171; *Monetary Theory* pp. 84-87; “Socialist calculation I-III” p. 127; *Pure Theory*, p. 17.
30. “Scientism” p. 82 (social wholes) p. 79 — quote; pp. 55, 71, 74, 76, 82, 83, 84; “Facts” pp 57, 71, 72, 75, 76.
31. “Scientism” p. 72 (“concrete”); “Dilemma” p. 124, also see p. 128 (“practitioners”).
32. “Dilemma” pp. 124, 123 (“theoretical”); p. 129 (“the task”).
33. “Degrees of Explanation”, *Studies in PPE*, p. 18 (“the presence”; “ready made”; “a sense”); also “Dilemma” p. 129 (“mechanical”); Degrees p. 18 (mechanical test); “Degrees”, p. 18, “Dilemma” p. 129 (“art”).
34. “Socialist Calculation I”, p. 127 (“empirically”); p. 126 (all other points).
35. “Economics and knowledge”, p. 50 (“bits”); pp. 46 (“people”); p. 55 (“questions”); p. 46 (remaining quotes); p. 47 fn 12 (“ideal types”).
36. “Scientism” p. 55; “Facts” pp. 70-71 (marking of facts).
37. “Facts” p. 71.
38. “Facts”, p. 71; “Scientism”, pp. 71, 72; “Facts” p. 71 (“intelligible”, “tell us”).
39. “Facts”, p. 71 (visible); p. 36 (conceptual realism); p. 54 (popular vague); p. 56 (remaining points).
40. “Facts” p. 59 (all points).

41. "Facts" pp. 59-60.
42. "Facts", p. 60.
43. "Facts", pp. 62-63.
44. "Facts", p. 64; "Scientism" p. 28 (quote).
45. "Scientism" p. 29.
46. "Facts" p. 65 (add), p. 65 (unfamiliar, no mind).
47. "Scientism" p. 34.
48. "Facts" p. 68.
49. "Scientism" p. 39 (formations), pp. 82-83 (instrumental); p. 84 (knowledge).
50. "Scientism" p. 34 (only learn); then pp. 55, 85; p. 37 (quotes); pp. 36-37 (overall argument).
51. "Scientism" p. 68 (using theories); "Facts", p. 72 (up to "schemes"); pp. 72-73 (contradictory).
52. "Scientism" p. 72 all quotes except "logically prior" (Facts p. 72). Thereafter "Facts" p. 73 (technique); p. 69 (type of theory); "Scientism" pp. 35, 55, 85; "Facts" p. 73 (problem selects).
53. *Hayek on Hayek*, p. 142 (resented), also "Pretence" p. 32 (simple phenomena).
54. "Pretence" p. 33 (anxious); p. 25 (correlation, false theory) p. 27 (quote — "particular").
55. "Pretence", p. 25 (picture), pp. 25-26 (general).
56. "Pretence", p. 29.
57. "Pretence", pp. 33, 26.
58. "Scientism" p. 42.
59. "Notes on the evolution...", *Studies in PPE*, pp. 74, 76.
60. *Cosmos* etc: "Confusion of Language", *New Studies*, pp. 72-80; LLLI ch 2; *Constitution*, pp. 150-51 (changing rules); p. 203 of *Socialism and War* for "Freedom"...
61. "Kinds of Rationalism", p. 92 (detail); acting on complex rules: "Errors of Constructivism", *New Studies*, pp. 7-10; LLLI p. 18; Rules, Perception, p. 43. Also see "Notes", *Studies in PPE*.
62. "Errors", p. 13 (vast new).
63. Groups: "Errors"; "Three Sources of Values"; "Notes" (*Studies in PPE*) p. 67 for definition.
64. LLLI p. 72 (far reaching). Law: LLLI chs 4-6; "Legal and Political...Hume" (*Studies in PPE*).
65. Equilibrium: *Socialism*, pp. 163, 196; *Human Action*, pp. 250, 356, 3258, 257-58, 613, 710, 711. Pricing is social: pp. 338, 614, 760, 873. Individual in market: p. 331.
66. *Human Action*, p. 315.
67. *Human Action*, p. 874.
68. *Human Action*, p. 257.
69. *Human Action*, p. 275.
70. *Human Action*, p. 261.
71. *Human Action*, p. 261.
72. *Human Action*, p. 276.
73. *Human Action*, p. 278.
74. *Socialism*, p. 23.

75. These terms are taken from: Hayek's early essays, collected as *Money, Capital, Fluctuations* (London: Routledge, 1984) pp. 95, 99, 86, 66; *The Pure Theory of Capital* (1941) pp. 16, 18, 22, 26, 27, 28, 32, etc; "The Meaning of Competition", *Individualism and Economic Order* (Chicago: University of Chicago Press, 1948). Also see his essay, "Economics and Knowledge", p. 44, in the same volume, together with his essays on "The Use of Knowledge" and "Socialist Calculation, I, II, III".
76. "The Trend of Economic Thinking", pp. 18, 19, 26, 27, 31; "Planning, Science and Freedom", *Socialism and War*, ed Bruce Caldwell (Chicago: University of Chicago Press), p. 215.
77. "Scientism and the Study of Society", *The Counter-revolution of Science* (Glencoe, Illinois, 1955) pp. 55, 57, 71, 74, 76, 82, 83, 84; "The Facts of the Social Sciences", *Individualism*, pp. 57, 71, 72, 76. Quote: "Facts", p. 76.
78. "The Use of Knowledge in Society", *Individualism*, p. 86
79. "The Meaning of Competition", *Individualism*, p. 98.
80. See ch 5 for complete references.
81. "Meaning", p. 94 ("opposed"); p. 92 ("has little"); p. 94 ("essential, 'this moving'"); p. 93 ("absurdity"); "Competition As a Discovery Procedure", *New Studies in Philosophy, Politics, Economics* (London: Routledge, 1978), p. 179, 182.
82. "Meaning", pp. 100-101.
83. "Meaning", pp. 101-102.
84. "Discovery", p. 181; "Meaning", p. 96.
85. "Meaning", p. 104 ("in the given"); p. 101 ("always").
86. "Meaning", p. 104 (all quotes).
87. "Meaning", p. 99.
88. "Meaning", pp. 104 ("variety"); p. 96 (alternatives); p. 97 (suppliers).
89. "Meaning", p. 106 ("continuous"); "Discovery", pp. 181-82 (look for); "Meaning", p. 99 ("constant"); "Discovery" p. 187 ("disappointed", "relative incomes", "statistics"); also see p. 186.
90. "Discovery", p. 181; "Meaning", p. 102 ("succession").
91. "Discovery", p. 188-89.
92. "Discovery", p. 186.
93. The catallaxy is discussed in "Discovery", pp. 182-86; "The Principles of a Liberal Social Order", *Studies in Philosophy, Politics, Economics* (London: Routledge 1967), pp. 164-65, 170-71; *Law, Legislation, Liberty*, Vol II (London: Routledge 1973, ch 10; "The Confusion of Language in Political Thought", *New Studies*, pp. 90-92. Quotes: "fundamentally": "confusion" p. 90, "Liberal" p. 164; "a complex...economics": collated from "Discovery" p. 182, *LLL II* p. 108; "brought about": *LLL II* p. 107, also see "Liberal" p. 164; "[t]he market"; *LLL II* p. 107; "multipurpose": *LLL II* p. 115; "serves...members": collated from *LLL II* p. 108, "Discovery" p. 183.
94. See fn 29. "Liberal" p. 164 ("great"); *Socialism*, p. 295 ("friends"); *LLL*, I, ch 10, pp. 184-85, fn 1 (Menger).
95. *Law Legislation Liberty*, Vol II (London: Routledge 1976) p. 113 (quote). For over-all argument, see "Competition As A Discovery Procedure".
96. Menger discusses higher order goods in *Principles of Economics*, trans James Dingwall and B.F. Hoselitz (London: New York University Press 1976), pp. 55-89, 106-109, 149-171.
97. *Human Action*, pp. 503-504 ("concrete"); pp. 91-92 (all participants); pp. 93-94 (classification of goods).

98. *Human Action*, pp. 93-94 ("intermediary"); pp. 482, 490, 529, 530.
99. *Human Action*, pp. 493, 503, 514.
100. *Human Action*, pp. 514, 485.
101. *Human Action*, pp. 491-92.
102. *Human Action*, p. 493 (quote); pp. 479-86, see esp. pp. 480-81, 491.
103. *Human Action*, p. 504 (quote); pp. 503, 504; *Epistemological*, p. 218.
104. *Human Action*, pp. 493, 497, 506, 507, 513. Quote: p. 506.
105. *Human Action*, pp. 506, 507, 492; the West: pp. 497, 500; nineteenth century: p. 501; civilisation: p. 260.
106. Complete references are given in Ch 5.
107. *Pure Theory*, p. 166; also see pp. 87, 167.
108. *Pure Theory*, p. 16 ("foreseen"); p. 87 ("historical"); *Hayek on Hayek, An Autobiographical Dialogue*, ed. Stephen Kresge and Leif Wenar (Chicago: University of Chicago Press, 1994) p. 142 ("character", "constantly"); *Pure Theory*, pp. 265, 87, 166 ("in large"), also see p. 263; p. 264 ("what we"); also see p. 167.
109. Mark Blaug, *The Methodology of Economics* (Cambridge University press, 2nd ed, 1992) p. 81 ("an antiempirical", "even", "travesty"); p. ("Mises"); p. 81 ("so idiosyncratic").
110. T.W. Hutchison, *The Politics and Philosophy of Economics* (London, New York University Press 1984), p. 218 ("There is"); pp. 218-219 ("critically"); p. 218 ("it has", "modern").
111. Hutchison, p. 207.
112. Hutchison, p. 206 ("vaguely" to "critical").
113. Hutchison, p. 209.
114. Hutchison, p. 218.
115. Hutchison, p. 219.
116. Bruce Caldwell, *Beyond Positivism* (London: Routledge, rev. ed., 1994).
117. Caldwell, p. 120.
118. Caldwell, p. 130.
119. Caldwell, p. 123 (all quotes).
120. Caldwell, p. 129.
121. Caldwell, p. 131 ("competing"); p. 132 ("dilemma"); p. 130 ("no discussion"); p. 131 ("no grounds").
122. Hayek, "Trend of economic thinking"; Mises, *Ultimate*, pp. 11-12, 31-32; *Theory and History*, pp. 106-107; 111-112.
123. Caldwell, p. 129.
124. Mises, *Ultimate*, p. 29 ("imputes", "show how").
125. *Theory and History*, pp. 97-99.
126. D.N. McCloskey, "Economics as an Historical Science", in W.N. Parker (ed) *Economic History and the Modern Economist* (Oxford: Blackwell 1987), p. 69.
127. McCloskey, p. 64.
128. McCloskey, p. 65.
129. McCloskey, p. 66 ("simulation", "the historian", "Like").
130. McCloskey, p. 69.
131. Elton, "Two Kinds", p. 86.

CHAPTER 2

The Unintended Results of Historical Development: The Beginnings of the Analytical Framework

AS THEY DEVELOPED OVER TIME, a number of social and economic phenomena came to be recognised (by their students) as both highly orderly and of the utmost usefulness. These phenomena were human activities but they had not been deliberately instituted. The problem therefore arose of how to account for them.

1. This situation was first confronted in the English common law, in the attempt to characterise it in general terms for fellow-lawyers, for students of the law, and later, in attempts to protect it against royal intervention.

a. The antiquity of the common law was the first of its characteristics to be explicitly recognised and articulated. Its age was at first taken quite literally. One Sergeant (in the fourteenth century) supposed the common law had existed since the world began.¹ Sir John Fortescue thought it to be older than the Romans or the Venetians (and therefore the best.) Sir Edward Coke likewise supposed that the various Anglo-Saxon codes published in his time simply omitted unwritten customary law — i.e. the common law had already existed during the earliest Anglo-Saxon times.² What is significant here is not the inevitable naivete of these views, but the recognition that the common law was an *historical* phenomenon.

b. It was recognised that the common law was not an invention. Rather it was seen to be practice — not just long-continued practice, but usage which had survived a long selection process; — a process which eliminated the less useful and retained the more useful customs. Written legislation or edict went

through no such elimination test of its general usefulness, and hence often proved a handicap to the people.³

Sir Edward Coke

This same recognition that law is generalised usage is found in the writings of Sir Edward Coke:

“The law of England is divided ... into three parts: 1, the common law, which is the most generall and ancient law of the realme ...; 2, statutes or acts of parliament; and 3, particular customes I say particular, for it be the generall custome of the realme, it is part of the common law.”⁴

Coke goes on to give the sources for all three:

“The common law appeareth in the statute of Magna Charta and other ancient statutes (which for the most part are affirmations of the common law) in the originall writs, in judicial records, in our bookes of termes and yeares — Acts of parliament appeare in the rolls of parliament, and for the most part are in print”⁵

Particular customs are defined thus:

“Of every custom there be two essentiall parts, time and usage, time out of minde and peaceable usage without lawfull interruption”⁶

The substance of both common law and statute are determined by reference to actual common practice (or non-practice):

“... as usage is a good interpreter of lawes, so non usage where there is no example is a great intendment that the law will not bear it ... Not that an act of parliament by non user can be antiquated or lose his force, but that it may be expounded or declared how the act is to be understood.”⁷

c. Coke discerned an order in the common law — an order which was not produced by a single ordering mind or even a single generation. Rather, the common law was the outcome of long experience and of many generations of past judicial decisions on individual cases. The result was a different *kind* of orderliness — of an immensely higher degree of complexity. Hence such an order was not immediately obvious, but required long study and observation and deep thought before its regularity could be fully grasped. Legal (and judicial) expertise then was expert knowledge of a highly complex social formation, which had been created by an unknowably large number of minds.⁸

Judicial decisions become such by articulating and expressing the principles of the common law; personal opinions are those that are not constrained by these rules:

“... they [the parties to a case] pray the discretion of the justices; which is as much to say, as, that they would discern what the law adjudgeth thereupon, ... for ... *discretio et discernere per legem, quid sit justum*, that is, to discern by the right line of law, and not by the crooked cord of private opinion, which the vulgar call discretion ...”⁹

Coke distinguishes very clearly between the inherent structure of the common law and any individual’s grasp thereof:

“... the knowledge of the law is like a deep well, out of which each man draweth according to the strength of his understanding. He that reacheth deepest, he seeth the amiable and admirable secrets of the law
....”¹⁰

Only when we thoroughly assimilate to our own thinking the internal structure of the rules of the common law, can we say that we know the law. These rules are summary statements of the general principles involved in an open-ended series of particular cases. Thus by penetrating through to the general, we can master the various particulars as they arise.¹¹

The general rules of the common law are such that they cannot speak for themselves; they have to be discerned and declared; and this is the function performed by judges:

“There be three things ... whereby every subject is protected viz. *rex, lex, et rescripta regis*, the king, the law, and the king’s writs. The law is the rule, but it is mute. The king judgeth by his judges, and they are the speaking law, *lex loquens*. The processe and the execution, which is the life of the law, consisteth in the king’s writs.”¹²

Their provenance means that the general principles of the common law have to be regarded as incontrovertible:

“*Principium, quod est quasi primum caput* from which many cases have their originall or beginning, which is so strong, as it suffereth no contradiction; and therefore it is said in our books, that ancient principles of the law ought not to be disputed, *Contra negantem principia non est disputandum*.”¹³

But this enunciation of common law principles emerges from decisions made in a *series* of cases — it is emphatically *not* the unsupported view expressed by a single judge in a single case:

“... these cases are in mine opinion rightly adjudged against a sudden opinion ... to the contrary.”¹⁴

Long established rules protect everyone’s interests:

“... the knowne certaintie of the law is the safetie of all.”¹⁵

Hence judges reject proposed changes that don't fit in with such well-settled general principles:

"... that by a new and subtile invention of pleading, an ancient principle in law ... should be subverted, which ought not to be suffered; and therefore ... the wisdom of the judges and sages of the law have allways suppressed new and subtile inventions in derogation of the common law. And therefore the judges say in one booke, We will not change the law which alwayes hath been used. And another saith, It is better that it be turned to a default, than the law should be changed, or any innovation made."¹⁶

Hence consistency with common law principles is the test which both statute and any specific custom have to pass: the common law

"corrects, allows and disallows both Statute Law and Custom, for if there be repugnancy in a Statute, or unreasonableness in Custom, the Common Law disallows and rejects it..."¹⁷

The actual details of Coke's famous encounter with James I are now beyond recovery;¹⁸ but the quotation from Bracton usually included in the story certainly demonstrates that when Coke placed the common law in final control of both legislation and the king's prerogative, he was continuing in a tradition already established in the thirteenth century:

"quod Rex non debet esse sub homine, sed sub Deo et lege."

And again,

"the law makes the king"

"there is no king where will rules and not the law"¹⁹

Coke and James I

d. As against Coke (and Bracton) James I held that the law expressed his will. And so, as he was the supreme judge, so were

"inferior judges his shadows and ministers ... the King may, if he please, sit in Westminster Hall in any Court there, and call their Judgments in question ... The King being the author of the Lawe is the interpreter of the Lawe."²⁰

On another occasion, James I put this view even more starkly, adding that no subject could set limits on his prerogative:

"Encroach not upon the prerogative of the Crown ... it is presumptuous and high contempt in a subject to dispute what a king can do, or say that a king cannot do this or that; but rest in that which is the king's will revealed in his law."²¹

Hobbes v. Coke

The most systematic exposition of this stand came from Hobbes, interwoven with an explicit attack on Coke. Hobbes argues that long usage cannot make law since, firstly, unreasonable customs are not law and secondly, whatever is reasonable is self evident: long usage cannot make it more so.²⁸ Anyone may become a judge: since the common law is reason (and therefore everyone can express it) while statutes are printed with indices.²³ All men have reason in common with Sir Edward Coke; and so if he is a judge, it is only by virtue of royal appointment to that position.²⁴

Hobbes denies Coke's view that law is the outcome of many generations of judicial decisions: law is made by authority.²⁵ Everyone can put forward his own individual argument as to what the law is: but sovereign authority is the only common element in the several legal systems of different countries; so the king, although an individual, is the divinely-ordained source of both statute and common law.²⁶ Thus law is the command of a properly-constituted authority:

“A Law is the Command of him, or them that have the Sovereign Power, given to those that be his or their Subjects, declaring Publickly, and plainly what every of them may do, and what they must forbear to do.”²⁷

By submitting to authority we agree to obey its orders, made for the public benefit:

“For the Statutes were made by Authority, and not drawn from any other Principles than the care of the safety of the People. Statutes are not philosophy as is the Common-Law, and other disputable Acts, but are Commands, or Prohibitions which ought to be obeyed, because Assented to by Submission made ... to whosoever had the Sovereign Power ...; so that the Positive Laws of all Places are Statutes.”²⁸

Statutes create order because they are enforced; and a governing authority (however constituted) must be given the forces necessary to compel obedience.²⁹ For consistency, the supreme legislator also has to be the ultimate judge, and therefore judges too are public officials appointed by royal authority along with other officials.³⁰ Authority creates law and law then creates justice:

“... a Just Action ... is that which is not against the Law; it is Manifest that before there was a Law, there could be no Injustice, and therefore Laws are in their Nature Antecedent to Justice and Injustice, and you cannot deny but there must be Law-makers, before there were any Laws, and Consequently before there was any Justice ...”³¹

Thus by *enforcing* private rights, the sovereign authority *creates* such rights as private property.³² In short, for Hobbes the law was a simple phenomenon: a matter of commands given to subordinates, enforced by officials.

Sir Matthew Hale

e. In his (unfinished Mss) reply to Hobbes (and elsewhere) Sir Matthew Hale constantly contrasted the obvious rationality of geometrical or mathematical reasoning with the *circumstantial* problems — the solving of *practical* difficulties — faced by the law. Hence in the latter field, it was not possible to parallel the clearly-demonstrable theorems of geometry or mathematics. Any attempt to model a legal system after Euclid failed when dealing with actual cases.³³ In framing laws for a group, the problem is not so much general principles — these may be broadly agreed upon — but their application in specific instances; intellectual achievement is not of much help here.³⁴ The best judges are men with a wide variety of human experience; profound thinkers make very poor justices, precisely because they lack the common touch.³⁵

Definite laws, derived from experience, give men stable rules to live by. This is quite distinct from being subjected to the uncertainty and arbitrariness of whatever opinions particular people might happen to have. If every judge's individual opinion is to be the rule, then we have corruption, partiality and conflict. The costs of uncertainty and arbitrariness are immensely greater than those of definite known rules.³⁶ From the study of past cases, we obtain the rules on which decisions are based; by adhering (as far as possible) to these rules in future cases, we achieve the general end aimed at by all systems of law: certainty and the reduction of arbitrariness.³⁷

But even with definite rules, some undesirable consequences are unavoidable, since all possible developments cannot be foreseen; and so the constant issue is how not to make an old problem's solution the new problem;

“... it is a thing of greatest difficulty, So to Contrive and Order any Lawe that while it remedyes or provides agst one Inconvenience, it introduceth not a worse or an equall.”

Immediate consequences are easily foreseen; but human affairs are an interconnected web:

“A Man that hath a prospect at once ... may with ease enough fitt a Lawe to that ... But ye texture of Humane affaires is not unlike the Texture of a diseased bodey labouring under Maladies, it may be of so various natures that such Phisique as may be proper for the Cure of one of the maladies may be destructive in relation to ye other, and ye Cure of one disease may be the death of the patient.”³⁸

Thus the judge has to consider unintended as well as intended consequences, and weigh up costs and benefits.³⁹ Furthermore, circumstances alter cases, and circumstances are infinite in their variety.⁴⁰ Thus change is inherent in the law:

“From the Nature of Laws themselves in general, which being to be accommodated to the Conditions, Exigencies and Conveniences of the People as those Exigencies and Conveniences do insensibly grow upon the People, so many Times there grows insensibly a Variation of Laws, especially in a long Tract of Time ...”⁴¹

As circumstances change over time, so must the law:

“It is very evident to every Day’s Experience, that Laws, the further they go from their original Institution, grow the larger, and the more numerous: In the first Coalition of a People, their Prospect is not great, they provide Laws for their present Exigence and Convenience: But in Process of Time, possibly their first Laws are changed, altered or antiquated But whatsoever be done touching their *Old* Laws, there must of Necessity be a Provision of *New*, and other Laws successively answering to the Multitude of successive Exigencies and Emergencies, that in a long Tract of Time will offer themselves ...”⁴²

Among the latter are “the various accessions and alterations in points of Commerce and dealing ...”⁴³ In sum, “Use and Custom, and Judicial Decisions and Resolutions, and Acts of Parliament” alter old laws and introduce new ones, although the precise time period for such changes is not known explicitly or clearly.⁴⁴

Thus the study of the common law is a highly specialised discipline, not just an exercise in deductive logic.⁴⁵ Mathematics and geometry clearly require considerable time to master them, yet their propositions are far easier to demonstrate and assimilate than the structural principles of the common law. Hence common lawyers are better suited to become judges than those trained in philosophy or mathematics.⁴⁶

Rationality is not confined to whatever is immediately obvious or is developed by a single mind. Indeed, the outcome of an historical process involving many minds may be infinitely more orderly, though its principle is not patently manifest.⁴⁷ Experience over a long period of time results in a kind of knowledge which a single mind or even group of minds could never provide, or possibly even grasp:

“Again I have reason to assure mysele that Long Experience makes more discoveries touching conveniences or Inconveniences of Laws then is possible for the wisest Councill of Men att first to foresee. And that those amendments and supplemts that through the various

Experiences of wise and knowing men have been applied to any Law must needs be better suited to the Convenience of Laws, then the best Invention of the most pregnant witts not ayded by Such a Series and tract of Experience.

All these things are reasonable, the particular reason of the Laws & Supplemts themselves perchance are not obvious to the most Subtill Witts or Reason.

And this adds to ye difficultie of a present fathomeing of the reason of Laws, because they are the Production of long and Iterated Experience wch, tho' itt be commonly called the mistriss of Fooles, yett certainly itt is the wisest Expedient among mankind, and discovers those defects and Supplys wch no witt of Man could either at once foresee or aptly remedye."⁴⁸

Thus the rationale of custom and practice is not, and need not be, instantaneously self-evident; to demand such immediacy is to mistake the nature of the object itself.⁴⁹ Similarly, a language (such as English or French) has various grammatical rules and usages for which "no immediate reason can be justly given or required, but institution or custome, which is a tacite institution."⁵⁰ Thus Hale recognised a class of customary institutions (which included the common law and language) which were as necessary and useful to mankind as mathematics and other sciences; but while the latter were patently orderly, the former required deep study to discover their internal structure.⁵¹

Hale already recognised that because law and language arose out of practice, they embodied the distilled circumstances faced by generations of men — they were essentially historical in nature. Thus they were another *type* of order than those obtained by construction or deduction, and so they required another kind of understanding and explanation.

Edmund Burke

f. Burke's foundation was the common law. He recognised that many minds contributed to its development over time; it was the joint outcome of both general principle and particular circumstance:

"... the science of jurisprudence, the pride of the human intellect, which, with all its defects, redundancies and errors, is the collected reason of ages, combining the principles of original justice with the infinite variety of human concerns ..."⁵²

Burke systematically applied common law principles to legislation, opposing the anti-Catholic legislation passed in Ireland because it was "against the

spirit of the common law.” Any statements of the law only articulated pre-existing general principles:

“All human laws are, properly speaking, only declaratory; they may alter the mode and application, but have no power over the substance of original justice.”⁵³

To identify mere legality with the law is literally anti-social:

“It would be hard to point out any error more truly subversive of all the order and beauty, of all the peace and happiness, of human society, than the position that any body of men have a right to make what laws they please; or that laws can derive any authority from their institution merely and independent of the quality of the subject-matter.”⁵⁴

Neither democratic legislation nor political authority nor judges could make the law:

“... of all things this was the most truly absurd, to fancy that the rule of justice was to be taken from the constitutions of commonwealths, or that laws derived their authority from the statutes of the people, the edicts of princes, or the decrees of judges. If it be admitted that it is not the black letter and the king’s arms that makes the law, we are to look for it elsewhere.”⁵⁵

Royal decrees as well as democratic legislation could be equally unlawful:

“Have these gentlemen never heard ... of anything between the despotism of the monarch and the despotism of the multitude?”

“These old fanatics of single arbitrary power dogmatized as if hereditary royalty was the only lawful government ... just as our new fanatics of popular arbitrary power maintain that a popular election is the sole lawful source of authority.”⁵⁶

Legislation could only *re-state* those rights already held by the people under the common law; charters and declarations were merely “a reaffirmance of the still more ancient standing law of the kingdom.” Hence

“it has been the uniform policy of our constitution to claim and assert our liberties, as an *entailed* inheritance derived to us from our forefathers, and to be transmitted to our posterity; as an estate belonging especially to the people of this kingdom, without any reference whatever to any other more general or prior right.”

In other words, this was based “not on abstract principles, ‘as the rights of men’, but as the rights of Englishmen, and as a patrimony derived from [our] forefathers.”⁵⁷

Thus the British constitution was “a prescriptive constitution, whose sole authority was that it had existed time out of mind.” It “never was the work of any legislator, never was made upon any foregone theory.”⁷⁵⁸

Thus Burke also discerned the existence of undesigned social phenomena; but he saw too that the further *unintended* consequences of actions or rules could be the opposite of those appearing immediately:

“... the real effects of moral causes are not always immediate; but that which in the first instance is prejudicial may be excellent in its remoter operation, and its excellence may arise even from the ill effects it produces in the beginning. The reverse also happens: and very plausible schemes, with very pleasing commencements, have often shameful and lamentable conclusions. In states there are very often some obscure and almost latent causes, things which appear at first view of little moment, on which a very great part of its prosperity or adversity may most essentially depend.”⁷⁵⁹

Experience is the best test of any social formation; and experience brings about unsuspected and unpredictable benefits:

“old establishments are tried by their effects. If the people are happy, united, wealthy, and powerful, we presume the rest. We conclude that to be good from whence good is derived. In old establishments various correctives have been found for their aberrations from theory. Indeed they are the results of various necessities and expediciencies. They are not often constructed after any theory; theories are rather drawn from them. In them we often see the end best obtained, where the means seen not perfectly reconcilable to what we may fancy was the original scheme. The means taught by experience may be better suited to political ends than those contrived in the original project. They again react on the primitive constitution, and sometimes improve the design itself, from which they seem to have departed.”⁷⁶⁰

The experience and knowledge encapsulated in grown institutions were greater than could be acquired in a single lifetime or by a single mind:

“We are afraid to put men to live and trade each on his own private stock of reason; because we suspect that this stock in each man is small, and that the individuals would do better to avail themselves of the general bank and capital of nations and of ages.”⁷⁶⁰

Burke has a very clear idea of what reason can accomplish when examining social institutions; its job is to elucidate the actual functioning of successful institutions.

“I do not vilify theory and speculation — no, because that would be to vilify reason itself ... No, whenever I speak against theory, I mean

always a weak, erroneous, fallacious, unfounded or imperfect theory, and one of the ways of discovering that it is a false theory is by comparing it with practice.”

“... instead of casting away all our old prejudices, we cherish them to a very considerable degree ... Many of our men of speculation, instead of exploding general prejudices, employ their sagacity to discover the latent wisdom which prevails in them. If they find what they seek, and they seldom fail, they think it more wise to continue the prejudice, with the reason involved ...”⁶²

Thus only intellectual *hubris* could take social and political reform as the equivalent of writing on a blank sheet:

“I cannot conceive how any man can have brought himself to that pitch of presumption, to consider his country as nothing but *carte-blanche*, upon which he may scribble whatever he pleases.”⁶³

Reform can only proceed from what already exists:

“A spirit of innovation is generally the result of a selfish temper and confined views. People will not look forward to posterity, who never look backward to their ancestors.”

“A state without the means of some change is without the means of its conservation.”

“... the idea of inheritance furnishes a sure principle of conservation and of transmission; without at all excluding a principle of improvement.”

“... in what we improve, we are never wholly new, in what we retain, we are never wholly obsolete.”

“All the reformations we have hitherto made have proceeded upon the principle of reverence to antiquity ...”

“The two principles of conservation and correction ...”

“At once to preserve and to reform is quite another thing.”⁶⁴

Thus in Burke we find precisely an Old Whiggish grasp of social formations: correctly apprehending the nature of undesigned social phenomena, and recognising the *kinds* of change inherent in them. Burke was neither a mindless devotee of monarchy nor of democracy. What he sought rather was to subordinate legislation and policy to the grown principles of the common law; and in this he carried forward the insights of the older common lawyers.

David Hume

g. Hume brought out some significant aspects of social formations such as the common law, while emphasizing other aspects already seen by older lawyers.

i. General practice over time established not only the rules of the common law, but also the social formations of language and money.⁶⁵

ii. The existence of general rules of law led to the need for systematic and impartial enforcement — *hence* the emergence of government. But for government to be obeyed, people had to have *already* acquired the habit of obeying rules. Once again, the law *had* to precede the state.⁶⁶

iii. The common law was a system of *general* rules — only such rules were free of doubt and uncertainty, and so could produce order. If there were no general rules, then greed, bias and opposing views of what was appropriate in particular cases would result in disorder.⁶⁷

The remoter and *less* desirable consequences of breaking a general rule in any specific case were *as* real as the immediate benefits of such a breach. But since the more distant outcome *was* more distant, the balance — in any single case — would always weigh in favour of the breach.⁶⁸ Now while the outcome of applying a general rule in a single case might be, and very often was, perverse, the overall beneficial impact of the entire *system* of rules would become evident only when such general rules were applied consistently in *all* cases.⁶⁹ Thus it was the entire set of general rules — its observance by everyone — which was productive of, and essential to, both social and individual welfare: the outcome in a single case was no indicator of the overall result.⁷⁰ Thus Hume underlined the *interdependence* amongst the rules of the common law and its *systematic* nature.

The Common Law: A Summary

2. Thus among those social formations that are the unintended results of historical development, the common law was the first to be recognised. By the sixteenth century it had developed sufficiently for its distinctive characteristics to be discernible. And so, in attempting to articulate its general attributes, the English common lawyers were trying to identify the features of an actual historical entity, a phenomenon which had already developed historically. In sum, the common lawyers discovered the following properties in the common law:

i. It was an undesigned social phenomenon; it had not been invented. The common law was custom, i.e. human action continued over a long period of

time. These customs survived and developed as they proved their usefulness over time.

ii. The principles of the common law are made explicit in the process of solving practical difficulties: this leads to the enunciation of the *general* principles involved.

iii. Thus the common law is an interconnected *set* of rules. The effects of acting on these rules only become evident over the long-term; so too the effects of *breaking* a rule.

iv. Because it is built up by the actions of many men over time, the common law incorporates more knowledge than is available to any single mind or generation of men. Thus it is useful in more ways than anyone could have foreseen.

v. Thus the common law is an order of another *kind* than that produced by design. The orderliness of the common law is far more complex and requires deep study to be recognised. This order cannot be made immediately obvious or explicit, as with geometry.

Mandeville

3. It next began to be realised that other social phenomena besides the common law had similar characteristics and could be explained in the same way.

a. Mandeville pointed out that not only law, but a wide range of skills, crafts, pursuits, and occupations were the results of slow accretion over time, embodying the experience of many generations of men.

“... every Art and Science, every Trade, Handicraft and Occupation, that are profess’d and follow’d in such a City as *London*; and all the Laws, Prohibitions, Ordinances and Restrictions... Among [these] there are very few that are the Work of one Man, or of one Generation; the greatest part of them are the Product, the joynt Labour of several Ages.”⁷¹

Over the long-term, a social process — one involving many men — incorporated and transmitted more knowledge than that available individually with each man concerned:

“... to what prodigious Height, from next to nothing, some Arts may be and have been raised by human Industry and Application, by the uninterrupted Labour, and joint Experience of many Ages, tho’ none but Men of Ordinary Capacity should ever be employ’d in them.”

“... we often ascribe to the Excellency of Man’s Genius, and the Depth of his Penetration, what is in Reality owing to the length of Time, and the Experience of many Generations, all of them very little differing from one another in natural Parts and Sagacity.”⁷²

To illustrate this point, Mandeville used the example of ship-building. A large number of different skills are needed to construct a ship. Thus each man involved contributes to achieve something he could not accomplish individually, — but he does this in the ordinary exercise of his occupation.⁷³

The practical wisdom contained in social phenomena is of another kind, than that acquired explicitly through formal learning:

“The Wisdom I speak of, is not the offspring of a fine Understanding, or intense Thinking, but of sound and deliberate Judgement, acquired from a long Experience in Business, and a Multiplicity of Observations.”⁷⁴

b. Mandeville now observes a key aspect of human action: he realises that men manifest the most complex rules in their actions, in the form of the many different skills they learn and practise. Even children can acquire the most difficult skills.⁷⁵ No one can state *how* they do this, nor do they realise the *rationale* of their actions. But the rules thus acted upon are so intricate that extensive study is required to analyse and elucidate them. Similarly, in many practical occupations, men use knowledge they are completely unaware of, and they are skilled at following processes that science cannot (as yet) explain. Mandeville cites the examples of sea-faring skills, of soap-boiling, and the various methods of dyeing cloth. Even those who are illiterate, or have been press-ganged, eventually become quite adept in the skills required on board ship. And practical men continue to make improvements in both ship-building and sea-faring techniques. But it has been shown that, in sailing and steering a ship, the most intricate mathematics are involved. Yet even a young helmsman can guide a ship by force of habit, in total ignorance of the precise angle between keel and rudder. Similarly, in making soap, or dyeing cloth, men follow the most complicated processes and make continuing improvements and changes in their methods. They do this without any knowledge of the chemistry involved (which, in many cases, was unknown in Mandeville’s time, as he mentions.)⁷⁶

Not only such intricate practical skills, but also useful habits and customs, are passed from man to man by imitation:

“...how many useful Cautions, Shifts, and Stratagems, [men] will learn to practise by Experience and Imitation, from conversing together...”⁷⁷

In short, men first develop and extend those practices and techniques that prove to be useful; only afterward do investigators realise the inherent complexities of these

actions. This means that the long-term outcome of many such practices could not have been foreseen at the time they began to be adopted:

“...diligent Enquirers have often stumbled by Chance on useful Discoveries of Things they did not look for, and which human Sagacity labouring, with Design *a priori* never would have detected...”⁷⁸

c. Finally, Mandeville recognised that language emerged and developed by the same sort of process found in other human pursuits:

“Then which way could any Language ever come into the World...? By slow degrees, as all other Arts and Sciences have done, and length of time; Agriculture, Physick, Astronomy, Architecture, Painting, &c.”⁷⁹

Mandeville observes here the same process of historical change that Hale saw earlier in the common law.

Adam Ferguson

d. Adam Ferguson saw that the bulk of legal rules consisted of universally-followed customs:

“...the laws of every country consist more of customary practice, established by repeated decisions, than of statue or express constitution of any sort”.⁸⁰

Customs become established only when they are followed in *all* instances, regardless of immediate outcome⁸¹. Ferguson now noted another key facet of human action: regularity in men’s actions produced a regular social order:

“Convention...may be supposed almost coeval with the intercourse of mankind. Men do not move in the same company together, without communications of mind and intention. These communications become objects of mutual reliance, and even that party may be charged with breach of faith who has belied the expectations he gave... From the first steps, therefore, that are made in society, conventions may be supposed to go on accumulating in the form of practice, if not in the form of statue or express institution.”⁸²

If men displayed no general rules in their actions, social life could not subsist:

“...habits...fix the manner of men, no less than instinct is observed to fix the practice of other animals.

If this were not the case, human life would be a scene of inextricable confusion and uncertainty. One person could not know whether another...had any determinate rule of conduct, or whether a party, in any transaction, would abide by the sequel of what he himself had

proposed. Were intelligent beings so anomalous in their disposition and conduct, the consequence would be no less perplexing...than the want of any uniform law...would be in the practice of mechanical acts; and would equally frustrate every exertion of prudence and foresight in the conduct of life.”⁸³

As men gradually manifest the appropriate rules in their actions, new types of economic activity, and new capital goods, appear:

“Thus mankind acquire industry by many and by slow degrees...by these methods the habits of the labourer, the mechanic, and the trader, are gradually formed.”

“...the industry by which [property] is gained or improved, requires...a habit of acting with a view to distant object... This habit is slowly acquired, and is in reality a principal distinction of nations in the advanced state of mechanic and commercial arts.”⁸⁴

e. Ferguson saw that social formations were the long-term outcome of the kinds of rules that men acted upon, and the changes that followed in the circumstances in which men found themselves. Hence, the development of these formations could not have been foreseen — or even imagined before it occurred.

And even after these formations had evolved, no one realised the full extent of their complexity:

“Mankind, in following the present sense of their minds, in striving to remove inconveniences, or to gain apparent and contiguous advantages, arrive at ends which even their imagination could not anticipate, and pass on...without perceiving its end. He who first said, ‘I will appropriate this field: I will leave it to my heirs’, did not perceive, that he as laying the foundation of civil laws and political establishments...”

“...the forms of society are derived from an obscure and distant origin, they arise, long before the date of philosophy, from the instincts, not from the speculations, of men. The croud of mankind, are directed in their establishments and measures, by the circumstances in which they are placed...”

“Every step and every movement of the multitude, even in what are termed enlightened ages, are made with equal blindness to the future; and nations stumble upon establishments, which are indeed the results of human action, but not the execution of any human design.”

“The establishments of men...[are] directed by the variety of situations in which mankind are placed. Those establishments arose from successive improvements that were made, without any sense of their general effect; and they bring human affairs to a...complication, which

the greatest reach of capacity...could not have projected; nor even when the whole is carried into execution, can it be comprehended in its full extent.”⁸⁵

f. Ferguson recognised that in using a language, people utilised an immensely complicated apparatus of rules and vocabulary. Thus they manifested in practice a ‘know-how’ which professional students of language found extremely difficult to put into words:

“The peasant, or the child, can reason, and judge, and speak his language with a discernment, a consistency, and a regard to analogy, which perplex the logician, the moralist, and the grammarian, when they would find the principle upon which the proceeding is founded, or when they would bring to general rules, what is so familiar, and so well sustained in particular cases.”⁸⁶

Language developed through its very use:

“...it is necessary that the stock of language should wax with the growing occasions in which it is employed.”

“[men] change their words, to accommodate the circumstances in which they have occasion to use them they find new forms of expression for every new subject...”

“Thus, men at work on the present stock of their language...ever contrive to adapt some new form of expression...it shews the capacity of man to effect, by degrees that gradual accumulation of signs, on which the progress of language consists.”⁸⁷

Language and association amongst one another are the defining characteristics of mankind:

“...both associating and speaking in however rude a form, are coeval with the species of man. There must have been a society at the birth of man, and some species of expression where any concourse of numbers took place...”⁸⁸

The human propensity to associate with each other means that human society eventually extends across national boundaries and through time:

“Man’s talent for communication and intercourse is, no doubt, to be considered among the most irrefragable proofs of his destination to live in society, and even to render this society in some respects universal... Discoveries of science, models of invention, or attainments of genius, wherever they may have originated, find their way to the world, and become a property of mankind.”

“In [the human] species, the communication extends from nation to nation, and from age to age, at any definite distance of place or time,

and the society, or cooperations of men may be conceived as extended accordingly.”⁸⁹

Thus Ferguson also saw that man could act on the basis of complex rules. These actions gave rise to social formations that went far beyond anything which could be foreseen or designed. Both Mandeville and Ferguson recognised that there existed a wider category of social phenomena, which included not only the common law but other types of human action.

Dugald Stewart

g. Following Burke and Hume, Dugald Stewart saw that the evolution of the common law preceded, determined and led the growth of the English Constitution. Only those regulations that conformed to the spirit of the common law could be termed “constitutional”:

“...what we call the *constitution*...may...be defined to be that form of government and that mode of administering it which is agreeable to the *general* spirit of our established laws and usages.”⁹⁰

In short the English Constitution was simply an adjunct to the common law. And so any legislative rule which contravened the principles of the common law proved itself to be inconsistent with these pre-existing legal rules. Thus practice demonstrated that such legislation was unconstitutional:

“In such a constitution, when any law contrary to the spirit of the rest is occasionally introduced, it soon falls into desuetude and oblivion... Of such a law we may say with propriety that it is *unconstitutional*, not because we dispute the authority from which it proceeds, but because it is contrary to the spirit and analogy of the laws we have been accustomed to obey.”⁹¹

Stewart draws a parallel between the growth of the English constitution as shaped by that of the common law, and the development of language:

“...although the Constitution was the gradual result of circumstances which may be regarded as accidental and irregular, yet the very mode of its formation necessarily produced a certain consistence and analogy in its different parts, so as to give to the whole a sort of systematical appearance.”

“Something similar to this obtains with respect to languages. *These*... are the gradual result of time and experience...yet every language, in process of time, acquires a great deal of systematical beauty.”

Since both law and language are orderly, only those innovations survive that can be assimilated in practice to the general structure already developed:

“For unless every new institution which was successively introduced, had possessed a certain reference or affinity to the laws and usages existing before, it could not possibly have been permanent in its operation.”

“When a new word, or a new combination of words is introduced, it takes its rise from the same origin with every other expression which the language contains; — the desire of an individual to communicate his own thoughts or feelings to others. But this consideration alone is not sufficient to justify the use of it. Before it is allowed by good speakers or good writers to incorporate itself with those words which have the sanction of time in their favour, it must be shown that it is not disagreeable to the general analogy of the language, otherwise it is soon laid aside as...anomalous and *ungrammatical*. It is much in the same manner that we come to apply the epithet *unconstitutional* to a law.”⁹²

In other words, legal and linguistic innovations are always introduced in the pursuit of some individual purpose. But a language and the legal system have to serve a huge variety of such purposes. So only those changes survive that cumulatively help to produce a general-purpose social tool.

Again following Burke, Stewart assesses the actual effects of the English Constitution as it operates over the long term:

“Whenever a Constitution has existed for ages, and men have enjoyed tranquillity under it, it is a proof that its great and fundamental principles are all animated by the same congenial spirit.”

“...possessing...the strongest of all recommendations...an experimental proof of its excellence...”⁹³

Stewart echoes Burke’s emphasis on the results of historical experience:

“It is a presumption in favour of any settled scheme of government against any untried project, that a nation has long existed and flourished under it.”

“...The happy experience of this country of a growing liberty and growing prosperity for five hundred years...”⁹⁴

Economic Phenomena

4. With regard to economic phenomena, Mandeville, Adam Smith and David Hume, all analysed orderly processes that could not be explained as deliberate intent. Nonetheless these ordered outcomes were the result of individuals’ actions.

a. Mandeville saw that the division of labour, specialisation and exchange, was a social — inter-individual — process.

As compared with autarky, the division of labour binds men together while it raises their productivity:

“...savage People all do the same thing: This hinders them from meliorating their Condition, though they are always wishing for it: But if one will wholly apply himself to the making of Bows and Arrows, whilst another provides Food, a third builds tents, a fourth makes Garments, and a fifth Utensils, they not only become useful to one another, but the Callings and Employments themselves will in the same Number of Years receive much greater Improvements, than if all had been promiscuously follow’d by every one of the Five.”⁹⁵

Analysing the production of scarlet cloth, he outlines the variety of raw materials, the large number and range of different skills and trades, the diverse tools and implements, that are needed to provide the final output. Some of these are obvious, others are much less so. The geographical areas involved are widespread and many risks must be taken. Thus a number of men all contribute their specific talents to produce something which isn’t even a luxury, but a mass-consumption good.⁹⁶ Mandeville sums up the role of exchange in establishing and maintaining society:

“...the Order, Oeconomy, and the very Existence of the Civil Society; for as this is entirely built upon the Variety of our Wants, so the whole Superstructure is made up of the reciprocal Services, which Men do to each other.”⁹⁷

b. Adam Smith recognised that as the division of labour progressed, mass-consumption output rose substantially:

“It is the great multiplication of the production of the different arts, inconsequence of the division of labour, which occasions...that universal opulence which extends itself to the lowest ranks of the people.”⁹⁸

The footwear, clothing, domestic utensils, food, drink and housing of a day-labourer — appeared to be the simplest of mass-consumption goods. Yet they are produced through the cooperation of vast numbers of people, using a large variety of production processes, and a wide range of specialised tools.⁹⁹ Smith now observes a key development, which appears as the division of labour is extended: the production process in effect brings together more people than could ever know each other personally; and their joint efforts are all now necessary to the final product:

“...without the assistance and cooperation of many thousand, the very meanest person in a civilised country could not be provided even according to, what we falsely imagine, the easy and simple manner in which he is commonly accommodated.”

“In civilised society [everyone] stands at all times in need of the cooperation and assistance of great multitudes, while his whole life is scarce sufficient to gain the friendship of a few persons.”¹⁰⁰

Smith sees that this interdependence — the outcome of the division of labour — is unique to humans. It means that all men’s abilities are utilised in providing mutually for one another’s requirements; this is not found in animals:

“Each animal is...obliged to support and defend itself separately and independently, and derives no sort of advantage from that variety of talents with which nature has distinguished its fellows. Among men, on the contrary, the most dissimilar geniuses are of use to one another; the different produces of their respective talents, by the general disposition to truck, barter, and exchange, being brought, as it were, into a common stock, where every man may purchase whatever part of the produce of other men’s talents he has occasion for.”¹⁰¹

Smith recognises that exchange is a specifically human activity — it is not seen amongst animals; and that it is probably the result of the two human attributes — language and reasoning.¹⁰²

Smith saw that the extension of the division of labour, and the resulting growth and quality of output, was the unintended result of individuals’ efforts to raise their real incomes. He describes how specialisation and exchange might arise in a hunting tribe. Everyone wishes to increase the supply of cattle and other goods available to themselves. But they gradually discover that this end is best achieved indirectly, through barter, rather than by direct hunting and herding (i.e. autarky). Different individuals discover they can specialise in the production of various goods and services — arrow-making, hut-building, dressing and tanning hides and skins, hunting, etc. By specialising and then exchanging their respective outputs, they jointly obtain higher real incomes than if each had produced for himself, in isolation from his fellows.¹⁰³ Thus the division of labour develops as the orderly and unintended outcome of the pursuit of other ends altogether; no one foresees its development or its result:

“This division of labour, from which so many advantages are derived, is not originally the effect of any human wisdom, which foresees and intends that general opulence to which it gives occasion. It is the necessary, though very slow and gradual, consequence of a certain propensity in human nature which has in view no such extensive utility; the propensity to truck, barter and exchange one thing for another.”¹⁰⁴

Thus Smith’s well-known invisible hand metaphor points to the development of an orderly process which leads to ordered results other than, and additional to, those aimed at by the actors involved.

c. David Hume's analyses of the effect of a change in the money supply on prices, and of the balance-of-trade adjustment process, both illustrate the existence of self-balancing processes in economic affairs. Such processes clearly operate independently of whatever is intended by the participants therein, and bring about orderly results that those involved could not have realised were occurring.

d. The economic phenomena that Mandeville, Smith and Hume analysed, had already appeared and had been developing for millennia. By the late seventeenth and eighteenth centuries there existed in Britain and Western Europe, a considerable volume of both interregional and international trade, extending into Africa and Asia, supplying a wide range of mass-consumption commodities. Thus Mandeville, Smith and Hume were trying to identify and elucidate the features of social processes that had already developed historically over millennia, processes that were clearly the result of the manifold actions of their fellow-men. *How* these actions brought about the unrealised social outcome was the problem to which all three addressed themselves. In short, they sought to provide a theoretical framework to help comprehend the long-term historical development they observed.

Language

5. In the field of language, serious general study came at a much later date than with the common law. Among students in the eighteenth century, Rousseau held to the older view, that language had been deliberately invented by Man under Divine guidance. Men arrived at language by conscious agreement on the lines of the Social Contract: "Such an institution could only be made by common consent ..."¹⁰⁵

Partly in reaction to such opinions, the Prussian Academy held an essay contest (in 1769) on the question of whether and how men, on their own, could have evolved languages. Herder's prize essay (published in 1772) argued that because language was so *badly*-arranged, it had to be a *human* institution, which grew out of human nature. (The Deity would have produced something altogether more organised and logical.) Language was inseparable from thought; both were unique to mankind.

Twentieth-century linguistics began, however, with Sir William Jones' observation in his famous paper to the Royal Asiatic Society in Calcutta in 1786:

"The *Sanskrit* language, whatever be its antiquity, is of a wonderful structure; more perfect than the Greek, more copious than the Latin, and more exquisitely refined than either; yet bearing to both of them

a stronger affinity, both in the roots of verbs and in the forms of grammar, than could possibly have been produced by accident; so strong, indeed, that no philologist could examine all three without believing them to have sprung from some common source which, perhaps, no longer exists. There is a similar reason, though not quite so forcible, for supposing that both the Gothick and the Celtick, though blended with a very different idiom, had the same origin with the Sanscrit; and the old Persian might be added to the same family ..."¹⁰⁶

Thus Sir William recognised linguistic change as simply another form of historical change and development; languages gradually evolved over time into new forms and types as circumstances changed. The same sort of process observed earlier (by Hale) in legal change, was now seen to occur in the field of language as well.

In the early nineteenth century there appeared one of its more profound thinkers in linguistics, Wilhelm von Humboldt. He argued that men had an inherent linguistic capacity, so that language was a mental activity — the repeated attempt to express ideas via sounds. Thus language was essentially dynamic and ever-evolving — it could exist only in human minds and therefore it changed as ideas changed. This meant language was also an historical entity.

Humboldt appears to have been influenced by Herder's insights; Humboldt, in his turn, influenced many twentieth-century linguistic students, notably Edmund Sapir (whose work Hayek used to some extent.)¹⁰⁷ Thus students of linguistics, too, eventually realised that language is the unintended result of individual human action — i.e., of historical development; although this recognition came at an appreciably later date than with the common law.

Overview

6. Thus between the late sixteenth and late eighteenth century, the historical existence of a number of distinct social formations came to be recognised. These social orders were: the common law; occupational skills and attitudes; the division of labour, specialisation and exchange; types of social relations; and language.

a. In examining these social orders, their students saw firstly, that they were analysing historical phenomena that had already appeared and developed over past millennia, and that continued to change and evolve. Secondly, these students saw that they were investigating the actions of unknown numbers of their fellow-men — i.e., the process whereby such actions jointly led to these various social formations, without any concerted design.

These historical phenomena appeared and developed because men could and did manifest the most complex rules in their actions. That is, human beings acted such that highly intricate patterns could be discerned in what they did — without, however, their being aware of this fact. Over time, as circumstances changed, and as people altered their actions, the complex patterns being manifested in these actions were likewise modified in a gradual, piecemeal fashion.

Thus these social formations are the changing outcome of the changing actions of many myriads of human beings, over many generations. Because so many people in such various circumstances contributed to the growth and evolution of these social orders, such formations constitute a sort of fund of practical knowledge. The availability of this fund — accumulated from the actions of numerous individuals — enables people to achieve far more than if they were confined to what they could acquire in isolation. The division of labour, in particular, allows men to draw on the abilities of vast numbers of their fellow-men. And so, through interdependence, they jointly obtain immensely more than under autarky.

In short, social formations appear as long-term regularities in the actions of numbers of people; — or, in other words, only when *numbers* of people display these regularities in their actions, is it possible to discern the appearance of social orders.

b. Thus the study of social orders began with the common law. As the analysis was extended to other social (inter-individual) phenomena, the essential disciplines of economics and linguistics were added.

Of the major students of social phenomena (considered above), seven were professional lawyers or else had strong legal interests or training (the exceptions being Mandeville, Ferguson and Dugald Stewart). In addition, five were historians or else had a depth of historical reading and knowledge not usual amongst non-historians. Hale was a legal historian; Burke embarked on unfinished histories of the common law and of England; Hume was an historian of England; Smith's writings are filled with extensive historical comparisons; and Ferguson can be described not only as a fore-runner of comparative historical sociology, he also wrote a history of the Roman Republic. Linguistics — which Sir William Jones and Wilhelm von Humboldt added to their legal training — has to be both historical and analytical. Hume and Smith added the key analytical discipline of economics to their legal and historical interests. Mandeville was an experienced and shrewd observer of human nature in all its extent and variety. Dugald Stewart alone was a mathematician, philosopher and economist, thus lacking any practical training or discipline. And today it is necessary to say explicitly (though not for all readers) that all the names mentioned

here were educated first in the classical languages and their literature. Thus all those referred to had a systematic acquaintance with ancient history and classical society (what was known of both at the time).

FOOTNOTES CHAPTER 2

1. J.H. Baker, *An Introduction to English Legal History* (3rd ed, Butterworth 1990), p.1.
2. J.G.A. Pocock, *The Ancient Constitution and the Feudal Law* (2nd ed, Cambridge University Press 1987); p.33; pp.38-47,66-68. W.S. Holdsworth, *History of English Law, Vol V* (3rd ed, Methuen, (1945) pp.459; 472-74.
3. Cf Sir John Davies:

“For the Common Law of England is nothing else but the Common Custome of the Realm: and a Custome which hath obtained the force of a Law is always said to be *Jus non scriptum*: for it cannot be made or created either by Charter, or by Parliament, which are Acts reduced to writing, and are alwaies matter of Record; but being onely matter of fact, and consisting in use and practice, it can be recorded and registered no-where but in the memory of the people.

For a Custome taketh beginning and groweth to perfection in this manner: When a reasonable act once done is found to be good and beneficiall to the people, and agreeable to their nature and disposition, then do they use it and practise it again and again, and so by often iteration and multiplication of the act it becometh a Custome; and being continued without interruption time out of mind, it obtaineth the force of a Law.

And this Customary Law is the most perfect and most excellent, and without comparison the best, to make and preserve a Commonwealth. For the written Laws which are made either by the Edicts of Princes, or by Councils of Estates, are imposed upon the Subject before any Triall or Probation made, whether the same be fit and agreeable to the nature and disposition of the people, or whether they will breed any inconvenience or no. But a Custome doth never become a Law to bind the people, untill it hath been tried and approved time out of mind, during all which time there did thereby arise no inconvenience: for if it had been found invonvenient at any time, it had been used no longer, but had been interrupted, and consequently it had lost the virtue and force of a Law.”

(Sir John Davies, Preface to his *Irish Reports* (16 74 ed); as quoted in J.G.A. Pocock, *The Ancient Constitution ...*(1987) pp. 32-33.

And also:

“Neither could any man ever vaunt, that like *Minos*, *Solon* or *Lycurgus*, he was the first *Lawgiver* to our Nation: for neither did the King make his own *Prerogative*, nor the Judges make the *Rules* or *Maximes* of the law, nor the common subject prescribe and limit the *Liberties* which he injoyeth by the Law. But, as it is said of every Act or Science which is brought to perfection, *Per varios usus Astem experientia fecit*; so may it properly be said of our Law, *Per varios usus Legem experientia fecit*. Long experience, and many trials of what was best for the common good, did make the *Common Law*.” (ibid, p.41)

4. Sir Edward Coke, *The First Part of the Institutes of the Laws of England* (1832 ed; repr. New York 1979) 115b. See also 142, 344a, and 110b:
“... a custome cannot be alledged generally within the Kingdome of England; for that is the common law”.

5. *I Inst.*, 115b.
6. *I Inst.*, 110b. See also 344b:
 “customes grounded upon reason, and used time out of minde; the construction and determination of these doe belong to the judges of the realme.”
7. *I Inst.*, 81b.
8. *I Inst.*, 97a:
 “And this is another strong argument in law, *Nihil quod est contra rationem est liatum*; for reason is the life of the law, ay the common law itself is nothing else but reason; which is to be understood of an artificiall perfection of reason, gotten by long study, observation, and experience, and not of every man’s naturall reason; for *Nemo nascitur artifex*. This legall reason *est summa ratio*. And therefore if all the reason that is dispersed into so many severall heads, were united into one, yet could he not make such a law as the law in *England* is; because by many successions of ages it hath beene fined and refined by an infinite number of grave and learned men, and by long experience grown to such a perfection, for the government of this realme, as the old rule may be justly verified of it, *Neminem oportet esse sapientiores legibus*: no man out of his own private reason ought to be wiser than the law which is the perfection of reason.”
 And in Calvin’s Case:
 “we are but of yesterday, (and therefore hath need of the wisdom of those that were before us) and had been ignorant (if we had not received light and knowledge from our forefathers) and our days upon the earth are but as a shadow in respect of the old ancient days and times past, wherein the laws have been by the wisdom of the most excellent men, in many successions of ages, by long and continual experience, (the trial of light and truth) fined and refined, which no man (being of so short a time) albeit he had in his head the wisdom of all the men in the world, in any one age could ever have effected or attained unto. And therefore it is *optima regula, qua nulla est verior aut firmior in jure, neminem oportet esse sapientiores legibus*: no man ought to take it on himself to be wiser than the laws.”
 (quoted in J.G.A. Pocock, *The Ancient Constitution* (1987) p. 35).
 See also *I Inst* 319b: “*Quod vanum et inutile est lex non requirit. Lex est ratio summa, quae jubet quae sunt utilia et necessaria et contraria prohibet*; and arguments drawn from hence are forcible in law.”
9. *I Inst.*, 227b. See also 232b:
 “For *Ratio est radius divini luminis*. And by reasoning and debating of grave learned men the darknesse of ignorance is expelled, and by the light of legall reason the right is discerned, and thereupon judgment given according to law, which is the perfection of reason. This is of *Littleton* here called *legitima ratio*, whereunto no man can attain but by long studie, often conference, long experience, and continuall observation.
 Certaine it is, that in matters of difficultie the more seriously they are debated and argued, the more truely they are resolved, and thereby new inventions justly avoided.”
10. *I Inst.*, 71a.
11. *I Inst.*, 395a:
 “*Ratio est anima legis*; for then are we said to know the law, when we apprehend the reason of the law, that is, when we bring the reason of the law so to our own reason, that we perfectly understand it as our owne; and then, and never before, we have such an excellent and inseparable propertie and ownership therein, as we can neither lose it, nor any man take it from us, and will direct us (the learning of the law is so chained together) in many other cases.”

And further:

“... knowing for certaine, that the law is unknowen to him that knoweth not the reason thereof...”

12. *I Inst.*, 130a.

13. *I Inst.*, 343a. See also 11a:

“*Maxime*, a sure foundation or ground of art, and a conclusion of reason, ... so sure and uncontrollable as that they ought not to be questioned... And it is well said in our books, *n'est my a disputer l'ancien principes del ley*.”

14. *I Inst.*, 148a.

15. *I Inst.*, 395a.

16. *I Inst.*, 282b. See also 232b, 343a (*supra*).

17. Quoted in J. U. Lewis, “Coke’s theory of artificial reason,” *Law Quarterly Review*, Vol. 84 (July 1968) p. 334. See also Coke’s opinion in *Bonham’s Case*: “it appears in our books that in many cases the common law will control acts of parliament and sometimes adjudge them to be utterly void; for when an act of parliament is against common right and reason, or repugnant, or impossible to be performed, the common law will control it and adjudge such act to be void.”

(Quoted in J. H. Baker, *An Introduction to English Legal History* (1990) p. 241).

See also *I Inst.* 2726: “... the surest construction of a statute is by the rule and reason of the common law.”

18. R. G. Usher, “James I and Sir Edward Coke”, *Eng. Hist. Rev.* Vol. XVIII (1903), pp. 664-75.

19. Both quotations are from Bracton; the first is in Holdsworth, *History of English Law*, Vol. V *op.cit.* p. 430; the second is in J. U. Lewis, *op.cit.*, p. 336.

20. Quoted in Usher, *op.cit.* p. 673.

21. Quoted in W. S. Holdsworth, *op.cit.*, p. 429, fn. 1.

22. “I deny that any Custome of its Own Nature, can amount to the Authority of a Law. For if the Custom be unreasonable, you must with all other Lawyers confess that it is no Law, but ought to be abolished; and if the Custom be reasonable, it is not the Custom, but the Equity that makes it Law. For what need is there to make Reason Law by any Custom how long soever when the Law of Reason is Eternal?” Thomas Hobbes, *A Dialogue Between A Philosopher and A Student of the Common Laws of England* (1682; repr. Chicago 1971), pp. 96-97.

23. *Dialogue*, p. 56:

“...if I pretend within a month, or two to make my self able to perform the Office of a Judge, you are not to think it Arrogance; for you are to allow to me, as well as to other Men, my pretence to Reason, which is the Common Law and for Statute Law, seeing it is Printed, and that there be indexes to point me to every matter contained in them, I think a Man may profit in them very much in two Months”.

24. *Dialogue*, p.62:

“... no Man is born with the use of Reason, yet all Men may grow up to it as well as Lawyers; and when they have applied their reason to the Laws may be as fit for, and capable of judicature as Sir *Edward Coke* himself who whether he hath more, or less use of Reason, was not thereby a Judge, but because the King made him so”

25. *Dialogue*, p.55:

“... that the reason which is the Life of the Law should be not natural but artificial I cannot conceive. I understand well enough, that the knowledge of the Law is gotten by much study, as all other Sciences are, which when they are studied and obtquined,

it is still done by natural, and not by Artificial reason. I grant you that the knowledge of the Law is an Art, but *not* that any Act of one Man, or of many how wise soever they be, or the work of one or more Artificers, how perfect soever it be, is Law. It is not Wisdom but Authority that makes a Law. Obsecure also are the words Legal Reason; there is no Reason in Earthly Creatures but humane Reason; but I suppose that he means, that the Reason of a judge, or of all the judges together (without the King) is that *Summa Ratio*, and the very Law, which I deny, because none can make a Law but he that hath the Legislative power. That the Law hath been fined by Grave and Learned Men, is manifestly untrue, for all the Laws of *England* have been made by the Kings of *England*”

26. *Dialogue*, p.67:

“Would you have every Man to every other Man alledge for law his own particular Reason? There is not amongst Men an Universal Reason agreed upon us any Nation, besides the Reason of him that hath the Sovereign Power; yet though his Reason be but the Reason of one Man, yet it is set up to supply the place of that Universal Reason, which is expounded to us by our Saviour in the Gospel, and consequently our King is to us the Legislator both of Statute Law, and of Common Law.”

27. *Dialogue*, p.71.

28. *Dialogue*, p.69.

29. *Dialogue*, p.59:

“.... a Nation that is subdued by War to an absolute submission of a Conqueror, it may by the same Arm that compelled it to submission, be compelled to obey his Laws. Also if a Nation choose a Man, or an Assembly of Men to Govern them by Laws, it must furnish him also with Armed Men and Money, and all things necessary to his Office, or else his Laws will be of no force, and the Nation remains, as before it was, in Confusion.”

30. *Dialogue*, p.68:

Ph. Since therefore the King is sole Legislator, I think it also Reason he should be sole Supream Judge.

La. There is no doubt of that; for otherwise there would be no congruity of Judgments with the Laws. I grant also that he is the Supream Judge overall persons, and in all Causes Civil, and Ecclesiastical within his own Dominions, that he has ever been so by the Common Law; and to say all at once, there is no Magistrate, or Commissioner for Publick Business, neither of Judicature, nor Execution in State, or Church, in Peace, or War, but he is made so by Authority from the King.”

31. *Dialogue*, pp.72-73.

32. *Dialogue*, p.73:

“*La.* without Statute-Laws, all Men have Right to all things *Ph.* no private Man can claim a Propriety in any Lands, or other Goods from any Title, from any Man, but the King, or them that have the Sovereign Power; because it is in virtue of the Sovereignty, that every Man may not enter into, and Possess what he pleaseth;”

33. “Reflections by the Lrd. Cheife Justice Hale on Mr Hobbes this Dialogue of the Lawe”, in W.A. Holdsworth, *History of English Law, Vol V, op cit.*, Appendix, p.502:

“of all Kind of Subjects where about Ye reasoning Faculties is Conversant, there is none of So greate a difficulty for the Faculty of reason to guide it Selfe and come to any Steadiness as that of Laws, for the regulation and Ordering of Civill Societies and for the measuring of right and wrong, when it comes to particulars. And therefore it is not possible for men to come to the Same Certainty, evidence and Demonstration touching them as may be expected in Mathematicall Sciences, and they that

please themselves with a perswasion that they can with as much evidence and Congutie make out an unerring systeme of Laws and Politiques equally applicable to all States and Occasions, as Eclide demonstrates his conclusions, deceive themselves with Notions wch prove ineffectual, when they come to particular application”.

34. “Reflections.....”, pp.502-503.

35. “Reflections”, p.503:

“.... men of observation and Experience in Humance affaires and Conversation between man and man make many times good Judges, yett for the most part those men that have greate reason and learneing wch they gather up of Casuists, Schoolmen, Morall Philosophers and Treatises touching Moralls in the Theory, that so are in high speculations and abstract notions touching Justice and Right, and as they differ in xtreamely among themselves when they come to particular applications, So are most Comonly the worst Judges that can be, because they are transported from the Ordinary Measures of right and wrong by their over fine speculacons, Theories and distinctions above the Comon Staple of Humane Conversations”.

36. “Reflections”, p.504:

“A certaine Law hath this inconvenience attending it that sometimes some persons or causes may Suffer by the rigour of a certaine Law, yett Infinite more must suffer by the inconvenience of an Arbitrary and uncertaine Law.”

37. “Reflections”, p.596.

“It is one of the things of greatest moment in the profession of the Common Law to helpe as neare as maybe to the Certainty of the Law and the Consonance of it to it selfe, that one age and one Tribunall may Speake the Same things and Carry on the Same thred of the Law in one Uniforme Rule as neare as is possible; for otherwise that wch all places and ages have Contended for in Laws namely Certainty and to avoid Arbitrariness and that Extravagance that would fall out, if the reasons of Judges and advocates were not kept in their traces wold in halfe an age be lost.

And this Conservation of Laws within their boundes and Limitts could never be, unless men be well informed by Studyes and readeing what were the Judgemts and Resolutions, and decisions and interpretations of former ages, and of other Courts and Tribunallss, and thereby to keepe a Consonance and Consistence of the Law to it Selfe, wch wold never be done without much readeing, and observation and Study.”

38. “Reflections”, p.503 (both quotations).

39. “Reflections”, p.503-504:

“..... the Difficultie of making interpreting and applying Laws because It requires a very large prospect of all the most considerable emergencies that may happen not only in that wch is intended to be remedied, but in those other accidentall, Consequentiall or Collateral things that may Emerge uppon the Remedy propounded. 2dly a greate and Experienced Judgemt to weigh and consider whether the Convenience of the Law propounded may considerably preponderate the inconvenience that it will occasion.”

40. “Reflections”, p.504.

41. Sir Mathew Hale, *History of the Common Law of England* (1739; Chicago 1971) p.39.

42. *ibid*, p.41.

43. Henry Rolle, *Un Abridgment Plusieurs Cases et Resolutions Del Common Ley* (London 1668), Preface by Six Matthew Hale, p.vii.

44. *History of the Common Law* p.40.

45. “Reflections ...”, p.505:

"... it appears that men are not borne Comon Lawyers, neither can the bare Exerciss of the Faculty of Reason give a man a Sufficent Knowledge of it, but it must be gained by the habituateing and accustomeing and Exerciseing that Faculty by readeing, Study and observation to give a Man compleate knowledge thereof. And although a Man that hath long and industriously Exercised himselfe in that Study cannot p'tend either to Infallibilitie in his Judgemt or to a full attainemt of all that is attaineable toucheing the Laws of England, yett he will be much better fitted for right Judgemt therein, then he that hath no other Stock to trade upon then the bare Exercise of his Faculty of reason, or that hath only taken the paines to read over the Titles of the Statutes or Indexes or Repertories of some Law bookes."

46. "Reflections ...", p.505-506.

47. "Reflections ...", p.504:

"There are many things especially in Laws and Governmts yt mediately, Remotely, and Consequentially are reasonable to be approved, though the reason of the party doth not presently or imediately & distinctly see its reasonableness. For instance, it is reasonable for me to preferre a Law made by a hundred or two hundred persons of age, wisdom Exzperience and interest before a Law excogitated by my selfe a Simple unexperienced younge man, though I discern better ye reason of that Law that I have thought of then ye reason of the Law of those wise men".

48. "Reflections ...", pp.504-505.

49. "Reflections ...", p.505:

"... yett in things thus settled it is not necessary that the reasons of the Institution should be evident unto us. It is sufficient that they are instituted Laws that give a Certainty to us, and it is reasonable for us to observe them though the particular reason of the Institution appeare not. And tis a foolish and unreasonable thing for any to find fault with an Institution because he thinks he could have made a better or expect a Mathematicall Demonstration to evince the reasonableness of an Institution or the Selfe Evidence thereof."

50. Preface to Rolle's Abridgment, p.vii.

51. *loc. cit.*:

"In things that have their originall much by insitution, men cannot easily or ordinarily by rational deduction find them out, but only by instruction and education and yet those things are of as great necessity and use to mankind as other matters more obviously deducible by Argumentation."

52. Edmund Burke, *Reflections on the Revolution in France* (1790; Dent, 1910) p.92.

53. *idem*, "Tracts relative to the laws against Popery in Ireland", in *Works, Vol VI*, (London: George Bell 1886), p.22.

54. *ibid*, p.21.

55. *ibid*, p.22.

56. *Reflections ...*, pp. 120, 24.

57. *Reflections ...*, pp.29-30; 33, 30.

58. *idem*, "Speech on the Reform of the Representation in the House of Commons," in *Works, Vol VI, op. cit.*, pp. 146, 148.

59. *Reflections ...*, p.58.

60. *Reflections ...*, pp. 168-69.

61. *Reflections ...*, p.84. See also pp.58-59:

".... a matter which requires experience, and even more experience than any person can gain in his whole life, however sagacious and observing he may be" and again. p.166. ".... the work itself required the aid of more minds than one age can furnish."

62. "Speech on the Reform of the Representation", *op cit*, p.148; *Reflections*, p.84.
63. *Reflections* ..., p.153.
64. *Reflections* ..., pp.31, 19-20, 32, 29, 20, 164.
65. David Hume, *A Treatise of Human Nature, Vol II* (1739; ed. T.H. Green and T.H. Grose, Longman 1898) pp.263, 270. See also *idem, Essays, Moral, Political, Literary, Vol II* (ed. T.H. Green and T.H. Grose, Longman 1907) p.275.
66. *Treatise, Vol II*, pp.303, 304.
67. *Treatise, Vol II*, pp.283, 298-99. Cf. Hall's exposition, *Supra*.
68. *Treatise, Vol II*, p.301.
69. *Treatise, Vol II*, pp.269, 273-74; *Essays, Vol II*, pp. 273-75.
70. *Treatise, Vol II*, pp.263, 269, 270.
71. Bernard Mandeville, *The Fable of the Bees* (1729; F.B. Kaye (ed). O.U.P., 1957 reprint), Vol II, pp.321-22. See also p.187: "Our Knowledge is advanced by slow Degrees, and some Arts and Sciences require the Experience of many Ages, before they can be brought to any tolerable Perfection."
72. *ibid*, pp.141, 142.
73. *ibid*, pp.141-42. Hume uses the same example, but somewhat more pointedly:
 "... it must still remain uncertain, whether the excellences of the work can justly be ascribed to be workman. If we survey a ship, what an exalted idea must we form of the ingenuity of the carpenter, who framed so complicated, useful and beautiful a machine? And what surprise must we feel, when we find him a stupid mechanic, who imitated others, and copied an art, which, through a long succession of ages, after multiplied trials, mistakes, corrections, deliberations, and controversies, had been gradually improving?" David Hume, "Dialogues concerning natural religion", in *A Treatise of Human Nature, op.cit.*, Vol II, p.413.
74. Mandeville, *The Fable of the Bees, op.cit.*, p.322.
75. "... without knowing any thing of Geometry or Arithmetick, even Children may learn to perform Actions, that seem to bespeak great skill in Mechanicks, and a considerable Depth of Thought and Ingenuity in the Contrivance besides." *ibid*, p.140.
76. *ibid*, pp.140-41, 143-45.
77. *ibid*, p.139.
78. *ibid*, p.179.
79. *ibid*, p.287.
80. Adam Ferguson, *Principles of Moral and Political Science* (1792; New York: AMS Press 1973) Vol II, p.232.
81. "It is evident in particular, that custom may be pleaded against those who take the benefit of it, where it is favourable to themselves; and who, therefore, may be reasonably supposed willing, in their turn, to comply with it, where it is favourable or beneficial to others".
 "... every party observing a custom, in those respects in which it is burdensome to himself, is entitled in his turn to expect the observance of it also in those respects in which it is beneficial." (*ibid*, pp.231, 232).
82. *ibid*, p.232.
83. *ibid*, pp.232-233.
idem, An Essay on the History of Civil Society (1767; repr. Edinburgh University Press 1966), pp.97,82.
84. *ibid*, pp.122,182. See also p.123: "We are therefore to receive, with caution, the traditionary histories of Ancient legislators, and founders of States... we ascribe to a

previous design, what came to be known only by experience, what no human wisdom could foresee...”

85. *ibid*, p.34. See also *Principles of Moral and Political Science, op.cit.*, Vol I, p.43: “Parts of speech, which, in speculation cost the grammarian so much study, are in practice familiar to the vulgar: The rudest tribes, even the idiot, and the insane, are possessed of them: They are soonest learnt in childhood; insomuch, that we must suppose human nature, in its lowest state, competent to the use of them; and, without the intervention of uncommon genius, mankind, in a succession of ages, qualified to accomplish this amazing fabric of language, which, when raised to its height, appears so much above what could be ascribed to any simultaneous effort of the most sublime and comprehensive abilities.”
86. *ibid*, pp.42,44,45.
87. *ibid*, pp.43-44.
88. *ibid*, p.47.
89. Dugald Stewart, *Lectures on Political Economy* (1855; repr. New York: Kelley 1968) Vol II, pp.422-23.
90. *ibid*, p.423. Cf. Sir Edward Coke, *supra*: the common law determines the interpretation of statutes.
91. *loc. cit.*
92. *ibid*, pp.423-424.
93. *ibid*, pp.423,424.
94. Edmund Burke, “Speech on the reform of the representation in the House of Commons”, *Works* (London: George Bell 1886) Vol VI, pp.146,149.
95. Mandeville, *The Fable of the Bees, op.cit.*, p.284. See also:
 “... the truth of what you say is nothing so conspicuous, as it is in Watch-making, which is come to a higher degree of Perfection, than it would have arrived at yet, if the whole had always remain’d the Employment of one Person; ... the Plenty we have of Clocks and Watches, as well as the Exactness and Beauty they may be made of are chiefly owing to the Division that has been made of that Act into many Branches.” (*loc. cit.*)
96. *ibid*, Vol I, pp.356-58.
97. *ibid*, Vol II, p.349. Mandeville, incidentally, realised that on *both* sides of an exchange, that which was given up — i.e. *both* parties increased their subjective utilities. He also saw that money obviated the problem of the double coincidence of wants, and that *both* supply (relative scarcity) and demand (utility) determined price.
 “... if you want or like a thing, the Owner of it, whatever Stock or Provision he may have of the same, or how greatly soever you may stand in need of it, will never part with it, but for a Consideration, which he likes better, than he does the thing you want.” (*loc. cit.*)
 “which way shall I persuade a Man to serve me, when the Service I can repay him in, is such as he does not care for? No Body, who is at Peace, and has no Contention with any of the Society, will do any thing for a Lawyer; and a Physician can purchase nothing of a Man, whose whole Family is in perfect Health. Money obviates and takes away all those Difficulties, by being an acceptable Reward for all the Services Men can do to one another.” (*loc. cit.*)
 “Nothing can be dear, of which there is great Plenty, how beneficial soever it may be to Man; and Scarcity inhances the Price of Things much oftener than the Usefulness of them.” (*ibid*, p.350).

98. Adam Smith, *The Wealth of Nations* (Edwin Cannan, ed; New York: Modern Library 1937) p.11.
99. *ibid*, pp.11-12.
100. *ibid*, pp.12,14.
101. *ibid*, p.16.
102. "Whether this propensity [to exchange] ... as seems ... probable, ... be the necessary consequence of the faculties of reason and speech ... It is common to all men, and to be found in no other race of animals ..." (*ibid*, p.13).
103. *ibid*, p.15.
104. *ibid*, p.13. See also: "As it is by treaty, by barter, or by purchase, that we obtain from one another the greater part of those mutual good offices which we stand in need of, so it is this same trucking disposition which originally gives occasion to the division of labour." (*ibid*, p.15).
105. J.J. Rousseau, *The Social Contract* (1762; London: Dent 1973) pp.60-61.
106. Quoted in Louis H. Gray, *Foundations of Language* (1939; repr. Macmillan, New York 1960) pp.435-36.
107. The material on the early history of linguistics is based on the following: (i) Otto Jespersen, *Language, Its Nature, Development and Origin* (1929; repr. Allen and Unwin, London 1950), pp.26-29, 33-34, 55-60. (ii) R. H. Robins, *A Short History of Linguistics* (London: Longmans 1967), pp.134, 149-52, 174-78. See also L.H. Gray, *op.cit.*, p.435. The comment on Sir William Jones is mine.

CHAPTER 3

The Analysis Developed: Menger

WE HAVE SEEN THAT THE common law was the first social phenomenon to be recognised as the unintended historical outcome of the actions of many generations of men. Customs and skills, and language were next seen to share these characteristics. Menger was the first to develop systematically and explicitly the two insights: *a.* economic phenomena too belonged with law and language, *b.* all these social formations in fact formed a distinct *analytical* category of their own. Menger developed this realisation in his controversy with the Younger German Historical School.

Now, neoclassical economics of the mid to late-twentieth century is pure theory — i.e. it requires a total ignorance of, and complete isolation from, the data studied by the professional historian and his particular approach to those data. Consequently, neoclassical economists and historians of economic thought can only see the *Methodenstreit* as a dispute over the methodology of pure economics, or over the relative merits and importance of pure economics and history. It is the ordinary historian's job to recognise that Schmoller and the other members of the Younger Historical School were historians, not economists. Consequently, the controversy related to the *nature* of historical data and *hence* to the relationship between these data and economic theory; and so, finally, to the nature of economic theory *per se*. In short, the dispute was over the relationship between theory and history — i.e. the historical data: from the *historian's* standpoint.

Since Menger was essentially responding to the stand already taken by the Younger Historical School, we need to begin with Schmoller's position. This

may be described as analytical collectivism. The following is taken from an authorised translation¹.

Schmoller's Collectivism

Schmoller rejects as “Utopian” and highly unrealistic, the “literary-ideological” view that economic activity is concerned “merely with... satisfying individual needs”, so it is “mainly dependent on individual action”. Rather, he says, economic activity is determined and dominated by the successive evolution of “certain definite economic organisms”² — ever-larger collective bodies: tribe or clan, village, manor, town, territory, national state, confederation. In each, a political centre of gravity guides and controls dependent economic institutions. These larger social bodies, consciously acting and thinking in common, as independent units, create society’s economic arrangements. Thus village-, town-, territorial- and national economies each successively place their peculiar stamp on economic activity: — it is *within* them that all economic phenomena proceed — the division of labour, monetary and technical advance, production and consumption, the formation of social classes. It is *within* the tribe, village, manor, territory, nation- state — that the individual and family — work, produce, trade, consume. It was the tribe or clan, in earliest periods, which first settled an area — not the individual.

As Schmoller sees it, each successive — and larger — economic organism contains successively higher, more progressive forms of economic phenomena. As later and larger politico-economic bodies grow, earlier and smaller units are broken up, or absorbed or controlled. Historical progress is always with the successively larger policy unit. The most brilliant historical achievements occurred when the political and the economic unit were one. Thus each historical epoch is to be understood by its place in this greater evolutionary scheme. Such an epoch is what the economist assesses and examines. Thus our object of study is the historical growth of the politico-economic entity of the nation-state, starting from kin-group or tribe and progressing through ever-larger organisms with an ever-higher degree of development. To comprehend such an object requires an equally spacious and all-embracing theory.

Finally, Schmoller emphatically rejects the “[English] doctrine” which justifies individual egotism only, never national egotism, and which dreams of “a stateless competition”³ among all individuals everywhere, because of the economic harmony of all nations’ interests. Schmoller thus clearly belongs to the Anglophobe tradition in the German-speaking world.

History is Complex

As against this historicist holism, Menger ⁴ emphasizes the *nature of the data* awaiting explanation. Real-world phenomena, whether natural or social, are the complex outcomes of many different and discrete chains of influences. In explaining any specific natural occurrence in the real world, we do not try to develop a single unified “law” or one all embracing scientific theory, to cover every aspect — the totality — of such a real-world phenomenon. Indeed, no single discipline could be adequate to this task and none attempts it. Every scientific discipline seeks rather to isolate *one* aspect of the complex reality as its object of — general — explanation. So in analysing real occurrences in the natural world, we call on *several* different natural sciences as appropriate — whether chemistry, physics, mechanics, etc. ⁵

Because such real occurrences are the mixed outcomes of a number of different influences (chemical, physical etc) there appear to be many irregularities in the operation of any *single* influence, taken in isolation. This sort of apparent real-world irregularity does not invalidate the general theoretical explanation offered by each of these sciences. ⁶

Such sciences as chemistry, mathematics, etc make a number of “unrealistic” assumptions about their objects of inquiry — eg the chemical identity of all chemical substances at all times and places; or the mathematical definition of a point; or the assumption in mechanics that bodies move in a vacuum; etc. Indeed in any real instance, the natural sciences do not inquire whether “pure” elements are actually found; they assume — quite “unrealistically” — that pure elements *do* operate, in complete isolation from all other influences, in an exactly measurable fashion (which scientists know is not achievable). On the basis of such “unrealistic” assumptions, the natural sciences establish exact scientific laws. ⁷

With social phenomena, too, the same general situation prevails: All history is the complex result of many different chains of causation: innumerable factors acting together to produce the complicated historical outcome. The (good) historian seeks to relate the particular developments he studies to their historical context and to identify the various influences shaping them. Economic history, too, is part of such an historical complex; here too the historian relates economic developments to the various influences producing them. When studying any aspect of history, to emphasise one single causative element alone is one-sided, and therefore poor historical analysis. And with social as with natural phenomena, it is equally chimerical to expect this entire historical complex to be explained by a single social theory: economics cannot be turned “into the phantom of a universal theory of social phenomena”; it can explain

only the economic aspect. This is perhaps the most important such aspect but it is only a part of the work. As with the natural sciences, the different social theories each study only one particular aspect of human activity, abstracting from all other aspects. We combine their various insights to grasp real-world social phenomena in their many-sidedness.⁸

It follows that we cannot simplistically and mechanically apply economic theory directly to historical materials. Economic theory abstracts from all non-economic influences (specifically: ignorance, ethical motives, external compulsion). Thus theory deals with economic phenomena in their “pure” form — i.e. “unrealistically”, ignoring many actual influences; it assumes that only economic forces affect economic interrelationships. But both economic and non-economic influences affect real-world prices (and other real economic phenomena). So the regularities perceived in the historical reality differ from those postulated in economic theory. Thus in theory, a definite rise in economic demand is — under definite assumptions — always followed by the same definite increase in price. This appears wherever there is exchange, irrespective of historical circumstances. But in actual fact, such a rise in price is seen only as a general rule, not as such a certain and definite relationship — the actual changes would depend on specific circumstances in different markets. Real-world prices, rent, etc. are influenced by ethics, law, custom, an incomplete attention to strict economic interests, etc; so they deviate to a greater or lesser degree from the “pure” forms postulated in theory.⁹

It follows from all the above that attempting to test economic theory against the complex historical reality is like testing geometrical theorems by measuring real things. The latter are not pure geometrical magnitudes; moreover, real measurements are always inaccurate to an irreducible degree.¹⁰

Two Aspects of Human Action

So as against the Younger Historical School, Menger insisted that human phenomena had *both* an individual (concrete) *and* a general aspect. Thus (he emphasised) both theoretical and historical investigations deal not with different but the same social and economic phenomena. Both approaches give us an understanding of these same phenomena: “However, this is in each case ... something essentially different...”¹¹

Historical inquiry deals with the concrete and the specific aspects of social phenomena. It is concerned with individual concrete phenomena and their interrelationships at a particular time and place. It deals with concrete and specific social units and particular developments (eg the history of particular states and districts; price history; the history of ground-rent in a particular territory; the

development of specific cultural conditions, or of economic activity in a specific nation or group of nations, etc.). Historical inquiry gives us the individual history of some specific historical object; it tells us under what concrete conditions it developed and how it became what it uniquely is. The value of such inquiry is quite clear in the study of such concrete phenomena as particular legal systems or particular languages: we gain immensely in an understanding of them by learning how they developed historically, the processes and influences at work.

Our grasp of economic phenomena is likewise advanced by examining their historical development. These individual and concrete historical instances are to be understood from a basis in theory, as particular instances of more general regularities — eg as specific examples of such general phenomena as ground-rent, interest etc. Thus we grasp historical phenomena with the aid of theory: the historian uses the social sciences as *auxiliary* tools for studying history. Such use of theory to elucidate historical phenomena, however, is quite distinct from the development of that theory itself. This last is a separate task and a specialism in its own right.¹²

Menger points out: an individual, concrete—historical—phenomenon, taken in all its complexity and uniqueness, cannot be a *general type*, for just that reason. So too the observed and specific course of development of such an individual historical phenomenon is not the same thing as the *typical* or *general* interrelationships or interconnexions, found amongst many similar phenomena. Now experience does show that all the various economic phenomena are not utterly unique — we do recognise certain *recurring general types*: eg money, prices, exchange, supply and demand, capital, interest, ground-rents, etc. We also recognise certain *typical interrelationships* amongst phenomena, recurring with a greater or lesser regularity: such as the effect of a change in supply or demand on a commodity's price; the effect of a higher money supply on money prices generally; or the effect of capital accumulation on interest rates, or of population growth on ground-rents, etc. It is this general and typical aspect of social phenomena and their typical interrelationships and interconnections that we grasp through theory. General theoretical categories enable us to group and classify these myriad economic phenomena. We thus go beyond what we observe immediately, to further factual observations. Theory thus gives us a deeper understanding; it is the basis of prediction and control.¹³

Menger sums up the difference between historical and theoretical aspects: "... *history* ... has the task of making us understand *all* sides of *certain* phenomena ... *theories* have the task of making us understand only *certain* sides of *all* phenomena ..."¹⁴ The historian, that is, analyses the various and manifold

influences acting within and upon a particular historical context. The theorist seeks for general explanations, going beyond any single historical context.

Complicated phenomena (found in the historical reality) develop from simpler elements. So in analysing such phenomena, we reduce them to their simplest components, taken in isolation. We then investigate how the more complicated types are formed and built up from these fundamental constituents, looking to the processes and regularities involved. The more complicated the phenomena, the more difficult and extensive is this task.¹⁵

Economic phenomena are human phenomena — so their elements are human attempts to satisfy material needs. These ultimate factors — “human individuals and their efforts” — are known directly to be real, unlike atoms and other postulated natural forces. Thus the theoretical social sciences have a definite advantage over the natural sciences.¹⁶

Two Types of Order

Economic and social phenomena may be divided into two categories: one sort are established by deliberate intent, i.e. through concerted agreement or positive legislation. Such social phenomena are “the result of a *common will*”. We explain these phenomena “pragmatically” — i.e. in terms of the aims and purposes of those involved, the obstacles they sought to overcome, the various means they used to attain specific (often pre-determined) ends.¹⁷

No such deliberate or concerted origin can be detected for the second group of social phenomena: they are not produced by legislation or common agreement. Although never invented for the purpose, these phenomena are vital to society’s welfare, which indeed they serve to a very high degree. They appear as the “*unintended results of historical development*.” They are “unintentionally created” by “individual human efforts” aimed at individual goals and interests. — So too, only some of the changes in social phenomena are brought about deliberately, by agreement or legislation; there are other social changes that are the unintentional outcome of social (inter-individual) development.¹⁸

Menger points out that Burke recognised the common law and the British constitution as the unintended result of historical development. Burke’s recognition was followed in Germany by Hugo’s historical studies, and then by Savigny and Niebuhr. They too saw that law was not created by the fiat of public authorities; it was an historical formation, like language. They further realised that even if legislation were introduced, law continued to develop “organically” — i.e. historically, as language did. W. von Humboldt systematically developed the same insight in general linguistics¹⁹.

Unintended Orders — The Category Widens

Menger now explicitly assimilates into this category, all social phenomena generally and economic phenomena in particular. Together with law and language he includes religion, morals, communities and other social units, as well as markets, the division of labour, specialisation, competition, trade customs, money, the prices of goods, interest rates, ground rents, speculative profits, wages, the location of economic activity, etc. All these, he says, “exhibit exactly the same peculiarity” — they are all “social structures” that “in their constant change are ... the unintended result of social [inter-individual] development.” He explicitly characterises economic phenomena in exactly the same terms.²⁰

In trying to grasp these social phenomena we initially apprehend them all in the most immediate and obvious fashion: as the product of calculated intent, whether agreement or legislation. But this approach is both unrealistic and unhistorical. Equally, mystical allusions to the primeval origins of these institutions or their organic nature likewise evade the analytical issue. Any complicated social phenomenon cannot always have been there, from the very beginning: it must have *developed* at some point — from simpler, individual elements. Menger emphasises just how different Burke’s insight is, from these two approaches. Burke saw that the common law and similar institutions were neither invented nor were they divinely-established, as Le Maistre held, for example. Burke’s view was objectively-based: all such formations were historical developments, that had survived the test of time.²¹

Thus Menger arrives at the key analytical issue: such social phenomena as law, language, religion, money, markets, competition, etc. occur historically where neither the populace collectively nor their rulers have established such social structures by purpose. So as Menger realises: “It is here that we meet a noteworthy, perhaps the most noteworthy, problem of the social sciences: *“How can it be that institutions which serve the common welfare and are extremely significant for its development come into being without a common will directed towards establishing them?”*”²²

All such phenomena — whether social or economic — “have come into being in exactly the same way”: as the unintended outcome of inter-individual interaction. So they cannot be understood to be intentionally-created (“pragmatic”). Thus for both social theory in general and economic theory in particular, the analytical problem is identical: in both cases we seek to grasp the emergence and development of exactly the same *type* of phenomena — “organically-created” social structures. So in explaining the latter, as in tackling the “main problem of theoretical economics”, our “methods of understanding... are by nature identical”. Thus Menger explicitly subsumes

economic phenomena and their theoretical explanation as a particular case of a more general category: “unintentionally-created social institutions” and their general explanation.²³

Now, complicated social and economic phenomena “developed ... from simpler elements”. So we reduce the complicated to its simpler components — its individual causative elements. We then investigate the regularities through which the more complex economic (and social) structures “are built up from these elements”. The latter are the “innumerable efforts “of economising individuals ”pursuing *individual* interests.” Such economic phenomena as markets, wages, interest rates, and the like are the “unintended result.”²⁴

To demonstrate the inter-individual processes involved, and their similarity, Menger analyses: the formation of the common law; the emergence of money; and the nature of the overall economic order — the “national economy”, as distinct from its component economic units (eg firms) which are formed on a completely different principle.

Separately from these three Menger also analyses the capital structure — *not* his term — for the first time. He recognises that the process of producing consumption goods is a sequence of productive relationships: between these final goods and the *chain* of investment goods that lead eventually to final consumption outputs. Hence Menger distinguishes amongst goods according to where they stand in this investment chain. Consumer goods belong to the “first order”. Those investment goods directly producing final goods are “second-order” goods. These are produced, in turn, by “third-order” goods, and so on. To produce the various final goods, all the requisite “higher-order” goods have to be available: in all the different orders needed, in the right proportions.²⁵ Menger does not explicitly include this overall production structure with the other unintentionally-developed social institutions, but is clearly a social formation of the same type, as I shall argue later in more detail. Meanwhile, I turn to the first such formation which Menger analysed explicitly as such — the common law.

The Common Law

Menger sees that the common law is the unintended product of inter-individual (social) development. It moulds the general welfare and promotes it to an outstanding degree — perhaps more than any deliberately-established institution. But the common law was never developed intentionally to this end: “...the explanation of this remarkable phenomenon is the difficult problem which social science has to solve.” We have to examine the processes through which law appeared without legislation. This process originated in periods

long before documents, so we can only explain it in general terms — the human tendencies and the general conditions involved.²⁶

Menger analyses this general process: in very early periods, people felt continuously threatened by others' violence: i.e. that of the few who were strong as against the weaker majority. But even the strong felt the need of protecting their acquisitions. Thus at first the far-sighted and then others saw gradually that in their own long-term interest, "individual despotism" had to be restrained: "What benefits all, or at least the far greater majority, gradually is realised by all". Thus law first arose as "*rules for action*" — customs — that were "fixed in the minds of the population without contract or particular agreement". At this early stage of society, everyone could see that not only did he — individually — gain from keeping these rules, he gained even more if everyone else also adhered to them: any violation threatened his own interests. Thus, to follow these rules was recognised to be in everyone's interest. So it was further realised that adherence to the law in specific cases could not be left to individual discretion: adherence had to be enforced. Thus common law — custom — developed: supported by general opinion, its rules apply equally to all; they are enforced especially on those who fail to keep them. Such enforcement is initially also a matter of custom: "everyone feels the impulse to defend the threatened law".²⁷

In short, Menger sees that law always begins as custom. He goes on: as groups of people come to live under a common set of customary rules, a feeling of unity arises. Different such sets of customary rules emerge, according to the particular historical environments in which they evolved over time: law is always shaped by specific circumstances. Only *after* a body of customary law has emerged, do there also appear coercive authorities — government officials — to enforce the law when needed.²⁸

The common law is shaped over centuries of practical development: by the people's needs and convictions, by specific and changing circumstances. But as these customary rules are further extended, developed and articulated, the division of labour leads to a specialised class of legal experts. The authority of government officials also grows. The law now appears more as "something *objective*", an external authority.

Initially, this professionalisation and government enforcement merely reinforced the common law. But it had technical faults — gaps, contradictions, uncertain points. Moreover, it was unsuited to governmental purposes, the "momentary views of the rulers". Nor could it be altered rapidly to meet political (and social) changes²⁹. Thus legislation is added to the body of legal rules.

But legislation is “pragmatic” — it expresses the legislator’s intentions and the specific conditions aimed at.

Thus it is imposed even at an early date, “by *authority*”, by “the man in power” or by the victor on the vanquished. These “statutes of power” are not law proper, but those in power have an interest in assimilating them to the common law in the minds of the people. So legislation “to serve the rulers” has often replaced many common law rules. Further, the effect of legislation is often perverse, when it is based on the “pragmatic” view of the state, society and social institutions: viz., that all these were purposefully created by the people or their rulers. From the rulers’ standpoint, “organically” created social institutions are “abuses and social evils”. So with no comprehension of the “unintended wisdom” of such institutions and the common law, immature legislative reform has produced the opposite of the common good. It has “spoilt the law” instead of “bettering it.”³⁰

Menger emphasises that referring to the “organic” or “primeval” nature of the common law *explains* nothing: such phrases, “partly figurative, partly meaningless”, give no theoretical understanding of how that law was formed. The common law is not a natural organism but the “outcome of *individual human efforts*”. Menger points out that in fact, on many occasions, common law has been proved harmful, while legislation has changed the law to the good. The jurist’s task, therefore, is to explain clearly the general advantages for everyone of the organically-grown common law. With the insight gained from “thoughtful consideration” of the common law’s specific value, legislation can be “purified” [Menger’s term]. Thus the legislator, in relation to the common law, is then akin to the farmer or physician, in relation to their understanding and application of natural laws³¹.

Money as an Unintended Order

Amongst economic phenomena, Menger twice outlines the historical logic of the emergence of money — i.e. the general use of particular commodities as media of exchange. Menger points out barter can proceed only within very narrow limits — what older economists termed “a double coincidence of wants” [not Menger’s term]. An individual can obtain what he wants through barter only if he can supply his potential supplier with what *he*, in turn, needs, and this cuts both ways, of course. This means that people barter only those goods surplus to their own requirements and accept only such goods as they can directly use themselves. But when particular commodities are used as exchange media, we see people accepting goods they cannot use immediately

or even already have sufficient of. At the same time, they reject other goods on just these very grounds³².

What has happened? — Some goods are more marketable — far more widely and readily accepted, because they fill a more general need than others. The specific such goods vary greatly, according to historical circumstance. Certain individuals, more perspicacious than others, begin to customarily barter their goods for these more widely-demanded commodities. Such individuals then use the latter to obtain the goods they actually need. This practice spreads gradually, as others become aware of the greater ease in securing their requirements, via this indirect method. Thus the use of money emerges as the development of a custom, a particular way of doing things. So money — a medium of exchange — appears via a social process, as “the unintended result, the unplanned outcome of specifically *individual* efforts of members of a society”. Only *after* such media of exchange are widely used, do coins appear: “coin... is only one variety of money”. Coins are merely convenient methods of using particular weights of the precious metal as exchange media³³.

The ‘National Economy’ — An Unintended Order

Menger now notes the existence of a distinctive economic order — the first time it has been recognised. In this social formation, the component elements are the individual economic units — firms, households, etc. These units obviously organise themselves in a variety of ways to achieve their several aims. They are economies proper; but “the *nation* as such is not a large subject that has needs, that works, practises economy, and consumes, and what is called ‘national economy’ is therefore not the economy of a nation in the true sense of the word.” Nor is this social structure separate from, or opposed to, the economic units composing it. “Those complicated human phenomena” we term “the national economy” are the “*results* of..... innumerable individual efforts”. Theoretical understanding means “reducing complicated phenomena to their *elements*.” So we have to begin with such individual economic efforts and see how they systematically result in an overall economic order³⁴.

Menger repeatedly emphasises that we cannot understand this order by analogy with an individual economy, such as a firm or household. To do this is to create a “thoroughly inadmissible fiction”. Material means are used, not by a fictitious entity, but by actual people, to provide for their own needs and those of other, equally real, people. The resulting social structure is a “complex of individual economies” — a multiplicity of units tied together by commercial inter-relationships. The (false) analogy with an individual economy is an analogy to something which is familiar and so clearly understood, which is

why it is used. The Historical School rely on this fiction, as do “Adam Smith and his school.” But what we are confronted with is a phenomenon far more complicated and difficult of interpretation. Economic theory has to explain how these “complicated phenomena of human economy” developed through the activities of individual economic units and their commercial interactions³⁵.

Analysing Such Orders

Menger also mentions that certain other social and economic phenomena — language; morals; the location and development of commercial centres; specialisation and the emergence of professions; the division of labour; trade customs — can all be analysed as the “unintended result” of individual efforts pursuing other ends altogether³⁶.

Menger is well aware that “legislative compulsion” has also shaped the various social phenomena in their later development, often to an increasing degree. Price formation is influenced by taxes and wage regulations. Legal systems are a mixture of “unintentionally created common law” and legislation. Monetary developments and the development of markets also represent a combination of the “organic” and the “positive” — i.e. both the unintended results of individual action and deliberate policy. In short, both “organic” and intentionally established institutions co-exist and interact in the historical reality³⁷.

As noted earlier, Menger sees that many social and economic phenomena are formed “in exactly the same way” as the common law and language. As we saw, Menger builds explicitly on Burke and Savigny amongst common-law thinkers, and on Wilhelm von Humboldt in linguistics. Menger sees further that Burke’s analysis differs sharply from three other approaches to social phenomena. Firstly, the mystical view (Menger’s characterisation). This view simply alludes to the primeval (or divine) origins of these phenomena and to their higher — i.e. superhuman — wisdom, especially that of the law. It makes no attempt at explanation. Secondly, the “pragmatic” outlook which links together the various members of the Anglo-French enlightenment. Menger includes here the Physiocrats, other French writers, and “Adam Smith and his closest followers”. For these thinkers, all economic phenomena are produced intentionally, whether by explicit agreement amongst people or by legislation. Thus “unintentionally-created social structures” remain to them a closed book. Burke (says Menger) was the first to oppose this Anglo-French “rationalism and pragmatism.” And so because Menger lumps Adam Smith in with the French rationalists, whom Burke opposes, we get this intriguing Mengerian contrast between Burke and Smith. Lastly, the Historical School. Here

Menger underlines its “essential” difference from Burke’s approach: the former is historical “in an entirely different sense.”³⁸

Menger shows how Burke is at variance with all three approaches: In opposition to the Anglo-French Enlightenment, Burke recognised that there did exist social phenomena that were the unintended results of historical development. As against the mystical viewpoint, he definitely aimed to explain such phenomena. This he did, as the unintended outcome of a long historical process of selection and development; these institutions had “proved [their] worth” through “the test of time”. And when Menger contrasts Burke with the Historical School, his point (though not spelt out) is clear: the Historical School postulated various over-arching superhuman “historical” organisms that succeeded each other through time, whereas Burke saw that history was a human process. Menger feels, however, that Burke and Savigny were “one-sided”. They combined their analysis with the defence of “what already exists” against reform (Burke) and the assumption the “organically created social structures” were “without proof, higher than human wisdom” (Savigny)³⁹.

Menger is widely described as an Aristotelian in his methodology. Thus Hutchison says that Menger quotes most frequently and approvingly from Aristotle, in the *Problems*. But these references are generally at the start of a chronological review of the various opinions expressed on some topic; and Aristotle is quoted on several occasions to be *refuted*.

Investment Chains

Now to the last social formation: the production structure. As mentioned earlier, Menger does not explicitly refer to this in these terms, but he is clearly describing an inter-individual social process of exactly the same type as the other historically-developed institutions he has analysed (the common law, the general economic order, etc.)

Menger begins his *Principles* with an exposition of the structure of production (*not* his term). From the very outset he recognises that the process of producing final goods consists in a chain of productive inter-relationships. Production of final outputs is an interlinked sequence of operations proceeding through time. This sequence is analysed by starting from the various final outputs and then continuing link by link through the *succession* of heterogeneous investment goods used in the investment chain which precedes and lies behind the appearance of these final goods and services.

Menger begins his analysis at the final consumption stage because these outputs satisfy human wants directly; so he terms them “goods of the first order”. As individuals have a range of wants to satisfy, they always aim at

obtaining not just one or two, but a *range* of such final goods. Many of the latter are versatile, in that they can satisfy more than one human want.⁴⁰

But there are other goods that are not directly useful but which human beings value nonetheless, because these goods help to produce first-order goods. Thus such instrumental goods contribute indirectly to the satisfaction of human wants and are valued in accordance with their capability in doing this. Those investment goods that directly produce final outputs are “second-order” goods. These latter are in turn produced by other types of investment goods: belonging to the “third order” — and so on, to that order of investment good which is furthest removed from final consumption (in whichever case is being examined).⁴¹

Thus in Menger’s example, bread is a first-order good. Flour, fuel, salt, ovens, the services of a skilled baker — these are second-order goods, as they directly help to produce the bread; while the flour mills, grain, labour (etc) needed to produce the flour (etc.) are third-order goods. In the fourth order, we place farmers’ services, fields, agricultural implements and the like. The fifth order would contain the investment goods needed to produce agricultural implements, fertilisers, etc; and so the sequence continues to that investment link in the chain which is furthest removed from the anchoring stage of final consumption.⁴²

Thus it is only from consumers’ subjective evaluations of first-order goods and services, that all other outputs can be evaluated. This evaluation is in terms of their contribution to the production of those final outputs that consumers in fact treat as valuable. Over time, consumers change their relative evaluations of the various final outputs — whose composition also changes as new goods and services appear. So the evaluation of the various higher-order goods and services changes correspondingly, in accordance with the latter’s contributions to providing the altered range of first-order goods and services⁴³. Menger takes the example of tobacco. If people no longer want to smoke, this changed evaluation of the final good (tobacco products) means that existing stocks are no longer useful in satisfying a human want and are therefore valueless. In turn, the following higher-order goods are also rendered valueless because they are specific to tobacco consumption. Firstly, complementary items such as cigar-boxes, humidors and the like. Then, at the next higher stage, raw tobacco, processing tools and machinery and the specialised purchasing and manufacturing skills specific to tobacco products. But the agricultural land and implements that can contribute to the production of *other* final outputs, have their contribution evaluated in terms of the relative significance that consumers attach to these other first-order outputs. Most higher-order goods are versatile in that

they can be used in helping to produce many different first-order items; only some higher-order goods are specific to one or a few items.⁴⁴

Menger emphasises that to classify goods into various orders is only to position them somewhere in the chain of production leading to final consumption. This classification is *not* something which is inherent in the goods themselves. Rather, such classification refers to the various ways in which human beings employ these goods to satisfy their wants, according to circumstances. Some goods and services are used directly to do this. Other goods and services are used indirectly, at various removes, for the same ends.⁴⁵

Thus to reach the stage of becoming final output, goods pass through a chain of production stages. At each stage, the inputs from the next preceding stage are worked on and then passed on to the next stage succeeding. Thus higher order goods are gradually converted into lower order goods: wheat becomes flour which becomes bread, — to continue with Menger's example. But this transformation requires *time*: higher order goods cannot become lower order goods "by a mere wave of the hand". The production processes that turn wheat in the fields into bread at home take time to proceed through the successive intervening stages. It follows that the goods in each successive stage are complements to one another — they cannot be substitutes. Thus wheat, flour, and bread in a retail shop, are the successive stages of production of the first-order good, bread at home — which is why these higher-order goods cannot be substitutes for one another: a bakery needs flour not wheat; while for direct consumption, people need bread at home, not wheat or flour.⁴⁶

But that is not all. At each stage, the input from the next preceding stage has to be combined with other capital goods and services. The resulting changed output is then passed into the next succeeding stage and there combined with yet other capital inputs — and so on, until the final consumption stage is reached. Thus to produce any final output, *all* the specific *combinations* of higher-order goods have to be in place in *each* link in the investment chain leading to that output. A single higher-order good in isolation, cannot do the job. Thus (to develop Menger's example), when wheat proceeds into the next succeeding production stage, it has to be put through a flour mill. In the next stage following, the flour needs to be combined with yeast, water, other ingredients, ovens, bakers' services to become bread. The next link in the chain puts bread into a retail shop from where it moves into the final consumption stage in the home. At *each* stage the various complementary capital goods and services must be available in the requisite quantities *and* in the appropriate combinations, if final outputs are to be produced. Thus wheat cannot be mixed directly with yeast, etc: a flour mill is also needed, and needed *first*. Then, at the bread-making stage,

the various ingredients and services have all to be available in certain quantities and proportions, although these two can vary within some range, of course.⁴⁷

In other words, in most investment chains there is some scope in many of the links for varying the proportions amongst the various capital goods and services making up the capital combinations forming those investment links. Menger gives the example of agricultural production, in which different proportions of land, fertilisers, implements and labour can be combined to produce agricultural outputs. But this is only one stage in the interlinked series of production stages leading to first-order goods. So far as the overall production chain is concerned, capital goods and services have value only when they can form a completed chain leading to the output of one or more final consumption goods or services. If the available capital inputs cannot form the appropriate combinations to produce the most desired final outputs, then these heterogeneous capital inputs will have to be used in other combinations — where possible — to provide other, less desired, first-order goods. For example (to extend Menger's own instance), if the flour mills, ovens, and all the other investments needed to produce (wheaten) bread are not *all* available in the appropriate quantities and proportions, then some land otherwise best suited to wheat, will have to be used for other crops, where there exists some chain of investments which can use these crops to ultimately produce some other final consumption good. But any higher-order good which cannot be so used becomes valueless.⁴⁸

Thus the analytical unit which Menger develops here consists of the entire chain of production — the complete set of linked investments — which yields the entire range of final outputs being produced: “The objective of ... investigation [is] the whole causal chain up to the last link, the satisfaction of human needs.” All these heterogeneous capital goods and services — goods of successively higher orders — have to be treated and analysed as a unit because they are tied together by their joint contribution to the production of some first-order good or goods: all together form “... the entire range of goods causally connected with the satisfaction of a human want.” Menger now systematically works out the implications of continuously extending this capital structure — using goods of successively higher orders to “lengthen” the production chain which will produce first-order goods.

Provision for the Future

Menger emphasises that people wish to provide for their future consumption, even if they are hunter-gatherers and therefore dependent on nature's providence. Even so, they search for food before hunger sets in and put up

shelters in anticipation of bad weather. And so, to provide first-order goods in future time-periods, people gradually begin to produce goods of successively higher orders. Such goods are valued precisely on account of the final goods they will provide in the future at the time when the production process is complete.⁵⁰

Thus when people produce goods of successively higher orders and when they move goods from lower to higher orders, they extend the production chain. In so doing, they establish production processes that will take more time to turn out final outputs: the first-order goods will be supplied at successively later periods in the future. Initially, of course, people wish to ensure that their consumption needs are met in the nearest future. Only after these are met will they use any remaining resources to provide for the next following time-period, and so on. And so the investment chain is gradually lengthened: goods of successively higher orders are gradually produced in succession.

Other Features

But such longer investment chains are also more productive: they not only produce larger quantities of first-order goods, these final goods are now more varied in range. Therefore the range of occupations becomes just as varied; and because of these outcomes, civilisation develops, population grows, and human well-being increases. In sum, Menger realised that it was because men had consistently lengthened the production chain — systematically extending it to goods of ever-higher orders — that people's material conditions improved: final output increased in quantity and range and hence a variety of employment also became possible.⁵¹

Menger analysed the historical development of the production chain over time. Initially, when they are hunter-gatherers, men can only obtain such first-order goods as nature provides fortuitously. Then, as people deliberately produce goods of the second or even the third order, the role of fortune in obtaining first-order goods is gradually reduced. Instead, deliberate production grows in importance. Then, as investment chains are lengthened, production dominates: men now use “causal connections between things” to produce final outputs. Thus, from gathering wild plants, men begin to cultivate them. Then people begin to practice intensive agriculture. Similarly, in hunting, men replace clubs with bows and nets. Then pastoralism begins and it, too, is intensified. Goods now increasingly come to be manufactured, at first by craft tools. These tools are then improved and finally machinery is produced. Thus men gradually produce goods of higher and higher orders, lengthening the investment chain leading from the highest order goods down to first-order goods.⁵²

Now, in the output of second and higher-order goods, the division of labour progresses by subdividing the production of each good amongst a number of production units. Each unit turns out only a part of each good, so that the various individuals and firms turn out complementary outputs. Each individual is aware of only the component (or part thereof) that he produces; he does not realise that this is only one small piece of the whole — that others elsewhere are producing all the complementary parts that will make up a complete product. Furthermore, this product is itself only one part of one link in an investment chain: still other individuals somewhere else are each producing component parts of all the various higher-order goods forming all the links in this investment chain. As this production chain is lengthened — as goods of higher and higher orders are produced — the output of all goods becomes more and more subdivided in this fashion amongst different production units.⁵³

Concomitantly, the time periods for which consumer goods are provided, are pushed further and further into the future. In hunting-gathering, men can provide for only a few days ahead. But a nomadic pastoralist, by increasing the size of his herds, uses investment processes that produce final goods after several months. And in the late nineteenth century, men engage in production processes that turn out first-order goods after several years or even decades. Moreover, men can now also provide for their future descendants.⁵⁴

Menger emphasised that because men had extended the production chain over time, they were able to convert “vast regions inhabited by a few miserable, excessively poor men into densely-populated civilised countries.” Menger underlines Adam Smith’s restricted vision here. Smith saw the advantages of the division of labour only in the direct production of consumer goods. He failed altogether to recognise that the bulk of production activities went into the output of higher-order goods, so he could not see the real significance of subdividing labour: the production of complementary goods of higher and higher orders, resulting in an increase in the quantity and range of first-order goods and an expanding range of employments. For example, in a hunting-gathering tribe, suppose different individuals specialise — in Smithian fashion — in particular tasks such as gathering plants, hunting, fishing, food preparation, making clothing. Certainly labour productivity would increase, but compare this with the results of producing higher-order goods: first bows and nets, then moving into both sedentary agriculture and pastoralism, going on to produce improved craft tools and machinery.⁵⁵ The differences in the output and range of first-order goods are dramatic.

Menger’s analysis was extended and build on by Mises, Hayek and especially Lachmann. Menger here was clearly analysing an actual historical process with analytical tools developed for the purpose. Menger’s analysis may

be contrasted with the neo-classical approach: in Mengerian terms, the latter treats all higher-order goods as homogenous and perfect substitutes for one another; concomitantly, production is instantaneous.

Comments and Criticisms

Before going on to Mises and Hayek and their development of Menger's insights, we may examine some critics and commentators on Menger. This examination will emphasise the centrality of both subjectivism and the capital structure to Menger's analysis, and also bring out more clearly the features of the latter. (Given the unfamiliarity of the analysis, some reiteration may be helpful.)

Stigler

Stigler objects to the subdivision of higher-order goods into classes according to how far they are from first-order goods: "The classification of goods into ranks [is] ... of dubious value. The same good, say coal, might be used both as a good of the first order (in domestic heating) and... as a good of ninth order (in smelting ore) in even a simple economy."⁵⁶ But this is precisely why Menger emphatically insists that these categories do *not* refer to any characteristics inherent in the goods themselves. Rather, the classifications help to identify the particular *use* that people make of the goods available to them. And so Menger pointed out that (versatile) production goods can be moved from lower to higher orders — which is how the investment chain is lengthened. For Menger, the analysis is of the various ways in which people make use of goods, i.e. the subjective assessments made by human beings and manifested in their actions towards these goods. But Stigler confirms that for the neo-classical economist goods are things-in-themselves and so the central objects of concern.

Thus the insight that coal is usable in very different stages of production is of the greatest value to the *historian*: he is led to inquire into the *relative* quantities used for direct domestic purposes and for smelting ore, in the historical context he is investigating. This means he looks into the other complementary capital goods being produced, the various capital combinations present. Thus the historian is guided to inquire into the "length" of the production chain in that historical context. In a relatively short investment chain, rather more coal is used for domestic purposes and in production stages closer to final consumption. The quantities used in stages further removed, e.g. smelting, are much smaller in comparison. But as the production chain is "lengthened" — as goods of successively higher orders are produced — larger quantities of coal

go into smelting and other investment links further from final consumption, as compared with domestic use; total production of coal also increases. This happened in England from the sixteenth to the nineteenth century, for example. Stigler recognises that “even a simple economy” may have production chains extending some distance from the first-order goods turned out. Exactly so: this gives the historian an insight into the complexities of the various production chains — particularly the more extensive ones — found in the different historical contexts he studies. Thus the very classification which Stigler finds “of dubious value” — to a neoclassical economist — provides indispensable and profoundly penetrating insights in historical study. In short, precisely because Menger is developing analytical tools for the historian, his analysis has to lie outside the limits of neoclassical economics.

Stigler goes on: “Menger himself makes no use of the concept of ranks other than to distinguish consumption goods from production goods.” But Menger nowhere refers to “production goods” *tout court*, all of which are homogenous and perfect substitutes for one another. Indeed he devotes the first three chapters of his *Principles* almost entirely to analysing heterogeneous investment *chains*. In these, the *successive* higher order goods are complementary to one another and so have to be used in the appropriate combinations; substitutability is only possible within a link and within limits, as in crop cultivation. Stigler also protests: “... to attempt to trace in detail the stages in the production of even a simple commodity — a common pin, for instance — would amount to nothing less than a detailed description of economic life and its history.”⁵⁷ Precisely: that is why Menger sees in the increasing use of goods of ever-higher orders the explanation for humanity’s growth from a small population of hunter-gatherers, almost entirely dependent on nature, to a densely-settled population with a wide range of employments, producing a vast range and quantity of first-order goods, in a global trading network.

Stigler says, “the greatest hiatus [in Menger]... is unquestionably the virtual absence of any theory of capital.” He refers to Menger’s “vague and unsatisfactory definition of capital”. Stigler goes on, “it is asserted both that increases in capital can take place only through extensions of the (undefined) period of production and that all such extensions increase the productivity of a given amount of capital.”⁵⁸

But Menger *nowhere* refers to the neoclassical notion of a homogenous stock called “capital”, in which any separate goods are perfectly homogenous and perfect substitutes for each other. Nor is Menger concerned anywhere with a “period of production”. What Menger investigates are the production *chains* formed by *sequential* and heterogeneous higher-order goods, whose final links consist of the various first-order goods yielded by these investment chains.

Because they must form a chain in order to reach this final link, the sequence of higher-order goods are complements; they cannot be substitutes (except, on occasion, within each link.) So in effect Stigler complains that Menger does not hold the neoclassical view of what it terms “capital”.

Now to what Stigler calls “the (undefined) period of production” and the “productivity” of an “amount of capital”. In Menger’s analysis, it is *from* the investigation of investment chains that there *follows* the implications regarding both the quantity and range of first-order goods produced and so also the time-periods involved. I summarise Menger’s analysis and then consider some practical examples, for reinforcement.

As we saw earlier, Menger recognised that it is as goods of successively higher orders are utilised — the production chain is extended — that the range and quantity of first-order goods both increase. We saw that Menger traced this process of extending investment chains and their effects through time. When people were hunter-gatherers and so produced virtually no higher-order goods, there was a small, poverty-stricken population. Then people began producing goods of successively higher orders, developing better hunting tools, then pastoralism, sedentary agriculture, craft production and finally machinery. Thus population grew, became densely-settled, final goods increased in range and quantity, and hence the range of occupations also grew. And as investment chains were extended, so also were the time intervals between the highest order good actually used and the first-order goods being turned out. In Menger’s examples, this time period was a few months in the short production structure of a nomadic pastoralist, but years or even decades in the vastly-extended production chains found in the international trading order of the late nineteenth century. Menger also recognised that *within* the investment chain, the time interval in each ‘link’ also varied — this being the time needed to convert inputs from the previous stage into inputs for the next stage following.⁵⁹

Investment Chains In Reality

We may take two examples to illustrate how differences in the “length” of investment chains produce differences in the “mix” and quantities of first-order goods and in the production time involved. Taking the nomadic pastoralist again, consider the time taken for a lamb to be born and then mature; the sheep’s wool to be shorn, prepared, spun and woven into cloth, then sold or traded and turned into clothing. In this relatively “short” production structure, the successive higher-order goods are relatively simple and coarse in quality: unimproved sheep, spindles, simple looms, etc. So too are all the first-order goods produced in a society where such pastoralism is prominent and

where therefore the other members are subsistence agriculturalists and part-time craftsmen. These first-order goods would include grain, clothing, pottery, baskets; etc. In sum: the production chain here is far “shorter”: from the highest order goods used to the first-order goods turned out. Concomitantly, the range of such goods and of available occupations is very meagre; and the time taken in the overall production process is also much shorter.

Turning now to a highly-simplified and incomplete example from a twentieth-century context: consider the time needed to mine iron ore and coal and transport them to steel mills — possibly in other countries; then to convert the ore, coal and other inputs into steel products, transport those products to different factories and ship yards and turn them into ships, lorries, cars, electrical goods, etc.; then transport these various goods (except the ships) to dealers and retailers; and finally, the time taken before final sale and transport to the purchaser’s house (or firm, in the case of lorries). These are merely the more obvious links in these investment chains. A slightly more comprehensive picture would include, *inter alia*, the production and uses of such higher order goods as the following (in the appropriate production stage); mining machinery; bricks to build factories; the various sorts of machinery used in the shipyards and in the various factories that turn out (for example): lorry and car engines; electrical motors; and the lorries, cars, electrical goods, etc. — In this example the investment chains are clearly immensely “lengthier” and more complex, from the highest order good utilised to the huge variety of first order goods ultimately turned out. Not only is there an incomparably wider range in the latter, there is an even greater range in the various higher-order goods used as also in lines of employment. So too an immensely greater amount of *time* is needed for the entire production process, from the stage furthest removed to the final consumption stage. Furthermore, *within* each production structure — whatever its “length” — each segment of the production process requires different amounts of time to be completed. That is, the time taken in each stage varies according to the product, the particular process and the particular link in that investment chain. In short, Menger is concerned to analyse the production chain. In any such chain, first-order goods constitute the final link. So its “length” determines the kind and quantity of first-order goods that are ultimately produced. So too the overall time taken to reach this final stage, depends on the “distance” between the highest order good used and the first order goods turned out. Thus the “length” of the investment chain considered determines *both* the final outputs *and* the time needed to produce them.

Back to Stigler

But Stigler concentrates solely on something which he calls “the period of production”. According to Stigler, if this period is extended, the “quantity” of capital is increased as is the “productivity” of a given amount of the stuff. Thus Stigler doesn’t just get the cart before the horse, he doesn’t realise it is a cart and that a horse is pulling it.

According to Stigler, Menger finds that one “limitation” to “extending the period of production” is “an irrational preference for present over future satisfaction.”⁶⁰ But Menger says explicitly that *scarcity* determines how far into the future people can provide for. With a very much smaller stock of resources, people can build up only those interconnected investment chains that yield first-order goods in the nearest future period. Only as resources increase does it become possible to extend these investment chains with goods of successively higher orders, thus to provide first-order goods in successively more distant time periods. *Because* resources are scarce, people can build up investment chains only link by link. It is scarcity which limits how far people can extend these chains — i.e. how far into the future they can provide for.

This point is worth pursuing further: to emphasize Menger’s analysis of subjectivism in opposition to Stigler’s neo-classical objectivism. To use Menger’s own example: Suppose people built up investment chains that yield final goods only in far distant time periods. Resources, however, are scarce: so people do this only by sacrificing those shorter investment chains that turn out first-order goods in the nearer future. This means that when these nearer time periods are reached, supplies of first-order goods dry up: Since all or most of the needed resources are tied up in the form of goods of much higher orders in investment chains that can yield final goods only in far later periods. Menger recognised that people did not deliberately starve themselves thus in the near future in order to obtain final goods much later on. Rather, they sought to make what they (subjectively) regarded as adequate provision for such contiguous time periods into the future as they felt (subjectively) their resources allowed. As their resources increased, people extended their “provident activities” to time periods that extended correspondingly further into the future. Menger emphasized that even in hunting-gathering societies, where resources were scarcest, efforts were still made to provide first-order goods in the next contiguous time-period. In short, Menger analysed how people used their scarce resources to gradually extend investment chains and thus provide first-order goods in successively later time-periods into the future.⁶² But as Stigler’s exposition demonstrates, since Menger’s analysis is entirely subjectivist, it lies outside the scope of neo-classical economics.

Stigler refers to “[Menger’s] failure to recognise the increasing mobility of resources through time...” In particular, says Stigler, Menger concentrates on the “spatial immobility” of land, whereas for price theory “the mobility of land as between different uses... is much more important.”⁶³

We may deal first with land. *Contra* Stigler, Menger does say plainly that land can be used for different human purposes. Used as a first-order good, it directly serves “consumption purposes”; e.g. as “ornamental gardens” or for hunting. Used as a higher-order good, it grows crops — i.e. it helps to produce other goods closer to final consumption. In analysing the effects of a drop in tobacco demand, Menger clearly states that the land and agricultural implements can be turned to other crops, — they can help to produce other first-order goods.⁶⁴ For Menger, human purpose is the prime mover behind economic phenomena. Such subjectivism lies outside Stigler’s neo-classical objectivism, where goods move themselves.

Turning now to the general issue of resource mobility: — Again *contra* Stigler, Menger emphasizes that many, if not most, higher-order goods are *versatile*: they can be and are used in various investment chains to produce a wide range and variety of first-order goods. Further, Menger points out that higher-order goods can be used in production processes of “very different durations”. To elucidate: the extending of production chains is a process which can only occur through time. In this process, not only are goods of successively higher orders produced, but goods are shifted from lower to higher orders. And since in each link of the production chain different capital combinations are used, this means *new* such combinations are formed.⁶⁵ In short, the development of production chains not only requires and presupposes *versatility* in higher-order goods, the whole is inevitably a process through time. But these facts are apprehended only within a subjectivist framework. Hence Stigler naturally cannot see that Menger *is* analysing the versatility of higher-order goods as a process through time.

More Examples

Concrete illustration will be helpful here. Many examples of such versatility are possible, taking a twentieth-century context and looking only to some of the more obvious interconnections. Steel mills for instance, turn out many different types of steel products, in changing proportions according to circumstances. Many of these products go to make a huge range of machinery, not only for producing ships, lorries, cars, electrical goods, etc. (as mentioned earlier) but also for woodworking, different sorts of textiles, various food products and so on. The first group of metal products also use a range of other steel

products in their manufacture. Then, at a number of stages in the production chain, ships and/or lorries transport virtually all higher-order and first-order goods (railways, too, are used in many cases). The category “electrical goods” covers goods for commercial use — e.g. commercial freezers, cold cabinets, washers and the like — that are several stages removed from final consumption, as well as domestic goods that directly provide first-order goods and services. Different types of timber are worked up with woodworking machinery into goods of various higher orders — e.g. doors, windows, floors for factory and office buildings, or office furniture — and also first-order goods: housing and domestic furniture. The office furniture, in turn, is used in offices ranging from those of iron and steel companies to retail establishments; and such furniture is also made of steel. Different sorts of textile machinery use wool, cotton, silk, linen and various synthetic fibres to produce a huge range of fabrics — for furnishing, household purposes and clothing. Furnishing fabrics, in turn, go into offices, shops, restaurants etc. as higher order goods closer to or further from, the final consumption stage, as also into houses as first-order goods.

All these are inevitably over-simplified instances. But we see how various higher-order goods can enter into different investment chains, thus forming an enormous variety of capital combinations. These various production chains yield a vast range of different first-order goods (and services).

Comparing this type of situation with one in which nomadic pastoralism is the norm: in the latter, such higher-order goods as sheep and wool are only a few links away from the first-order goods of clothing, rugs, etc. But in the twentieth century example, both sheep and wool are not only incomparably improved in quality, they are now goods of far higher orders and so very far removed indeed from such first-order goods as clothing, blankets, furnishings etc. The intervening links in the production chain now contain a huge variety of other, new, higher-order goods, impossible to produce under nomadic pastoralism. And correspondingly wool now contributes to immensely more varieties of final outputs.

Similarly with timber: under nomadic pastoralism, it was used for such items as simple looms, saddles etc. But in the twentieth-century example, it is not only very far removed along the production chain from the first-order goods it helps to produce, these goods are almost all entirely new and are now produced with the help of a vast range of new higher-order goods. Thus as the production chain is extended: *i.* many more varieties of higher-order goods contribute to the final output of a much vaster range of first-order goods; *ii.* higher-order goods are moved from lower to higher orders — further up the investment chain; *iii.* new capital combinations are formed. — So *contra* Stigler, Menger demonstrates an acute penetration into the versatility of higher-order goods.

Stigler Again

Stigler further charges that Menger “fails to establish the fundamental economic identity of land and other forms of capital...” Stigler sees Menger as offering only a failed criticism of classical rent theory.⁶⁶ But Menger *does* integrate land completely into his discussion of higher-order goods, according to where it is used in the production chain. He demonstrates that different parcels of land are valued exactly as are other higher-order goods: in line with their contribution to the ultimate turn-out of first-order goods.⁶⁷

Stigler feels that “under Menger’s implicit static assumptions, capital and labour are fixed in quantity”; however, “historically all three ‘factors’ have experienced enormous increases.”⁶⁸ But Menger is not only perfectly aware of all this, he penetrates far beyond the immediately obvious: simple quantities. He recognises explicitly the immense growth in population, in both numbers and density, since the days of hunting-gathering. And he emphasises the even greater growth in the quantity and range of first-order goods since then — the latter resulting from the systematic use of goods of “ever higher orders”. This vast extension of the investment chain enabled an ever-increasing population to go from hunting-gathering through settled agriculture and pastoralism to craft production and the use of machinery — which means the final output of first-order goods now came after years or decades. This picture is historically dynamic. Furthermore, Menger sees that higher-order goods are incipient first-order goods: i.e. it is *because* higher-order goods increased that greater and greater quantities of first-order goods could be turned out. He also brings out clearly the implications for land and natural resources: to utilise these, complementary higher order goods are needed. So as investment chains are extended through time, both land and natural resources eventually become scarce goods: as has happened historically in countries such as Germany and even in the new world. But again — this development entails prior increases in the various higher-order goods as also new capital combinations. Thus Menger’s analysis followed from his recognition that the labour force had grown substantially through time, as had the range and quantities of higher-order goods.⁶⁹

Stigler says Menger’s “failure to realize the continuity of production, i.e., ... the price of a good must ... repay its costs” and his “preoccupation with directly consumable goods” account for “the fundamental defect in his theory — the complete neglect of costs...” But Menger nowhere confines himself solely to first-order goods — indeed, he devotes virtually all of the first three chapters of the *Principles* to a systematic analysis of *higher-order* goods: their classification into successive orders; the need for capital combinations in each order; the time required by the various production processes leading to first-order goods, etc. etc. To a neoclassical economist, costs are physical and

objective: the various physical goods that go into producing another physical good. Stigler confirms this: “[Menger] fails to consider ... that although costs never have a direct effect on value, yet they are — ‘in the long run’ — of at least co-ordinate importance in its determination ...”⁷⁰ But for Menger, *scarcity* is the pivotal category — it derives from human purposes and the goods that are treated as means to achieve these purposes.

Thus (to take one instance) Menger distinguishes between scarce and free goods and analyses their differences. He also outlines the process whereby formerly free goods — e.g. agricultural land and resources like timber, sand and limestone — become scarce: with the growth of investment chains and thus of complementary higher order goods.⁷¹ In short, Menger analyses the implications of scarcity as a *human* condition whereas Stigler sees goods as purely physical things. Hence Stigler is concerned with the physical ‘inputs’ needed for their objective, physical replacement and so he stresses the ‘co-ordinate’ role of costs in determining long-run value. For Menger, however, value is what is imputed by human beings to those goods that they regard as useful, whether directly (first-order goods) or indirectly (higher-order goods). In Menger’s own illustration, when men no longer wish to smoke, tobacco products and smoking accessories become valueless, but not such higher-order goods as land, which can contribute to the output of other first-order goods. For Stigler, goods are produced so long as their physical costs of production are covered. But for Menger, the range of goods and services produced reflect the relative rankings of different uses made by human beings faced with a scarcity of resources. Thus Stigler is concerned with physical goods and their physical replacement. Menger is concerned with the changing evaluations made by human beings and how these changes result in the expansion of some first-order goods and services, and the contraction or disappearance of others.

Streissler

Turning now to two other commentators: Both — crucially — omit investment chains. According to Streissler, Menger believes that welfare is increased not by the division of labour, but through “changes in ... productive output” — i.e. a “constant widening” in range and “improvement in quality” of goods. As a consequence the division of labour becomes ever more necessary (Streissler sees Menger as saying.) Streissler also feels that Menger is centrally concerned with information: both technical and commercial. Thus when Menger refers to “increased understanding of the causal connections between things and human welfare”, Streissler glosses this to mean “technical progress” and “*product innovation*”, [italics in original] as also changes in information. So Streissler interprets Menger to say that “advances in agricultural chemistry

make agricultural produce much less scarce...⁷² — Investment chains are left out but they are *central* (as we shall see).

Taking these points in order: Streissler's account assumes that Menger believes that first-order goods simply drop from Heaven. But Menger explicitly recognised that it was only as people used goods of successively-higher orders that they could increase the quantities and range of final goods (as also the range of employments). Hence the bulk of the first three chapters of the *Principles* consists of a systematic exposition of investment chains — “the causal connections between goods”. Menger always used this term to mean investment chains — leading from first-order goods to the highest-order goods used in these production chains, and he always discussed first-order goods as final links in such chains. Menger explicitly traces in outline how, as people utilised goods of higher and higher orders, they moved from hunting-gathering through settled agriculture and pastoralism to manufacturing with machinery. He emphasizes that this historical process is not a simple linear growth in the division of labour. Rather it consists in the increasing use, over time, of goods of progressively higher orders. As a *consequence* of thus extending investment chains, final outputs grow in both quantity and range and so the division of labour is also extended. In referring only to final outputs and the division of labour, while omitting production chains, Streissler in effect describes a grin without a cat — and doesn't even realise it.

Now to “advances in agricultural chemistry” and their effect on agricultural output: Here, Menger is still systematically setting out various aspects of investment chains — the production structure. In so doing, he raises the following questions: does the availability of all the requisite combinations of higher-order goods by itself determine the turn-out of first-order goods? His answer: there are some types of goods where *additional* influences are also important. Menger compares the production of an industrial good — shoes, with that of an agricultural commodity — grain. With shoes, a knowledge of the available combinations of higher-order goods — their quantities and qualities — provides a fairly certain estimate of the quantities (and types) of shoes that will be turned out at the end of the production process. But in agriculture, it is not just the different types of higher order goods that alone determine output: soil chemistry and the weather also contribute significantly. It is *in this context* that Menger refers to the applied study of soil chemistry — as a means of reducing the uncertainty attaching to this *additional* influence on agricultural output.⁷³ So to omit the relevant investment chains while referring to “agricultural chemistry” is to omit the Prince of Denmark from *Hamlet* while pushing Rosencrantz and Guildenstern to centre stage.

Karen Vaughn

Dr. Karen Vaughn concurs “fully” with Professor Streissler that Menger, in his *Principles*, is “fundamentally providing a theory of economic development.” As Dr. Vaughn sees it, this theory is founded in Menger’s belief that goods have an objective want-satisfying capability. It follows, says Dr. Vaughn, that what Menger terms this “causal relationship” — between good and need — has to be learnt: through trial and error. Dr. Vaughn feels that this is why Menger devised his notion of “imaginary” goods: so that improved knowledge — economic progress — could be defined. As they acquire “better information”, people correct such of their — subjective — assessments as they now realise were erroneous. Thus Menger extends subjectivism to knowledge (says Dr. Vaughn.) He does this zealously and with “repeated examples” all through the *Principles*. Dr. Vaughn takes one such instance:- at one time, people believed in the prowess of witch-doctors. But as knowledge advanced, this error was recognised; people then substituted “better forms of medicine”.⁷⁴ In sum, according to Dr. Vaughn, Menger holds that “Seeking to satisfy human needs leads to both greater knowledge and greater command over resources.” And so, says Dr. Vaughn, Menger identifies “economic progress” with “widespread knowledge of the casual connection between goods and the satisfaction of needs as well as widespread knowledge about available supplies”.⁷⁵

Dr. Vaughn points to Menger’s explicit criticism of Adam Smith, for too narrowly seeing in the division of labour “the source of wealth”. Here she quotes from Menger [I omit some inessential words]:

“ The quantities of consumer goods at human disposal are limited only by the extent of human knowledge of the casual connections between things and... the extent of human control over these things... the degree of economic progress of mankind will... be commensurate with the degree of progress of human knowledge” (says Menger).⁷⁶

Dr. Vaughn’s interpretation omits investment chains. It makes Menger concentrate exclusively on first-order goods — that apparently simply dropped from heaven. This view gives Menger a “theory of economic development” which says in effect: Cave-dwelling humans, having learned of the shelter-giving properties of mud huts, realised their erroneous assessment of cave housing and sought more information on the availability of mud huts, which led to greater supplies. Then, having learned about air-conditioned houses with swimming pools, people rejected their previous evaluation of mud huts, searched for information on the available supplies of air-conditioned houses, and moved into such houses. Or, in other words, the masses in the LDCs (in the twentieth century) live as they do because they have not yet obtained information about better goods and services and about the supplies actually

available. In the DCs, on the other hand, people live better because they have far better knowledge about *which* goods and services will satisfy their requirements as also regarding the availability of these vastly-improved outputs. — But none of this is an explanation of *how* these first-order goods came into existence in the first place.

As opposed to this interpretation, Menger does in fact raise and answer the *real* question: how are such first-order goods produced? How in fact have people increased and improved their supplies?

As Menger realised, first-order goods are the final links in a production chain whose other links are formed from goods of successively higher orders. As these chains are extended with goods of higher and higher orders, the quantities and range of first-order goods both increase, as does the range of occupations together with population size and density. Hence from the very outset and through the first three chapters of the *Principles*, Menger analyses production chains — later termed the “capital structure”. As we shall see, people’s learning to use *higher*-order goods is pivotal to Menger’s analysis. But there is nothing in his *analysis* about people’s learning the characteristics of first-order goods.

As regards “imaginary” goods: According to Dr. Vaughn, the notion is integral to Menger’s definition of economic progress as learning from mistakes: “imaginary” goods are then the mistaken evaluations left behind by the advance of knowledge. But Menger discusses these goods once and once only; and, *contra* Vaughn, they play *no* role in his analysis. Menger defines “imaginary” goods as a “*special situation*”, [*italics added*] which occurs with goods that either cannot satisfy a human need or else fulfill only an imaginary need. Those “peoples who are poorest in true goods” have the largest numbers of “imaginary” goods. As people learn more about themselves, “imaginary” goods decline while “true” goods expand; thus “accurate knowledge and human welfare” are connected. But Menger nowhere again refers to this special case of “imaginary” goods.⁷⁷

Menger begins by defining a “good”. *Contra* Vaughn, he says explicitly that a good is “a relationship between certain things and men”. This relationship is composed of four strands, all essential — if even one is absent or disappears, the goods-relationship cannot hold, and the thing ceases to be a good (or cannot be one). The second of these strands is a capability of “being brought into a causal connection” with a human need; the third strand is “human knowledge of this... connection.”⁷⁸ Dr. Vaughn’s gloss suggests that Menger stops here with these bare statements. But in fact Menger systematically goes far, far beyond.

A direct causal connection puts a good into the “first order”. First-order goods, however, are produced through the help of “thousands of other things.”

Such higher-order goods have thus an indirect connection with human needs. But neither are higher-order goods a jumble of “unrelated occurrences.” Rather, such goods are linked together in a definite sequence; first-order goods are produced by second-order goods that in turn are produced by third-order goods and so on to the highest-order good in the production chains examined.⁷⁹ (Expanding on Menger’s example: bread in the home is transported there from a retail shop which gets it from a bakery where the baker uses flour and other ingredients, an oven, trays, etc. The flour is milled in a flour-mill from wheat produced by a farmer using the appropriate type of land, seeds, implements, fertilisers, etc. The baker’s oven, the flour mill’s machinery, and agricultural machinery are produced by their respective manufacturers using steel products and other inputs. The steel products come from a steel mill which uses various grades of coal, iron ore, skilled labour, etc... and so on, not forgetting insurance, legal, commercial and transport services throughout. And *all* first-order goods are likewise the final links in many such production chains.) Thus Menger begins by analysing “The causal connections between goods” — the title of Section 2 of Chapter 1, where he sets out the production chain for the first time ever. He then develops this analysis comprehensively.

It is on *this* basis that Menger criticizes Adam Smith. The latter, says Menger, examines “a single cause of progress in human welfare” while overlooking others, “no less efficient”. The division of labour, Menger points out, cannot by itself “increase... the consumption goods at human disposal”; it can only increase specialisation and efficiency in whatever tasks are already available. Thus a hunting-gathering tribe is “confined to... those goods of lowest order that happen to be offered by nature”. The concomitant activities are hunting, fishing, food-gathering, cooking, making clothes, etc. But even with increased specialisation and greater efficiency in these activities, “economizing individuals” still “exert no influence on the production of [first order] goods”; the latter remain “the product of an accidental concurrence...” To increase supplies of final goods requires that people “abandon” hunting-gathering, “investigate the ways in which things may be combined in a causal process for the production of consumption goods, take possession [of such things] and treat them as goods of higher order”. And so it is only as people use “goods of third, fourth and higher orders” with an associated division of labour that their welfare progresses. From hunting-gathering, people move on to better hunting weapons, then to improved and intensive agriculture and pastoralism, craft production, then improved tools and machinery. Their welfare increases “in the closest connection with these developments”: people now obtain larger quantities and more varieties of final goods; their occupations are more varied; and “vast regions” that once had a few, miserably poor inhabitants are now

“densely populated civilised countries.” Thus it is through using “goods of ever higher orders” that people move from “deepest misery to civilisation and well-being.” Such “improvement” is what “we can observe in actual cases of economically progressive peoples”.⁸⁰

Thus Menger demonstrates that it is because the investment chain is extended that the division of labour, too, can proceed: the former leads, the latter can only follow. And so he sums up: the division of labour is “only one factor” — and a lesser one at that — “among the great influences that lead mankind from barbarism and misery to civilisation and wealth”.⁸¹

Now Menger does not stop at recognising that only as the investment chain is built up, can supplies of first-order goods expand. He sees deeper, that this expansion of final outputs is the outcome of productive processes that are as “natural” — subject to regularities — as those on which hunter-gatherers relied. But unlike the latter, the productive processes set going when investment chains are extended, are controllable by human purposes — within the limits of these investment processes’ own regularities.⁸² Thus Menger sees that the production structure with its consequences is as real and “natural” as anything found in Nature, so people can and do make use of the investment chains’ “causal processes”, exactly as with other “natural” phenomena.

And so it is from his analysis of investment chains that Menger concludes that final output can grow and diversify only with “increasing understanding of the causal connections between things” — ie investment chains and the immense potentialities created by their extension. He repeats this conclusion quite explicitly at a later point: “... thought and experience lead men to even deeper insights into the causal connections between things, and especially into the causal connections between things and their welfare. *They learn to use goods of second, third, and higher orders*” [italics supplied]⁸³

Thus Menger is quite clear: as people use goods of ever-higher orders, they experience the resulting growth and diversity in final outputs. As people recognise and apply these “casual connections” — ie. as they utilise the expanding productive potential of extending investment chains — they find their welfare growing *pari passu*. Furthermore, as goods of *all* orders increase in quantities and range, two new functions appear in the associated division of labour: the holding of stocks by wholesalers and the supply of commercial information about the flow of goods. Again, Menger is quite explicit: it is when investment chains have been built up quite extensively with inter-regional and international flows of goods, that it becomes necessary to obtain and supply information about the availabilities of *all* sorts of goods.⁸⁴

Menger forged this analytical tool — the investment chain — to investigate actual historical developments: humanity's journey from hunting-gathering to the global trading network of the later nineteenth century. He recognised the analytical problem involved; his solution provides illuminating and penetrating insights, only available through this tool.

Dr. Streissler, as noted, omits the production structure altogether in his review of Menger; Dr. Vaughn mentions it only once: as “an important forerunner to the Austrian theory of the business cycle”.⁸⁵ The issue of the trade cycle is, of course, a major branch of neo-classical economics. But the production structure is not found there — neo-classical economics has no concern with analytical tools for historians. So only when the boundaries of neo-classical economics are left behind can we recognise the central significance of the production chain to Menger's analysis.

FOOTNOTES CHAPTER 3

1. The following three paragraphs are taken from: Gustav Schmoller, *The Mercantile System and its Historical Significance* (1883; New York: Macmillan 1895) pp 1-6, 14-15, 77, 79-80. — See p. vii: “The Essay on the *Mercantile System* here translated [...] with the author's sanction...”
2. Quotations from *ibid*, pp 79-80, 3-4. The reference to “organisms” also occurs on pp 5, 6, 14, 15, etc.
3. Quotations from *ibid*, p 80.
4. Carl Menger, *Problems of Economics and Sociology*, trans. F. J. Nock (1883; Urbana: University of Illinois Press 1963).
5. *ibid.*, pp 57, 62, 75-78, 80.
6. *ibid.*, pp 56, 58, 61.
7. *ibid.*, pp 58, 60-61, 85-86.
8. *ibid.*, pp 62-63, 75-76, 78-79, 85-88. Quote from p 78.
9. *ibid.*, pp 71, 72, 77, 80.
10. *ibid.*, pp 61, 69-70.
11. *ibid.*, pp 43, 55, 68. Quote from p 45.
12. *ibid.*, pp 42-46, 55-56.
13. *ibid.*, pp 36-37, 39, 42, 44-45, 51-52, 55-56, 57.
14. *ibid.*, p 79.
15. *ibid.*, pp 62, 63, 68.
16. *ibid.*, p 142, fn 51.
17. *ibid.*, pp 132-133, 145-146. Quote from p 133.
18. *ibid.*, pp 130, 133, 147, 148, 150, 152, 158. Quotes from pp 130 (italics in original), 147, 133. Also see p 133: “... social phenomena come about as the unintended result of individual human efforts (pursuing *individual interests*) without a *common will* directed toward their establishment”. And earlier: “... some social phenomena ... are the unintended result of human efforts aimed at attaining essentially *individual* goals (the unintended result of these).”

19. *ibid.*, pp 173-75.
20. *ibid.*, pp 130, 146, 147, 152, 157. Quotes from pp 147, 146.
21. *ibid.*, pp 148, 149, 173, 174 fn.
22. *ibid.*, p 146. Italics in original.
23. *ibid.*, pp 146, 147. Quotes from pp 158, 159, 147.
24. *ibid.*, pp 149, 159. Also see pp 93, 196.
25. Carl Menger, *Principles of Economics*, trans. B. Hoselitz and J. Dingwall (1871; New York: New York University Press 1976). Menger deals with the production structure on pp. 56-89, 106-109 and 149-71.
26. Menger, *Problems*, op. cit., App. VIII, "The 'Organic' Origin of Law and the Exact Understanding Thereof", pp 223-224. Quote from p 223.
27. *ibid.*, pp 225-227. Quotes from pp 225, 226, 227. Italics in original.
28. *ibid.*, pp 227, 229, 226.
29. *ibid.*, p 231.
30. *ibid.*, pp 229, 232, 234. Quotes from pp 229, 232, 234. Italics in original.
31. *ibid.*, pp 223, 232-34. Quotes from pp 232, 233, 234. Italics in original.
32. *ibid.*, pp 152-155; *Principles*, pp 247-271, 280-85.
33. *Problems*, pp 154-55; *Principles*, pp 259-61, 263-71, 280-85. Quotes from *Problems*, p 155; *Principles*, p 261.
34. *Problems*, p 93 and App. I, "The Nature of National Economy", p 194. Quotes from p 93. Italics in original.
35. *ibid.*, pp 194-196. Quotes from pp 196, 195.
36. *ibid.*, pp 155-157. Quote from p 156.
37. *ibid.*, pp 157-158, 146, 229. Quotes from pp 157, 233, 158.
38. *ibid.*, pp 172-176, 175 fn, 149, 182, 233, 174 fn. Quotes from pp 158, 172, 173, 177.
39. *ibid.*, pp 173, 177. Quotes from pp 177, 173, 181, 182.
40. *ibid.*, pp. 74-76; also see pp. 66, 80, 163, 164.
41. *ibid.*, pp. 56-58.
42. *ibid.*, p. 57. Also see pp. 152, 157.
43. *ibid.*, pp. 80, 107; and esp. p. 66.
44. *ibid.*, pp. 63-67, 163, 164.
45. *ibid.*, p. 58.
46. *ibid.*, pp. 67-71, 88-89, 159. Quote from p. 68.
47. *ibid.*, pp. 58-63, 157 (fn. 18), 85.
48. *ibid.*, pp. 163-65, 66, 107, 80, 150.
49. *ibid.*, pp. 67 (quote), 63 (quote).
50. *ibid.*, pp. 78, 68; also see pp. 149-52.
51. *ibid.*, pp. 71-74, 152-54, 159 (including fn. 21).
52. *ibid.*, pp. 71-74, 109. For the "length" of the production structure, see pp. 78, 152, 157.
53. *ibid.*, pp. 63, 86-87, 73.
54. *ibid.*, pp. 152-53, 155, 78-79.
55. *ibid.*, pp. 71-74.
56. G.J. Stigler, "Carl Menger", ch VI in his *Production and Distribution Theories* (New York: Macmillan 1941) p. 138.

57. *ibid*, p. 138 (both quotes).
58. *ibid*, p. 156 (all quotes).
59. Menger, *Principles, op. cit.*, pp. 70-74 (capital structure); pp. 153, 78 (time periods).
60. Stigler, *Production...op.cit.*, p.156.
61. Menger, *Principles*, p. 154 (effect of scarcity on provision for the future).
62. *ibid*, pp 153-45 (availability of resources determines time periods that can be provided for); pp 78-79 (provision for the future even in hunting-gathering); "provident activities: p.152.
63. Stigler, *Production...*, p.149 (mobility of resources through time); p.155 (land).
64. Menger, *Principles*, p.165 (different uses for land); p66 (land etc. used for other crops.)
65. *ibid*, pp 60,163,164 (investment chains and first order goods); p.159 fn.21 ("very different durations"); p. 155 (goods shifted from lower to higher orders).
66. Stigler, *Production...*, p.154.
67. Menger, *Principles*, pp. 165-69.
68. Stigler, *Production...*, p 155.
69. Menger, *Principles*, pp. 71-74 (population growth); p.153 (final output after years/or decades); pp 68-69 (higher order goods are incipient final goods); p.103 (land, natural resources, and investment chains.)
70. Stigler, *Production...*, p.148 (first quote); pp. 148-49 (second quote.)
71. Menger, *Principles*, pp.98-101, 155.
72. Erich Streissler, "To what extent was the Austrian School marginalist?", *History of Political Economy* 4(1972) pp. 430-431.
73. Menger, *Principles*, pp. 69-71.
74. Karen Vaughn, "The Mengerian roots of the Austrian revival" in Bruce Caldwell (ed) *Carl Menger and his Legacy in Economics* (Durham, N.C.: Duke University Press 1990) p 384 (theory of economic development); p.386 (other points and quotes).
75. Karen Vaughn, *Austrian Economics in America* (New York: Cambridge University Press 1994) pp. 33,27.
76. Vaughn, "Mengerian...", *op.cit.*, p. 385. Quote from Menger, *Principles*, p.74 (*recte*).
77. Menger, *Principles*, p. 53 ("special situation"); pp. 53-45 ("peoples who are poorest..."); p.53 ("accurate knowledge...")
78. *ibid*, p52 fn.4 ("a relationship"); p.52, text (other points and quotes).
79. *ibid*, p.56; p.57 ("thousands of other things"); p.56 ("unrelated occurrences"); pp.55-58 (investment chains from first-order goods to highest-order goods used.)
80. *ibid*, pp.72,73,74.
81. *ibid*, p.73
82. *ibid*, p.74
83. *ibid*, pp.74,109.
84. *ibid*, pp. 90-94, 239.
85. Vaughn, *Austrian Economics...*, p.14

CHAPTER 4

The Analysis Developed: Mises

I

WHEN MISES ENTERED THE UNIVERSITY of Vienna in 1900, he was “not at all interested in the Austrian School of Economics” (as he says later in his memoirs). In fact, in the field of economics, he considered that there was only economic history — i.e. there was nothing to which a general analysis could be applied. And as economic history was an historical discipline, it could “never yield economic laws”. So Mises “saw no possibility” of an analytical discipline of economics; indeed, he says of himself, “no one was a more consistent [historicist] than I!” In other words, he not only denied that there could be any general analytical economics at all, he went much further: he denied that the study of historical experience could yield any kind of general analytical proposition, no matter how limited and restricted in scope to particular historical periods. Thus Mises outdid the Younger German Historical School.¹

Mises great interest lay in “problems of economic, legal, administrative and social history”, but not in political history. As “the school of law offered greater opportunities for the study of history”, he “decided to study law”. About half the (degree) course consisted of legal history; the rest was “political economy and public law”. At this time (around 1900) the Younger German Historical School, led by Gustav Schmoller, dominated the teaching of history and of economics in the German speaking world; the exceptions (in economics) were Menger, Bohm Bawerk, Wieser and the other members of the “Austrian School”, as Schmoller and his followers had dubbed them contemptuously during the *Methodensreit*.²

Although Mises repudiated the very possibility of any economic theory, he objected very strongly to the highly unsatisfactory historical work produced by the Younger German School; he is quite caustic in his memoirs. Because of his “intense interest in historical knowledge”, he was repelled, amongst other things, by their illogic, relativism, militarism and power-worship, and by the way they collapsed “is” into “ought”. They glorified and justified “Prussian authoritarian government”; they “did not deal with scientific problems”. Their “historical investigations” were at best “clumsy data publications” that failed to advance knowledge. So Mises says of his own teacher’s work, that “it was neither economic ... nor administrative history”; it was “merely an extract from government documents, a description of policy as found in government reports”. Although Mises attempted to free himself from this approach, he says of his first two publications (in 1902 and 1905) that rather than being “economic history”, they were histories of “government measures”. Even as he worked on these, he planned to research extensively into “economic and social history” and not into “official reports”. But he “never again had the time” for archival and library research.³

At the beginning of his university years, in addition to being an historian in relation to economic analysis, Mises was “a thorough statist”, but also an “anti-Marxian”. In his first two years at university he uncritically devoured “all the writings of the social reformers”, believing with them that success came when social measures were radical enough. He “opposed” liberalism “vigorously” as an “obsolete world-view”.⁴ In sum: Mises initially agreed with the Younger German School that economics could not exist at all: i.e. there could be no such analytical discipline. But he disagreed with them that historical experience could give rise to theory. And he was profoundly and fundamentally dissatisfied with their historical work, since he already saw a difference between historical study and the delineation of government policy. In addition, in politics he was an anti-liberal interventionist.

Mises Joins the Austrian School

Mises’ contact with the Austrian School shattered and transformed his ideas radically. He read Menger’s *Principles* “around Christmas 1903”. He says: “the reading of this book ... made an ‘economist’ of me.” It demolished, once and for all, his previously-held view that there could be no general analytical discipline of economics, only the historical study of economic activity. By late 1903 and early 1904, he was already beginning to doubt the efficacy of interventionism, as a result of research into housing conditions and the legislation covering domestic servants (part of his university studies). Then Bohm-Bawerk joined the University of Vienna in 1904; Mises attended his seminar

upto 1913. For the first time, he was forced to take liberalism seriously. Mises says it was “further study of economics” that led him to abandon his previous political stance.⁵

At about the same time (late December 1903/early 1904) Mises also read Menger’s *Investigations into Method* and the literature of the *Methodensreit*. Mises describes the *Investigations* as “a polemic essay against” the lethal ideas disseminated from the Prussian universities. But in the context of the specific issues raised during the *Methodensreit*, he found it “a splendid work”. He remained dissatisfied, however, with the foundations on which the dispute proceeded.⁶ This led him to penetrate into the fundamental analytics of the study of human action, with monumental and exhaustive results.

Hayek worked directly with Mises for some ten years (from late 1921 to late 1931); Hayek also attended Mises *Privatseminar* (from 1924 onwards). Hayek confirms this picture — that Mises was led from history to theory because he saw the former needed suitable analytical tools:

“Mises’ initial interests had been primarily historical and ... he retained a breadth of historical knowledge rare among theoreticians. But ... his dissatisfaction with the manner in which historians and particularly economic historians interpreted their material led him to economic theory”.

Hayek further emphasises “Mises’ astounding historical erudition” and his “astounding knowledge of history”. He says Mises was “better informed about daily politics, modern history, and general ideological developments than most others”. Hayek reinforces Mises’ blistering opinion of the Younger Historical School as expressed in Mises’ memoirs: “Mises does not exaggerate in his description of the teaching of economics ... by the historical school.” Hayek also tells us that Mises met the effects daily: in both his official work and his teaching, Mises “had constantly to come to terms with the interventionism taught by the sociological-historical school of German economics...” Hayek goes on to say that it was “in occupying himself with [the latter’s] literature” that Mises took up “an increasingly critical attitude toward the academic economics of the German-speaking area”. Thus Hayek adds his own implicit confirmation of the dominance of the Younger German Historical School. Finally, Hayek confirms that Bohm-Bawerk’s influence led to Mises’ “radical conversion to ... liberalism.”⁷

In sum: Mises wrote in an historical context in which the Younger German Historical School determined and dominated the intellectual environment of history and the social sciences. This meant that in socioeconomic analysis the ‘Austrians’ were the only genuine alternative available, as the Anglo-American

neo-classicals, in the area of economics *per se*, were foreign in every sense of the term. So for Mises the *Methodensreichtum* remained the reference-framework within which he developed further the subjectivist analysis of human action, pioneered by Menger. — It is crucial for the historian to remember this historical context. To forget it, is to read Mises' works in a vacuum.

The Historical School held that, in any historical period, the political forces and the developmental stage of the economic organisms found in that period, shaped the economic regularities to be seen in it. This School denied that it was possible to have a general abstract economic analysis independent of some particular historical period. As against this historicist holism, Menger saw that the one set of socioeconomic phenomena, the outcome of individuals' actions, were — and had to be — studied both historically and theoretically: each approach examined different aspects of the same object. Mises extended this insight to recognise from the very outset, that for the one field of study — human action — there was the one discipline — praxeology, with its two branches, history and subjectivist economics. The latter provided the necessary analytical framework — general and abstract — for the former. Thus, in an intellectual environment moulded by the Historical School, only the Austrians developed a general economic theory, as the analytical part of the wider study of human action.⁸ And so for Mises, throughout his life, “economics” always meant the subjectivist discipline which was one branch of praxeology, the study of human action, the other branch being history. This analytical framework is patently quite distinct from twentieth century neo-classical economics, which follows the positivist model, and is therefore pure theory — developed in total ignorance of, and isolation from, professional historical research, its conclusions and problems. It is also pertinent here to remember that Mises' first major work was published as long ago as 1912, and that all his writings right up to *Nationalökonomie* (1940) were produced (effectively) in an intellectual environment which was actively hostile to the very notion of general, abstract economic analysis — which in turn, was provided only by the Austrian School. It should be remembered further that a substantial portion of his work, right up to 1945, was pre-occupied with analysing the intellectual causes contributing to the difficult political and social history of the German-speaking world and of Central Europe.

Mises' Subjectivist Criticism of the Historical School

The outline of the analytical framework which Mises later developed explicitly, is discernible in *Socialism* (whose outline, in turn, was sketched earlier in the final part of *Nation, State and Economy*). This last is a searing indictment of the policies and political ideas followed in the German world

before, during, and immediately after, the First World War). Mises' first analytical work, however, consisted of the eight essays assembled into *Epistemological Problems of Economics* (1933; trans. 1960). Although seven of the essays had been published separately between 1928 and 1932, Mises wrote them as components in a single line of development: "From the outset ... they were planned and conceived as parts of a whole and ... given further unity by various revisions." These essays were intended "to clear the way for the systematic analysis of the phenomena of human action". Thus they were "the necessary preliminary study for a thorough scrutiny of the problems involved" — as provided in his major treatise, *Human Action*.⁹

In this opening analysis, Mises set out to expound subjectivist economics as against the Historical School:

"The purpose of this book is to establish the logical legitimacy of the science that has for its object the universally valid laws of human action, i.e. laws that claim validity without respect to the place, time, race, nationality, or class of the actor".

This exposition required that the fundamental defects of the Historical School's position be revealed and cleared away first: it was necessary to "[emphasise] the untenability of historicism before embarking upon the task of setting forth the logical character of the science of human action." For example, a leading historicist held that scarcity was only found in a money economy ..., while another argued that marginal utility theory was "pointless" in the Middle Ages; the theory was "best tailored for the free economy."¹⁰

Mises recognised that his criticism applied to the American Institutionalists as well:

"The goal of my analysis is ... to distinguish a prioristic science from history ... and to demonstrate the absurdity of the endeavours of the Historical and Institutional Schools to reconcile the logically incompatible."¹¹

In short, Mises opposed both Schools on the same grounds: because they denied that a general analytical theory of human action — subjectivist economics — could ever exist. This repudiation had both analytical and political roots (as Mises saw it). We may first set out what Mises found analytically objectionable in the historicist position.

Mises pointed out that such a position could not constitute a systematic approach: "Historicism by its very nature is not a system, but the rejection and denial in principle of the possibility of constructing a system." He denied both that historical materials could be investigated without any general concepts and that historical investigation could yield general theories:

“What is under attack ... is the doctrine that would have us believe, on the one hand, that historical data can be approached without any theory of action, and, on the other hand, that an empirical theory of action can be derived by induction from the data of history.”

Mises further explained that historical study could not produce any general propositions at all, whether confined to a particular period or no:

“What is denied is the possibility of deriving a *posteriori* from historical experience empirical laws of history in general, or of economic history in particular, or ‘laws’ of ‘economic action’ within a definite historical period.”¹²

Mises develops these objections by analysing the differences between the theoretical and the historical study of phenomena: historical study is only of particular events; but to make general statements that could be found generally applicable independent of historical context requires a general analytical framework, which is non-historical.¹³ The Historical School follow the model of art history in which artefacts, buildings etc. are classified according to the stylistic period manifested in their features.¹⁴ By analogy, the Historical School assert that “from the data of economic history”, it is possible to derive “economic laws applicable to particular historical periods”. But this “characterisation of particular periods of history and their economic usages” is still research into historical materials, requiring “the specific understanding of the past.”¹⁵ It is not a general non-historical analysis of general categories and concepts, applicable and usable across historical periods as required by the historical problem presented. And whereas art history cannot predict the future, the Historical School regularly claim to do so.¹⁶ Thus they contradict themselves: if economic regularities are contingent on the historical period considered, then the historicist can only wait to see what future periods will bring. But if it is asserted that certain economic regularities will apply in future periods, then it is conceded that there is something operative in the historical data which is independent of historical period and which therefore requires a general, abstract, non-historical analysis.¹⁷

Mises went on to assess the effects of historicism on historical work in the German world up to the late 1920s: Because the historicists rejected subjectivist theory [the only general economic theory then available in the German world] “[t]he effect this has had on economic history is nothing short of grotesque.” Economic historians remain “content ... with the small measure of theoretical knowledge that today reaches everyone through the newspapers and daily conversation.” Thus historical work has suffered:

“the age in which historicism has held sway has been characterised by a progressive decline in historical research and historical writing. ...

the upshot of historicism has been ... the publication of sources and ... dilettantist constructions ...”

In sum, historicism couldn't deliver its own goods: “The Historical School failed precisely in the province of social and economic history, which it claimed as its proper domain.”¹⁸

Mises' own exposition and development of the framework which Menger built, is shaped almost entirely in response to the position taken by the Historical School. Each element in Mises' analysis is set out below; here I shall simply note his key responses in bald outline: Firstly, Mises emphasised repeatedly that historical research and narrative was possible only with the use of general theoretical concepts regarding the actions of human beings. Historians are not conscious of this, because the necessary concepts are in most cases relatively simple. But just as M. Jourdain spoke prose with no explicit knowledge he was doing so, historians too organise their work around analytical ideas, implicit for the most part.¹⁹ Secondly, historical materials cannot yield general theories because such materials record complex phenomena, to whose historical appearance and development many different influences have contributed. (Mises built here on Menger's observation set out above: real world phenomena are the joint outcome of many different influences; hence various scientific disciplines are necessarily utilised in analysing these phenomena). So to analyse complex historical developments, previously-elaborated theories have to be used, according to the problem under review.²⁰ The most important of these for the historian, is of course the general theory of human action: subjectivist economics.²¹

The Political Basis of the Historical School

We may now briefly set out Mises' account of the political foundations of historicism.²²

Mises pointed out that the Historical School subscribed wholly to the view expressed by the Rector of the University of Berlin ²³ in 1870 (he was also head of the Prussian Academy of Science): “we, the University of Berlin, quartered opposite the King's palace, are, by the deed of our foundation, the intellectual bodyguard of the House of Hohenzollern.”²⁴ And so, as Mises put it, “the lofty idols” of the Historical School were “the Hohenzollern Electors of Brandenburg and the Kings of Prussia.” Therefore this School held that “power (*Macht*) is the deciding factor in social life”; nothing else is important in it. Schmoller and his followers had not read David Hume, so their “notion of power was very materialistic. Power ... was soldiers and guns.” So the Historical School held that power — nullified analytical economics: “The study of economic theory

was useless, for the various systems of theoretical economics all overlooked the fact that governments had the power to alter all conditions.”²⁵

In Mises’ view, both the Historical School and the Institutionalists argued that power, not individual choice, ultimately lay behind economic phenomena: “... the choosing and acting individual is ... an unrealistic concept. Real man is not free to choose and to act.” People are “subject to social pressure” and to “irresistible power”. Thus not “individuals’ value judgments” but “the interactions of the forces of power” are what “determine ... market phenomena.”²⁶

So in the universities, the Historical School “replaced the study of economic theory by the history of Prussian administration...”²⁷ They sought to “refute the teachings” of subjectivist economics and so they “compiled numerous volumes dealing with the history of the administration of these glorious princes.” The Historical School (said Mises) contrasted their factual methods with the abstract doctrines of the classicals:

“This, they wrote, is a realistic approach to the problems of state and government. Here [are] unadulterated facts and real life, not the bloodless abstractions and faulty generalisations of the British doctrinaires.”

Thus the Historical School aimed to condemn subjectivist economics and “substitute” in its place “the economic aspects of political science” (*Wirtschaftliche Staatswissenschaften*). Mises saw this same outlook in “British Fabianism and American Institutionalism.”²⁸

In sum: Mises regarded the Historical School as denying that economic regularities might set limits to the exercise of political power. As he saw their stance, they considered that political power made all economic things possible. Mises considered this a political position, *not* an analytical one; and he clearly — indeed, vehemently — saw the analysis of human action as an analytical, *not* a political exercise. (But from the standpoint of the Historical School, to suggest that political power might not be able to control all economic phenomena can, of course, only be a *political* stance which in this view can only spring from a political opposition to the exercise of power).

Mises and Praxeology

Turning now to Mises’ development of the praxeological framework: Mises refined and exhaustively developed key aspects of Menger’s analytical framework, from the foundations up. The outcome was not only thorough, it was also massive and new. Hayek built on Mises and extended the remaining areas of Menger’s analysis far beyond where Menger had left them. It must be emphasised that because Mises and Hayek were building on Menger, they were developing further an analytical framework specifically needed for historical research:

to grasp key historical developments not comprehensible otherwise. Since historical study is an empirical discipline, the construction of such a framework can be done only from a thorough first-hand knowledge of the foundations, conclusions and practical problems of historical research: hearsay *cannot* do. In short, neither Menger nor Mises nor Hayek were pure theorists after the neoclassical model: they did *not* write on the basis of a total ignorance of and complete isolation from, professional historical work.

Menger saw that individuals' actions gave rise to socioeconomic phenomena and that this single field of study was "investigated from a double point of view": theory looked to the general aspects of all particular and specific phenomena, while historical study analysed these particular phenomena in the round — in all their varied, manifold and specific aspects.²⁹ Mises refined this insight into the recognition that human action — the actions of individuals using means to achieve ends — is the object of analysis common to both social theory and historical research: "human action constitutes the subject-matter of investigation in the social sciences, both historical and theoretical."³⁰ But right from the very start, he saw that this meant subjectivist economics was part of a wider discipline, the general theory of human action. Initially he thought the term 'sociology' was the most appropriate for this general discipline, although he used the term 'praxeology' as well. He also referred to "the science (or sciences) of human action", and at least twice, simply to "the science of action."³¹ Then, some time after the beginning of 1933, following on from his criticism of Max Weber's view of economics, Mises saw that sociology had by then become an historical, not a theoretical discipline. He therefore felt it had been a "mistake" to use "the term, 'sociology', to designate the theory of human action." Thereafter he used only the term "praxeology" for the general study of human action under which subjectivist economics was subsumed.³² Thus Mises systematically developed a praxeological economics, an economics of human action, specifically for assisting historical investigation — that is, the investigation of the concrete things that people actually did. This discipline is clearly quite distinct from the neo-classical economics of the late twentieth century which follows after the positivist model of the natural sciences and is therefore pure theory: hermetically sealed off in its development from the content of the world of professional historians and their preoccupations and problems.

And so, to repeat, Mises, right from the outset, was concerned with forging analytical tools for the historian. This can be accomplished only from a thorough knowledge of the content of this empirical discipline and the actual problems involved in its practice. Mises' theorising was solidly rooted in the specific analytical needs of an empirical activity: historical research. But before proceeding with the further development of the analytical tools needed to

study human action, Mises did some house-cleaning of the framework he was extending. First, he made more explicit the failure of the classical economists to analyse the real actions of real human beings. Secondly, he eliminated certain left-over classical views from Menger's and Bohm Bawerk's analysis and so rendered their subjectivism more consistent.

Why the Classics Failed

To begin with Mises' criticism of the classics: Here, it must be said that Mises did acknowledge that subjectivism had absorbed much and gained the "greatest benefit from the intellectual heritage of classical economics". This gain was particularly in areas of monetary theory, but also from the classics' comprehensive view of economics ... "that brilliant achievement." As well, their recognition of the division of labour had the most momentous consequences for the analysis of society.³³

But Mises also made explicit the nature and size of the gulf which separated the classical economists from "a universal, timeless understanding that would embrace all economic action." Mises was very clear about why the classics "could not succeed in this endeavour:"³⁴ they could not solve the paradox of value — they could only deal with exchange value, not with use value.³⁵ This meant "the classical doctrine" was incapable of "comprehending the most fundamental element of economics — consumption and the direct satisfaction of a want." Classical theory could not accommodate "the act of consumption or the consumer's expenditure of money." And so "the classical economists were able to explain only the action of businessmen", so that "whatever did not pass through a businessman's calculations and account books was outside the orbit of classical economics." Thus the classics "were unable to comprehend any change in well-being that cannot be valued in money in the account books of the businessman." For this reason "they regarded the attainment of the greatest monetary profit possible as the goal of economic action." Classical theory personified business principles in the *homo economicus* — which left out everything else:

"with [this] scheme ... classical economics comprehended only one side of man — the economic, materialistic side. It observed him only as a man engaged in business, not as a consumer of economic goods."³⁶

But concentration on the business side alone prevents the analysis of human action — i.e. the actions of everyone in their capacity as *homo agens*: the user of means to arrive at ends. Business conduct is "pertinently described" in the "over-simplified formula": buy cheap, sell dear. This leads to a — spurious — distinction between "economic and non-economic action", so that

“business-like conduct [is] falsely termed economic or rational conduct” while “conduct determined by other considerations than business [is] falsely termed uneconomic or irrational conduct.” But in fact everyone acts to achieve a variety of ends, so such a distinction is useless in grasping people’s actions: “this ... classification does not make any sense if we apply it to the behaviour of the consumers” — i.e. “everybody”. With such erroneous distinctions the classical economists “removed economics from reality”. Economics “did not deal with real living beings, but with a phantom, ‘economic man’, a creature essentially different from real man.” The *homo economicus* is one-sided, whereas in fact people have “various aims and desires.” So this construction is not based on “concrete historical data”. Being “fictitious”, it cannot represent the “complex phenomena of reality”. In other words, it is not an “ideal type” — which makes it useless for purposes of historical research.³⁷

Finally, the classical economists, because of their “objectivistic theory of value” and their concentration on the businessman and his accounts, considered that there were only two scarce factors, that had to be economised: labour and land (or natural resources. Both together produced the third classical factor, capital). Thus the classicals “could not observe that time too is economised. An account for time does not appear in the businessman’s books”. They could not see that “action always distinguishes between present ... and future goods”³⁸. Here Mises is clearly referring to Menger’s analysis of the investment chain and his recognition that the production process always involved the future (see below).

Classical Remains in Bohm-Bawerk and Menger

Moving on now to Mises’ removal of classical inconsistencies from Menger (and Bohm-Bawerk): As Mises observes, “the transition from the classical to the [subjectivist] framework did not take place all at once, but gradually.” Menger and Bohm-Bawerk had started from the classical system, and so even as they realised the subjective and historical nature of the phenomena to be analysed, they included in their writings “propositions and concepts carried over from the objective theory of value and therefore utterly incompatible with the subjectivism” of their “great fundamental ideas”. As “pioneers and trail-blazers”, they did not understand all the “ramifications” of their new departure (and were themselves misunderstood by others). Mises stresses that the inconsistencies lie in “details” and “elaboration” only; “there can be no doubt” about the “basic principles”³⁹.

We may first set out Mises' objections to certain of Bohm-Bawerk's statements on price formation and then go on to Mises' criticism of some classical hangovers in Menger.

Mises is concerned with Bohm-Bawerk's attempt to divide the analysis of price formation into two stages according to motivation. Mises quotes Bohm-Bawerk here, who says that it is first assumed that everyone involved, is motivated only by the "desire to attain a direct gain in the transaction." The result is then modified by introducing the effects of "other motives" such as "habit, custom ... generosity, comfort or convenience ... etc"⁴⁰. Mises emphasises that this is a classical differentiation and therefore quite inconsistent with subjectivist analysis: "Bohm-Bawerk's distinction" is "a tenet taken over from the older, objective system of classical economics. It is not at all compatible with the system of subjective economics"⁴¹. Mises asks, "What is that 'direct gain in ... exchange' which Bohm-Bawerk speaks of?"⁴² In paying more for pencils bought from an invalid ex-soldier, the purchaser achieves two ends simultaneously: charity and the acquisition of pencils. In wearing evening clothes (at the appropriate time) and in having them from a fashionable, more expensive tailor, a 'society' man follows the custom and opinion of his circle. Whether buying an easy chair, using taxis, hiring a maid, or shopping in a nearby but more expensive shop — the end achieved is the same in all cases: "comfort or convenience." Thus the proposed distinction cannot hold. Mises sees in it an "unsuccessful defense" intended to protect subjective price theory against a total rejection. He emphasises that this "dichotomy" in fact had no effect at all on Bohm-Bawerk's price analysis⁴³.

Mises criticised Menger's notion of "imaginary goods" on subjectivist grounds: these goods too (eg cosmetics; items used in idol-worship) were subjectively regarded as providing utility. Therefore they too were priced on a market; their prices could be explained in exactly the same way as with any other good (or service). As Mises emphasises, his criticism is grounded in the very subjectivism first developed by Menger himself. Mises also objected to the "psychologism and empiricism" which "still further weakened" Menger's "pioneering [I]nvestigations." Menger started there (says Mises) not from "subjectivist economics ... but from the system, the methodology, and the logic of classical economics." Although Mises does not spell out this objection, he clearly refers to certain very early passages in the *Investigations*, where Menger begins with "observation" and the teaching of "experience". These lead us (says Menger) to "perceive" that each economic phenomenon is not unique and singular; rather there are "empirical ... types". Amongst these we "observe, without much difficulty" the recurrence of "relationships which we call *typical*". While Mises does not say so explicitly, it is immediately obvious that it

was precisely this “observation”/“experience” which he found impossible to accept as a foundation for theorising: on what *basis* were “economic” phenomena and relationships first distinguished from other phenomena and then classified together as “typical”? or, for that matter, set apart as “untypical”?⁴⁴

The Study of Human Action

Mises’ answer to these questions built on, but also radically extended, the distinction which defined Menger’s *Investigations*: “between the historical sciences, directed toward phenomena in their particularity, and the theoretical sciences, which are directed toward ... the universal character of phenomena.” Mises recognised (as we saw earlier) that both were the two branches of the one field of study: human action. His development of the theoretical branch — dealing with the universal aspects of human action — meant a radical extension and systematisation of the subjectivism already developed by Menger: the recognition that the phenomena studied are subjective in nature and can only be apprehended “from the inside”, as Wieser put it ⁴⁵.

Mises saw the “possibility” of such an analytical discipline of human action to be the “subject of the Methodensreit.” There, as against the rejection of such a discipline, Menger pointed out “the character and logical necessity of a theoretical science of social phenomena.” Mises recognised that Menger had developed this analytical approach from the very outset: first in his *Principles* and then in his *Investigations*, Menger worked out how, from the actions of individuals pursuing their several goals, there emerged first indirect exchange and then money. From this “praxeological theory of the origin of money”, Menger generalised his analysis to develop a broader theory of human action: he elucidated “the fundamental principles of praxeology and its methods of research”. Thus Menger explained “social phenomena” as the “unintended outcome ... not deliberately designed or aimed at by specifically individual endeavours of the members of a society.” With this direct quote (in translation) from Menger, Mises makes it crystal-clear that he too has undertaken the same analytical task: to trace the formation of social phenomena as the unintended and undesigned result of the actions of individuals ⁴⁶.

And so Mises, on his own showing, made more explicit, organised and extended that general discipline of human action whose basic analytical elements Menger had developed. We may therefore set out certain key elements here; then we see, in somewhat greater detail, how Mises (and Hayek) built them into a more general framework for the study of both sides of human action.

1. Menger pointed to the crucial difference between theorising about social and natural phenomena: with the latter, the ultimate building-blocks — “atoms” or “forces” — are “unknown causes” of what is actually observed. Here “the theoretical social sciences have a great advantage over the ... natural sciences”. With social phenomena, “the human *individuals* and their *efforts*, the final elements of our analysis, are of empirical nature” [Menger’s emphasis]. From these “empirical” — real — elements, “the more complex ... phenomena evolve ... according to definite principles”⁴⁷. In other words, social *theory* builds with the real elements that lie at the root of all socioeconomic phenomena. But only *historical* investigation can tell us what actual people actually did under actual circumstances. Thus the line between social and natural phenomena, as Wieser then observed, is the line between those happenings that we view — inescapably — from the inside and those that we can only view from the outside. Mises and Hayek built further on this distinction, taken from Wieser.

2. Menger consistently and systematically used the “economising individual” or “economising person” as his basic analytical unit throughout. As the translators of his *Principles* point out, Menger used the term “economising” to refer solely to an *activity* undertaken by individuals — their “act of economising”, not their motives. He specifically did *not* mean by this term, “self-interest” or “the profit motive”. Mises, of course, repeatedly and indeed vehemently insists that in studying the theory of human action, we abstract from the motives and actual content of whatever ends people pursue; we are concerned only with the logical implications of the fact that they seek to achieve ends (that can and do change) and use (what they regard at the moment as suitable) means to pursue these (changing) ends⁴⁸.

3. Menger was explicit that economic phenomena were formed out of the human pursuit of ends, using means to do so:

“... man, with his needs and his command of the means to satisfy them, is himself the point at which human economic life both begins and ends.”

Consistently with this, it is quite clear that by the term “good”, Menger meant the means used by human beings to achieve their goals. Thus in his definition of a good, he says quite explicitly that to say something is a “good” is to refer to a relationship between it and human beings. When this relationship disappears, so does that thing’s “goods-character”. In other words, to say an item is a “good” is to say that at least one human being sees in it a means to an end. When it is no longer seen thus, it ceases to be an object for economic analysis. To characterise things as “higher-order” goods is to refer to the particular use to which people put these items, *not* to anything inherent in the latter. Again,

the analysis is of the human use of material means to achieve an end (or ends). And Menger also assumes the point as routine: when people obtain information about available supplies, they seek “knowledge ... of the means available to them for the attainment of desired ends”⁴⁹.

4. Menger realised that all human action is inescapably directed toward the future: “in planning all human activity directed to” satisfying needs, people aim to meet their estimated future requirements; how far they succeed determines how well their needs are actually met. “Without foresight”, it would be impossible to achieve this goal⁵⁰. Mises analysed much more extensively this unalterable time dimension of human action.

5. Menger also saw that as the investment chain was extended further and further, the entire production process became more and more subdivided amongst an ever-growing number of production units, each turning out only a small fragment of the whole. While people thus *acted* as the elements forming an overall economic order, they nevertheless remained ignorant of this reality⁵¹. Hayek made this insight explicit and developed it much further; it is clearly a significant — a key — aspect of human action.

We may now see how Mises incorporated all these insights into a systematisation of the study of people’s actions. After this first overview, we take a second look at certain key points (Part II).

The Results of Historical Development

1. Mises recognised that those historical phenomena that required analytical investigation had all developed over long periods of time, long before it could be seen, and was seen, that they represented a fundamental problem for analysis as well. Only *after* these historical developments had occurred could a praxeological framework be formulated to comprehend them theoretically. Mises saw that these social and economic formations are all firstly, the outcome of a long process of historical evolution — of gradual development over time. Secondly, they are the unintended and unplanned joint outcome of the actions of innumerable human beings. Thus while Mises recognised that social formations grew historically, he also opposed the methodological collectivism of the Younger German School

Amongst social phenomena, Mises referred specifically to law, moral values, social ties and economic activity — just as Menger does. Thus law has grown over long periods of time and has continued evolving:

“Law did not leap into life as something perfect and complete. For thousands of years it has grown and it is still growing”.

Therefore property too has evolved through time: “Property rights....are the outgrowth of an age-long evolution.” Along with Menger, Mises rejects the view that law came from explicit agreement, as a social compact. Mises further deplored

“Marxism’s professional revolutionaries, who...destroy values which the labour of centuries and decades has created.”

He saw that the “Bolshevists” [sic] aimed to “dissolve all traditional social ties, to destroy the social edifice built up through countless centuries...” Economic interaction too required long-term historical development: “Conscious and purposeful cooperation is the outcome of a long evolutionary process.” So too, “the market economy is the product of a long historical process.” And again: “the emergence of interpersonal exchange was the result of a long evolution...” Similarly “indirect exchange” was an “evolution”. These historical processes brought about a total and fundamental transformation in the human condition and therefore occurred on the requisite time-scale: they “began when the human race emerged from the ranks of the other primates” and then evolved “from savagery to civilisation.” This involved a long development from autarky to world-wide exchange, and

“evolution from the economic self-sufficiency of households, villages, districts, and countries to the world-embracing market system of the nineteenth century...”⁵².

All human beings contribute in their actions to the emergence of these historically-produced phenomena: “Political, social and economic affairs are the outcome of the cooperation of all people.” Mises agrees with Menger, that such historical developments are the composite and undesigned consequences of individuals’ activities:

“...the historical process is not designed by individuals. It is the composite outcome of the intentional actions of all individuals. No man can plan history. All he can plan and try to put into effect is his own actions which, jointly with the actions of other men, constitute the historical process.”

Thus people “and their fathers” have “unwittingly created [market] society by their actions” over many generations. Private law is the foundation of social cooperation and of human civilisation, but both law and society are not just the unintended consequences of all individuals’ actions aimed at other ends, — the development of the legal and social order was not just unforeseen, it was unforeseeable:

“All this is the result of conscious willing and awareness of the aims willed. But this willing sees and wills only the most immediate and

direct result: of the remoter consequences it knows nothing and can know nothing. Men who create peace and standards of conduct are only concerned...for the needs of the coming hours, days, years; that they are, at the same time, working to build a great structure like human society escapes their notice”⁵³.

Because historical formations such as law, society, and the market order have grown over such long periods, they can only be altered piecemeal:

“We are in all our endeavours the heirs of our fathers...our civilisation, the product of a long evolution, cannot be transformed at one stroke”⁵⁴.

Analytical Aspects of Historical Developments

Thus it was only after the division of labour and the market order had developed over centuries that their existence and orderliness could begin to be recognised and studied. In short, something systematic first actually manifested itself in peoples’ actions, and in economic and social phenomena: so the study of the principles involved is a study which begins with the actual actions of people as their activities evolved and changed through history.

Initially, students of these phenomena had “isolated insights”, as into Gresham’s Law. Mises points out that this

“was referred to by Aristophanes in the *Frogs*, and clearly enunciated by Nicolaus Oresmius (1364), and not until 1858 named after Sir Thomas Gresham by Macleod.”

But from this point “there was still a long way to go” before the “philosophers of the eighteenth century became aware of the interconnectedness of market phenomena”. Before the division of labour was recognised (says Mises) even Kant struggled to explain the growth of society; he could only attribute it to the impulse of social cohesion overmastering the opposite impulse, to social separation. But once the principle of the division of labour was seen, social knowledge forged ahead, far beyond such non-explanations. Mises points to the “great feat” of the classical economists: their

“discovery that there prevails in...the sequence of market phenomena a regularity that can be compared to the regularity in the ... sequence of natural events”⁵⁵.

Thus the “historical fact” is that a functioning market order first appeared in the course of history and it was in analysing this pre-existing historical phenomenon that there developed the systematic study of human action — the discipline of praxeology. And so, as Mises put it:

“The mental grasp and analysis of the problems present in a calculating market system were the starting point of economic thinking which finally led to praxeological cognition”.

Mises doubts whether economics “could have emerged” in a world of barter; and he agrees that, without the actual experience of indirect exchange, it might not have been possible to conceive of this type of action with “all its ramifications”⁵⁶.

Mises emphasises that, historically speaking, the development of praxeological theory only became possible after the development of the exchange order being thought about. But the historical data are ineradicably complex:

“in historical experience we can observe only complex phenomena”⁵⁷.

So in logical terms, the analytical tools needed have to be worked out beforehand; only then can the historical materials be untangled. The basis for this is the common thing which makes history distinct from natural phenomena: history is human action. This line of analysis is elaborated below.

A Totally New Perspective on Human Action

2. Mises recognises that since it is people’s actions that bring about the historical record, historians were the first students of human action:

“It is in accounts of history that we find the earliest beginnings of knowledge in the sciences of human action.”

Historians of necessity had always relied — implicitly and explicitly — on some sort of general propositions regarding human action *per se*, in grasping and interpreting their facts. But they did not systematise their repeated references to such “regularities”; they did not try to “clarify these tacit suppositions by special analysis.” They never asked whether “these regularities” were “extraneous” or “inherent in the very nature of human action.” Historians and philosophers saw in people’s actions only the observance or disregard of moral precepts: “With righteous men any utopia might be realised.” All this changed drastically in the eighteenth century, when systematic theoretical inquiry into social and economic phenomena began:

“The scattered and fragmentary insights of the historical and normative sciences themselves achieved scientific status only with the development of economics in the eighteenth century”.

Economics developed because of the “discovery” of an order “in the sequence and interdependence of market phenomena”. Thus a revolutionary new field of study was established: the systematic analysis of “[h]uman

action and social cooperation.” In short, “economics opened to human science a domain previously inaccessible and never thought of”⁵⁸.

It was now seen for the first time that human actions — individual and cooperative — required dispassionate theoretical investigation. They could no longer be the objects of a “normative discipline” only. Thus praxeology sprang from the empirical investigations and conclusions of the philosophers and economists of the late eighteenth and early nineteenth century:

“The discoveries made by Hume, Smith, Ricardo, Bentham and many others may be regarded as constituting the historical beginning and foundation of a truly scientific knowledge of society”.

The real world was found to contain something — manifested in human actions — which could not be explained by “logic, mathematics, psychology, physics, nor biology”. People “were compelled to recognise” an order “which they compared” with the natural order they were already familiar with⁵⁹.

From the Narrow Classicals to Universal Subjectivism

Mises underlines that the classical economists, because of their objective value theory, were unable to trace the market order they had discerned to its roots in the actions of individuals. So they were “forced...to restrict the scope of their science.” This new comprehension was thought to refer “only to a narrow segment of the total field of human action, namely, to market phenomena.” And so before the discovery of subjectivism, economic analysis was confined to material goods only:

“Until the late nineteenth century, political economy remained a science of the ‘economic’ aspects of human action, a theory of wealth and selfishness.”

But the realisation that value was something subjectively attributed by human minds “converted the theory of market prices into a general theory of human choice.” In consequence, “modern subjectivist economics” has a far broader reach than the narrower preoccupations of the classicals:

“the general theory of choice and preference goes far beyond...the scope of economic problems as circumscribed by the economists from Cantillon, Hume, and Adam Smith down to John Stuart Mill. It is much more than merely a theory of the ‘economic side’ of human endeavours and of man’s striving for...and improvement in his material well-being. It is the science of every kind of human action.”

Subjectivism is founded on the fact that individuals rank all their ends, material and non-material, on their value-scales, — ie for each individual, the one value-scale ranks all ends. This means that

“Nothing that men aim at or want to avoid remains outside of this arrangement into a unique scale of graduation and preference”.

Thus both material and non-material values affect the demand for and supply of, all goods and services. Therefore the analysis now has to be of the general and universal category of human action: the use of means to achieve ends, in the most general sense, abstracting from the concrete context altogether. Exchange activity is now recognised to be only a part of a far wider, comprehensive range of human actions. Consistently with all the above, Mises said flatly (twice) that the analysis of praxeology “was not a contribution to philosophy”; — in other words, it was an analysis of an aspect of reality⁶⁰.

In developing this analysis, Mises was acutely aware that he

“had drawn the appropriate praxeological conclusion from the scientific development that began during the eighteenth century with the discovery of regularity in market phenomena.”

But he also realised the extent to which he was breaking wholly new ground:

“For a long time I hesitated to present my investigations into epistemological problems to the public because I was aware that they went far beyond the field of economics. In fact, we are dealing here with the opening of a new field of epistemology and logic”⁶¹.

In sum: Mises is centrally concerned in all his analytical work with the emergence and growth of the discipline of praxeology; the “economics” he refers to is always subjectivist economics — a branch, and only one branch, of this more comprehensive discipline, of which the other segment is history.

Organism and Organisation

3. Mises followed Menger in distinguishing between two kinds of social phenomena: the deliberately-organised and the unintentionally-developed. But Mises goes further: while emphatically rejecting the “absurdity” of all biological metaphors, he recognises that in both social and biological life, there is life in a very real sense. Both social and biological entities manifested an organising principle which makes them all living organisms and therefore in fact something more than the sum of their parts:

“...when organisms are formed, something which did not exist before is created out of individuals. Vegetable and animal organisms are more than conglomerations of single cells, and society is more than the sum of the individuals of which it is composed. We have not yet grasped the whole significance of this fact”⁶².

Mises feels that to understand the principle of life it is necessary to break with “the mechanical theory of the conservation of energy and of matter”, which cannot tell us how a new living entity is created out of its component parts. Here he feels the understanding of social life will have to lead ahead of biology⁶³. — As we shall see (below), Mises was the first to recognise that key analytical ideas — evolution, the division of labour — were developed first to explain social formations and only then used in biology, with a resulting transformation in that field.

Mises compares the difference between an organisation and living social organism — society — to the difference between an artificial and a natural flower. The ordering principle of the one is hierarchy and command; of the other, interdependence: “Organisation is an association based on authority, organism is mutuality.” An organisation expresses the will and purpose of its organiser, but this no more creates a living social organism than a maker of artificial flowers creates “a living rose”. So an organisation falls apart when its organising force is withdrawn. To convert the living organism, society, into an organisation means killing the living thing first:

“To seek to organise society is just as crazy as it would be to tear a living plant to bits in order to make a new one out of the dead parts”.

Society is not only larger than any organisation it contains, its social forces are ineradicable. If any attempt is made to turn a living society into a deliberate organisation, social forces both limit and defeat this attempt. And so “The collectivist movements were...fore-doomed to failure”⁶⁴.

From Evolution to its Negation, Social Darwinism

In the recognition of the principle of unintentional growth, Mises sees the crucial breakthrough which made proper scientific explanation possible in *all* fields. Initially, people explained natural phenomena animistically, after the model of their own purposive actions, as in the making of an arrow. Then God or Nature was called in, but the explanation remained anthropomorphic. Only after this approach was dropped, could natural science progress. Similarly with social phenomena: at first people regarded all social formations as deliberate organisations. Then, from the eighteenth century onwards, “Classical Political Economy and its immediate precursors” realised that social and economic phenomena manifested not the hierarchy of command, but the organic principles of unintentional development — viz., evolution and the division of labour. Biology then adopted this explanation, thus eliminating animistic and hierarchical interpretations in its field, and great progress followed⁶⁵.

But society remained “so mysterious and incomprehensible a formation” that the notion of a divine outside force persisted, far longer than with natural phenomena, to account for the “origin and nature” of society. The “last great expressions” of this approach are in “Kant’s *Nature*, which leads humanity towards a special aim, Hegel’s *World Spirit*, and the Darwinian *Natural Selection*.” Then later, the explanatory principles that had passed from the study of society to that of biology, “reverted to Social Science” in the form of “that monstrosity, sociological Darwinism”. The latter “is unable to explain the phenomena of society”. In fact, this view is profoundly anti-social: because it “ends in a romantic glorification of war and murder”, Social Darwinism is held by Mises to be “peculiarly responsible” for the ideological environment which led to the First World War and the continuing social strife in the period after ⁶⁶. In other words, Mises was constantly aware that ideas — whether inchoate, implicit or explicit — determine people’s actions; thus ideas determine whether the social bond amongst individuals is strengthened progressively or gradually weakened (see below).

The Complexity of History

4. The socioeconomic formations that were recognised in the historical data by the classicals and Menger, are all historical developments. This means they are integral parts of a complex historical environment produced as human beings, influenced by a variety of ideas, values, etc, utilise various specific material means to achieve a variety of ends, both material and non-material. In other words, all historical contexts are the outcome of a complex of influences.

Thus “history is the record of human action”: it “deals with unique and unrepeatable events, with the irreversible flux of human affairs”. Its “scope” is “all the data of experience concerning human action.” This means that all historical developments are the joint and unique results of multiple causes; so such developments occur at a specific time and place:

“...history, that is, the description of a complex phenomenon that happened at a definite place on our globe at a definite date as the consequence of combined operations of a multitude of factors.”

Historical data are thus distinguished from natural data by belonging to a specific historical context:

“A historical event cannot be described without reference to the persons involved and the place and date of its occurrence. As far as a happening can be narrated without such a reference, it is not a historical event but a fact of the natural sciences” ⁶⁷.

The complex and unique combinations of influences found in history cannot be used to test a theory; it is rather the other way about: independently-developed theories are needed to sort and organise the historical data:

“Every experience concerning human action is historical, ie an experience of complex phenomena, of changes produced by the joint operation of a multitude of factors. Such an experience...can neither verify nor falsify any theorem. It would remain an inexplicable puzzle of it could not be interpreted by dint of a theory that had been derived from other sources than historical experience”.

So the historian needs to use a wide variety of non-historical disciplines in his work, according to the problem under consideration. These disciplines would include logic, mathematics, the natural sciences and other specialisms according to topic:

“The historian must regard all other sciences as auxiliary to his own and must be as thoroughly familiar with as much of them as is required by the particular tasks he has set himself... Whoever writes a history of bridge-building will need a thorough knowledge of bridge-building; whoever writes a history of strategy will need a thorough knowledge of strategy”⁶⁸.

Mises follows Menger in seeing that the various non-historical disciplines are “indispensable auxiliaries” for the historian’s work. But if theory is insufficient for the problem at hand, or the historian selects the wrong theory or has an inadequate grasp of theory, “the result of [the historian’s] examination and analysis of the material will be vitiated”⁶⁹.

The Simple Data of the Natural Sciences

Mises contrasts such complex historical experience with the experience of the natural sciences, which he sees as data that can be ultimately reduced to and reproduced in, laboratory experiments, which reveal the numerical constants in these data. Initially, Mises thought scientific hypotheses were reached inductively and then verified. Then he added the alternative of falsification or disproof; and finally he referred only to falsification. But he saw the laboratory experiment as the distinguishing feature of analysis in the natural sciences, and experimentally-established laboratory facts as the building-bricks of scientific hypotheses. Against this, he contrasted the complex historical phenomena studied by the sciences of human action. In other words, the data of the natural sciences could be broken down into relatively simple laboratory facts with numerical constants, whereas historical experience remained irreducibly complex⁷⁰.

Mises' grasp of the philosophy and methodology of the natural sciences clearly lagged far behind the latest developments in that field; but it does not follow that he could not, therefore, have a penetrating and comprehensive insight into the problems of studying human action. Mises' distinction between the relative simplicity of the facts of the natural sciences and the inherent, ineradicable complexity of socioeconomic formations was developed much further by Hayek (see below).

How Theory Shapes History

The common thread that makes history intelligible is that it is the actions of human beings:

“although unique and unrepeatable, historical events have one common feature: they are human action”⁷¹.

The historian therefore needs the appropriate analytical tools to grasp this, the root cause of the reality he studies. Here Mises again rejects the anti-theoretical stance of the Historical School and the Institutionalists. He emphasises that it is impossible to simply register ‘facts’; any report or organisation of the historical data implies a theory. For human action, this means praxeology:

“The Historical School and the Institutionalists want to...occupy themselves merely with the registration of the data... But no statement concerning these data can be made without reference to a definite set of economic theorems. When an institutionalist ascribes a definite event to a definite cause, eg. mass unemployment to the alleged deficiencies of the capitalist mode of production, he resorts to an economic theorem... There is no such thing as a mere recording of unadulterated facts apart from any reference to theories. As soon as two events are recorded together or integrated into a class of events, a theory is operative. The question whether there is any connection between them can only be answered by a theory, ie. in the case of human action by praxeology”⁷².

In their work historians implicitly and unavoidably use concepts concerning human action — the use of means to achieve ends. Ideas about human action are ineradicably embedded in our thinking and so our language:

“Theories about action are implicit in the very words we use in acting, and still more in these we use in speaking about action.”

Thus to use language is to use concepts, albeit untutored:

“the terms employed are themselves the outcome of definite theories held in common-sense thinking...a theory is already contained in the very linguistic terms involved in every act of thought. To apply

language, with its words and concepts, to anything is at the same time to approach it with a theory.”

For many purposes, the theoretical concepts needed and used are relatively simple:

“The study of history always presupposes a measure of universally valid knowledge. This knowledge which constitutes the conceptual tool of the historian, may sometimes seem platitudinous”.

Uncomplicated general concepts are utilised in virtually every historical statement, but these concepts remain non-historical ie applicable across historical contexts. For example, even the

“simple sentence, ‘the defeated king found himself forced to conclude peace under unfavourable conditions’,” contains “simple and scarcely disputed theories, which by their very character, are non-scientific, but this does not change the fact that they are still theories, ie statements understood as universally valid”⁷².

But the concepts must be held before historical research can be carried out:

“...concepts are always logically prior to the understanding of the individual, the unique, and the non-repeatable. It is impossible to speak of war and peace unless one has a definite conception of war and peace before one turns to the sources”⁷⁴.

In short, as mentioned before, although the development of the analytical tools to study human action came temporally — historically — after the historical growth of the socioeconomic phenomena that called for such analysis, nevertheless in logical terms, praxeological theory cannot be derived from the complex phenomena of history, but needs to be worked out independently and separately, as with all the other disciplines used in historical analysis. How this is possible is examined further below.

Since the historian perforce utilises theoretical concepts concerning human action, the choice is between the unexamined, untutored, everyday ideas found in common-sense thinking, or using conceptual tools that have been systematically worked out and examined:

“The only question is whether one wants to have recourse to causal explanations that have been elaborated and critically examined by scientific thought or to uncritical, popular, prescientific ‘dogmas’”.

Mises feels that history is too important a task to pursue with anything less than the best available theories of action, while dropping unexamined ideas:

“History cannot fulfil its task if it does not employ the most precise logic. At every step of the way it must make use of universally valid

concepts and propositions...it must, whether it wants to or not, theorise...it is obvious that nothing but the best theory is good enough for it. The historian is not warranted in uncritically accepting any concept or proposition from the stock of naive popular habits of thought."

The historian should "subject all concepts and propositions to a sharp critical examination." All ideas have to be thought through, questioned and examined for consistency, coherence, and to remove "unessential elements that imprecise reasoning may have mixed in with them." In short, the historian has to either "practice theorising" or "accept theory where it is developed in a scientific way." Thus the historian "in order more than ever to discharge" the "proper tasks" of history, needs "the intellectual tools provided by the theory of human action." Mises puts Sombart forward as a warning:

"He does not ask what exchange and price are. He unconcernedly employs these terms as everyday, unscientific usage presents them" ⁷⁵.

Systematic thinking about human action begins with ordinary concepts, but these are refined and all their implications clearly thought through. This applies especially to the remote and less obvious consequences. These conceptual tools are worked into a coherent system which links certain implications together while separating others (again, see below). Mises points out that a proper economic history only became possible when classical economics produced a systematic analytical apparatus; before then, it had been possible only to compile memoranda, as with the history of trade. In short, economic history can be written "only because there is an economic theory capable of throwing light upon economic actions." Without such a theory,

"reports concerning economic facts would be nothing more than a collection of unconnected data open to any arbitrary interpretation" ⁷⁶.

The Scope of History

It should be mentioned that Mises regards a wide range of disciplines to have as their common object the actual doings of actual people — which is what he means by "history." Thus history — the study of the actual content of human action — encompasses

"history proper, philology, ethnology, anthropology — as far as it is not a part of biology, and psychology as far as it is neither physiology nor epistemology nor philosophy. Economic history, descriptive economics, and economic statistics are, of course, history".

It includes "descriptive sociology" which

“deals with those historical phenomena of human action which are not viewed in descriptive economics; it overlaps to some extent the field [of] ethnology and anthropology.”

General sociology too — as Max Weber developed it — is a branch of history, which “approaches historical experience from a more nearly universal viewpoint...” Linguistics is included “as far as it is neither logic nor the physiology of speech”. Thus history “embraces every aspect of human activities,” so it is possible to study the history of

“political and military action, ideas and philosophy, ... economic activities... technology, ... literature, art and science, [and] religion... mores and customs, and of many other realms of human life”⁷⁷.

The Role of ‘Understanding’

The various non-historical disciplines that the historian needs to use are auxiliaries only; they do not themselves “suffice for his task.” That is because the “historian’s genuine problem is always to interpret things as they happened.” But the non-historical disciplines cannot deal with them: “there always remains at the bottom of each of the historian’s problems something which resists analysis” by these other disciplines. The historian has to exercise a specific skill:

“it is these individual and unique characteristics of each event which are studied by ... understanding.”

The historian can exercise understanding “because he is himself a human being.” Once again, the historian refines and systematises an activity which is part of every human being’s mental apparatus: “Understanding is not a ... procedure peculiar to historians”. Rather, it is practiced by everyone:

“It is applied by everybody in daily intercourse with all his fellows. It is a technique employed in all inter-human relations. It is practised by children in the nursery... by businessmen in trade, by politicians and statesmen...”

But the historian “removes inconsistencies and contradictions” in his (or her) practice.

Mises is emphatic that “understanding” is *not* empathy or approval, nor is it “a free charter for nonsense”. To understand historically is to appreciate the uniqueness of the data and to assess the relevance of the action being studied, “ie its bearing upon the course of events.” Thus it involves historical judgment, of the relative importance of the various historical influences at work in the problem or issue being examined. Understanding (*verstehen*) does *not* mean justification or emotional appreciation, as of an artwork.

The Analysis of Human Action: the Foundations

5. We now come to the theoretical side of human action: that aspect which cannot be grasped through historical study, including understanding, but which has to be comprehended through theoretical categories. The starting point for the development of praxeology is the recognition that the study of historical materials is only possible because all human beings have minds with the same logical structure. This does NOT mean that everyone thinks alike *or* that everyone is a rational, cool, calculator *or* that everyone has an identical psychological make up. It means that we can grasp people's actions: — comprehend that they are using means to arrive at some end or other, *not* that people rationally sit down and consciously set out to do this. If people were not acting beings, with a similar mind structure, then it would be impossible to study them in different historical contexts:

“If thinking and action were really conditioned by place, time, race, nationality, climate, class, etc., then it would be impossible for a German of the twentieth century to understand anything of the logic and action of a Greek of the age of Pericles”⁸⁰.

Clearly Mises is not saying that a Greek of the fifth century BC is simply a twentieth-century German wearing an eccentric costume, nor is he saying that the world of a Periclean Greek is instantaneously accessible because everyone there is human too. Rather, Mises is moving on a much deeper, more fundamental level: underneath their vast historical differences, ancient Greek and twentieth-century German are human beings — and that is why it is possible to comprehend that both regard some ends as worth pursuing and others as worth sacrificing, with all the abstract, general implications that follow. The concrete content of these ends and of the implications of their pursuit, is of course vastly different, but the subjective *action* is the same: acting on a scale of values. It is *because* people have the same abstract mental structure, that it is possible for a twentieth-century historian to comprehend and historically understand the historical context, Periclean Athens, — or indeed, any other historical context.

Mises was again tilting at the Historical School here: they deny that there are regularities in human action, independent “of place, time, race, or nationality.” But to prove this they

“would have had to show that the logical structure of human thinking and the categorical nature of human action change in the course of history and are different for particular peoples, races, classes, etc”⁸¹.

But the Historical School “could never demonstrate”⁸¹ this and if they had, as Mises has just argued, they would have cut the ground out from under

their own feet: where there is no human mind involved, there the natural sciences have to come into play.

Mises went on to further develop the observation that the categories of human action are what makes human beings human: Suppose “a traveller from the Germany of ‘high capitalism’ [was] drive off his course” and fetched up on an island with tribal inhabitants. Initially their behaviour would be “incomprehensible and unintelligible” to him. But when he suddenly realised they were exchanging goods, he would have comprehended the meaning of their actions — even though up to then, he would have been “familiar only with the exchange [activities] of ‘high capitalism’.” Again Mises’ point is that such comprehension is of the subjective meaning common to all people of what are otherwise vastly different activities in outward appearance: but this means that all peoples have the same abstract mental categories. This is what makes possible “the comprehension of an event that otherwise cannot be grasped at all...”⁸²

Ethnography and the Study of Action

Mises examined ethnographic data to conclude that the differences displayed were in *content* of thought only — the underlying logical structure was the same in all cases:

“No facts provided by ethnology or history contradict the assertion that the logical structure of mind is uniform with all men of all races, ages, and countries.”

Thus in earliest times, agricultural cultivation was treated as a sacred or magical rite; only later was it realised that the methods involved were *technically* valuable. But, as Mises points out, this merely says that “the technological notions of primitive ages were different from ours.” Similarly, a “peasant eager to get a rich crop “may “perform magical rites,” go on pilgrimage, light a candle before a saint, or use “more and better fertiliser.” All these are action: using means to achieve ends; so “magic is in a broader sense a variety of technology.” Mises reiterates that “action “ means only that “the performer believes...the means...will produce the desired effect.” Action does *not* mean using only a correct theory or improved technology⁸³.

Ethnological studies also demonstrate only that tribal peoples think about different things from the “intellectual interests” of “a narrow circle of intellectually distinguished men” in other countries. Tribal peoples see “magical or mystical connections” where others see none, or fail to see links that others see — but this is a difference in the “content of [their] reasoning”, not in its “logical structure”. It is reported of such peoples that they “stop short at [their] earliest perceptions...and never reason if [they] can...avoid it”. Mises says

“European and American educators sometimes report the same of their students”. He also says if these ethnologists had “looked about...among European economists and politicians,” they would never have attributed “the practice of never thinking matters out and never reasoning” to tribal peoples alone. Again, it is said of such peoples their “conversation...turns only upon women, food and...crops.” Mises asks caustically, “What other subjects did many contemporaries and neighbours of Newton [and] Kant... prefer?”⁸⁴

What All Human Minds Have in Common

Mises brought out further the reality that everyone’s mind was of the same logical structure: We all manifest this reality in our daily actions: we act, and act successfully, on the principle that we are surrounded by fellow-humans, whose minds are similar in general structure to ours. (This does *not* mean ‘with identical mental contents’ or ‘psychologically identical’!!) Thus:

“everybody in his daily behaviour again and again bears witness to the immutability and universality of the categories of thought and action. He who addresses his fellow men, who wants to inform and convince them, who asks questions and answers other people’s questions, can proceed in this way only because he can appeal to something common to all men — namely, the logical structure of human reason”⁸⁵.

Everyone’s experience demonstrates that their fellow-humans also act — ie. use means to achieve ends:

“If we do not transcend the realm of reason and experience, we cannot help acknowledging that our fellow men act. We are not free to disregard this fact...Daily experience proves...convincingly that our fellow men are acting beings as we ourselves are.”

When we act on the assumption that our fellow humans are as human as we are, this practice turns out successfully

“It is beyond doubt that the practice of considering fellow men as beings who think and act as I...do has turned out well...”.

In research as in daily life, we find we can successfully treat people as if they were humans like ourselves

“...it is beyond doubt that the principle according to which [I deal] with every human being as if the other were a thinking and acting being like [myself] has evidenced its usefulness both in mundane life and scientific research. It cannot be denied that it works”⁸⁷.

If it is postulated that people should be treated as if they were natural objects, then how would we get the same sort of empirical verification of this hypothesis? Agreed, it is “impossible to provide conclusive evidence” that

“my logic and...the categories of my action” are those of every other human being. But it is a fact that “in addressing [our] fellow men [we presuppose] ... the inter-subjective validity of logic and thereby the reality of...[the] eminent human character” of everyone else. In short, we know about the fundamental category of action — using means to achieve ends — both through our own actions and through “understanding...other peoples’ conduct.” To act is to grasp the fact that others act as well: “Action implies understanding other men’s reactions.”

Subjective Categories Make the Reality

6. Mises here radically extends the subjectivism first discerned by Menger. As Menger was a pioneer, he saw only that the rank value that individuals attributed subjectively to various ends ultimately determined how much of which goods and services they would give up in exchange and also the quantities of the particular goods and services they would seek to obtain in exchange. Mises now realised that all social and economic phenomena are subjective in nature — i.e., to say these phenomena are ultimately intelligible is to say there are human minds behind them. This means the intelligibility of these phenomena consists in the general meaning attributed to them by some human mind or minds:

“...all experience concerning human action is conditioned by the praxeological categories and becomes possible only through their application. If we had not in our minds the schemes provided by praxeological reasoning, we should never be in a position to discern and grasp any action. We would perceive motions, but neither buying nor selling, nor prices, wage rates, interest rates and so on. It is only through the utilisation of the praxeological scheme that we become able to have an experience concerning an act of buying and selling... Unaided by praxeological knowledge we would never learn about media of exchange. If we approach coins without such pre-existing knowledge, we would see in them only round plates of metal, nothing more. Experience concerning money requires familiarity with the praxeological category *medium of exchange*”⁸⁹.

Thus the logical categories that create meaning are part of our mental structure, they are not gained through experience, nor could they be obtained thus:

“What we know about the fundamental categories of action — action, economising, preferring, the relationship of means and ends, and everything else that...constitutes the system of human action — is not derived from experience. We conceive all this from within...a priori, without reference to any experience. Nor could experience lead anyone to the

knowledge of these things if he did not comprehend them from within himself”⁹⁰.

Mises emphasises that these mental categories are specifically human — they are not obtainable by other means:

“No special experience is needed ... to comprehend these theorems, and no experience, however rich, could disclose them to a being who did not know a priori what human action is”⁹¹.

Mises is particularly emphatic that to have logical categories in one’s mind does *not* mean that one is a rational, cool, calculating thinker:

“economics does not deal with an imaginary *homo oeconomicus*...but with *homo agens* as the really is, often weak, stupid, inconsiderate, and badly instructed.”

By mental categories, Mises means the specifically human capacity to acquire and use concepts; he is not saying that any particular concepts are somehow obtained through heredity

“The a priori categories are not innate ideas. What the normal...child inherits...are not any categories, ideas or concepts, but the human mind that has the capacity to learn and to conceive ideas, the capacity to make its bearer behave as a human being, ie, to act”⁹³.

Thus experience requires a mind: “Experience is a mental act on the part of thinking and acting men.” So too, historical understanding is of human beings:

“understanding presupposes and implies the logical structure of the human mind with all the priori categories”⁹⁴.

Mind — ie, action — separates humanity inexorably from all entities that lack such a mind:

“There is nothing in between a being driven exclusively by instincts and physiological impulses and a being that chooses ends and the means for the attainment of these ends”⁹⁵.

The gulf between acting and non-acting beings is unbridgeable:

“There is no evolution which would lead from non-action to action... There is only acting and non-acting”⁹⁶.

Failing to act where action was possible expresses a choice: “Action is not only doing but no less omitting to do what possibly could be done”. Habitual behaviour is action since habits can be changed. The opposite of action, in other words, is an instinctive, involuntary reaction, where there is no mind operative. Thus action is peculiarly and specifically human:

“Thinking and acting are the specific human features of man. They are peculiar to all human beings. They are....the characteristic mark of man as man”.

Mises here generalises to *all* human activities, Adam Smith’s observation that exchange and property were specifically human traits, not found amongst animals.

Thus it is the human mind which projects subjective meaning onto physical objects or processes. When something is called a “means”, this refers to the meaning attributed by a human mind, not any physical characteristic of the object:

“...in this universe there exists only things. A thing becomes a means when human reason plans to employ it for ... some end and human action really employs it for this purpose...It is of primary importance to realise that parts of the external world become means only through the operation of the human mind and its offshoot, human action. External objects are ... only phenomena of the physical universe and the subject matter of the natural sciences. It is human meaning and action which transform them into means. Praxeology does not deal with the external world, but with man’s conduct with regards to it... Economics is not about things and tangible material objects; it is about men, their meanings and actions. Goods, commodities and wealth... are not elements of nature; they are elements of human meaning and conduct. He who wants to deal with them must not look to the external world; he must search for them in the meaning of acting men”⁹⁸.

Mises here extensively develops Menger’s point that “goods-character” is not inherent in things, but expresses a relationship between people and the objects they consider useful. And so, as against behaviourism, Mises insists that actions have meaning:

“It is impossible to describe any human action if one does not refer to the meaning the actor sees in the stimulus as well as in the end his response is aiming at”⁹⁹.

Thus it is the human mind which creates the reality of human action. As Mises says:

“to the obvious question, how a purely logical deduction from aprioristic principles can tell us anything about reality, we have to reply that both human thought and human action stem from the same root... they are both products of the human mind”¹⁰⁰.

Subjectivism Has Nothing To Do With Psychology

It should be obvious by now that this consistent subjectivism is *analytical* only: it has nothing whatsoever to do with psychology. Mises is again quite explicit and definite on this point. Psychology is concerned with the “internal events” that result in action; praxeology analyses action per se:

“Praxeology deals with choice and action and with their outcome. Psychology deals with the internal processes determining the various choices in their concreteness...[Psychological] explanation has nothing to do with a branch of knowledge for which the concrete choices are data not needing further explanation or analysis. Not what a man chooses but that he chooses counts for praxeology”¹⁰¹.

Psychological processes are entirely distinct from action:

“Economics is distinguished from psychology by the fact that it considers action alone and that the psychic events that have led to an action are without importance for it”¹⁰².

Subjective value is erroneously linked to psychology; in fact the study of human action is a separate and independent field:

“[Psychology] has no special relation to praxeology and economics. The popular belief that modern subjective economics, the marginal utility school, is founded on or closely connected with ‘psychology’ is mistaken”.

Praxeology analyses action and its implications, not the preceding psychological happenings:

“The very act of valuing is a [psychological] phenomena. But praxeology and economics do not deal with the [psychological] aspects of valuation. Their theme is acting in accordance with the choices made by the actor”¹⁰³.

Mises sums up: “Economics begins [where] psychology leaves off.”

Mises thus recognises that while psychology may discuss the psychological influences on the concrete content of peoples’ choices, action itself — using means to achieve ends — is an entirely different and distinct aspect of reality. The historian investigates “what [actual, concrete] ends people aim at and what [actual, concrete] means they apply...”¹⁰⁵ Such investigation requires insight into action per se; so the historian needs the appropriate analytical framework for this. In other words, psychology is clearly one of the disciplines the historian would need, according to the issue being studied. But as all history is human action, the historian would need praxeology for *all* his (or her) studies.

Human Action is Not Found in the Natural World

Thus the presence of human purpose makes off the social world from the natural world, investigated by the natural sciences:

“action is a category the natural sciences do not take into account... [I]n the orbit of natural events of the external world...there is no such thing as action...there is nothing that would suggest aiming at ends sought; there is no ascertainable purpose”¹⁰⁶.

Where there is no human mind and human action, there we find natural phenomena: so “meaning” and “purpose” in historical investigation always refers to human meaning and purpose: “the ends sought by acting men in pursuit of their own designs” and the meaning attached to their actions by “the actors themselves and those affected by their actions” or by historians¹⁰⁷.

Action Is A Fact

7. Thus the *fact* that people act is something which is known to all humans because they are human: “As thinking and acting men, we grasp the concept of action”. Our common humanity gives us “a knowledge of what goes on within acting men”. But this knowledge is *general and abstract only*: we can see that people “wish to change their conditions” because some felt unease and that they attach meaning to their actions¹⁰⁸. Thus by beginning “with the act of choice”, catallactics starts from

“a fact whose existence can be established in a manner that admits of not doubt — a fact that every human being knows...because he himself acts...”¹⁰⁹.

And since the historian is a human being studying other human beings, he can also understand their actions, in all their uniqueness. Mises sums up with a quotation from Empedocles [c. 5th century BC]: “Knowledge is of like by like”.

II

The Great Society: Extending the Division of Labour

Now we take a somewhat more detailed look at the praxeological framework which Mises developed:- We re-examine some key points in a little more detail.

Mises sets out the central object to be analysed: “that great human society”, which covers “all nations” and embraces “all men in all of their activities”. To clear the analytical decks, Mises emphasises that this Great Society is *not* any of the following:

1. God-given, and therefore mysterious and beyond analysis.

2. produced through a social instinct or urge — this is circular and therefore explains nothing,
3. the result of a social contract, rationally and deliberately entered upon,
4. an overarching and superhuman but anthropomorphic entity or being¹¹⁰.

Menger pointed out that the “final elements” of social phenomena are acting individuals — ie facts already known, unlike in the natural sciences. Mises builds extensively and massively on this founding insight. It is impossible to deny (he says) that “collective wholes”, such as “nations, states...religious communities”, are “real factors” that determine the course of human events. But such collectives are invisible, and manifestly no-one observes “society as a whole”. We have “direct cognition” only of individuals’ actions. Therefore, “[e]verything social must in some way be recognisable in the action of the individual”, and “[e]very form of society is operative” there. Thus “[a] collective whole is a particular aspect of the actions of various individuals” and *therefore* a “real thing” influencing real-world happenings. The “evolution of reason, language” and of “social cooperation under the division of labour”, the emergence and growth of nations, churches and other collective entities — all are discernible only in what people actually do, and in changes in their actions. In sum: it is in and through the content of people’s actions and through changes in these actions, that social phenomena are constituted, change, and develop. These social phenomena are perceived mentally, through appropriate analytical lenses, not physically with the eyes¹¹¹.

Mises asks the next logical question: what makes human society possible? Why do humans *not* live in colonies like ants (for example)? Or as animals do in herds, quasi-‘family’ groups, or as solitary and self-sufficient creatures? The answer (he says) lies in certain facts of the real world. Overwhelmingly the most important such fact is the greater productivity of the division of labour. This in turn rests on the wide variety in people’s abilities and in geographical conditions. Thus as people specialise and exchange, ie cooperate with one another, in however small a group, — they each gain, in terms of material outputs, services and/or leisure. That people are mentally capable of making these connections — between particular actions and returns — is another fact, equally fundamental to the maintenance and extension of the division of labour¹¹².

Mises emphasises that when people act, their actions are *not* an automatic reflex or some other involuntary process. Ideas — mental acts — precede action:

“Before a man aids his fellows in cutting a tree, such cooperation must be thought out. Before an act of barter takes place, the idea of mutual exchange of goods and services must be conceived”¹¹³.

In fact, of course, as Mises underlines, people act on custom and habit. But such action is *not* immutable, as are one’s bodily processes (for example): people act thus because it mostly never occurs to them to do otherwise; they can, and do on occasion, change a habit or custom or adopt a new one¹¹⁴.

To sum up so far: Only acting human beings can perceive that as they alter their actions to provide material means to other people, the return obtained from these actions is likewise improved supplies of material means for their own ends — these “means” and “ends” as seen to be such in everyone’s own subjective reckoning, of course.

Thus as they mutually supply each other, people find, and see, that from these actions their several ends are better achieved, and/or they obtain other ends (observes Mises)¹¹⁵. Moreover, as the division of labour is extended and intensified, certain consequences follow. Firstly, people’s skills improve continually, with continued specialisation. Secondly, more and more opportunities open up: for the use of different kinds of tools; for these tools to be improved, and increased in quantity and range; and then for the introduction of machinery of various types¹¹⁶. This machinery is then improved, diversified, changed and developed, while being produced in larger and large quantities. Concomitantly, new occupations — new specialisms — open up. Thus people’s supplies of goods and services are increased in quantity, improved, and diversified. Population grows as infant mortality drops and life expectancy increases. But peaceful conditions are the *sine qua non* for specialisation and exchange to be maintained, let alone extended¹¹⁷.

Thus it is only in and through extending the division of labour on a massive scale that people can gain such a massive improvement in the material means at their disposal, and so increase their numbers and life expectancy. Only human beings can so change their actions as to extend and intensify the division of labour. This can proceed only step-by-step, of course; and only as people, at each step, first perceive and take advantage of new possibilities, and then experience initially, at least some material or non-material improvement — as they regard it. Again, people are not automatons (says Mises); they may feel that the various changes in their actions and in other circumstances that would need to be made first, far outweigh whatever new conditions would follow afterwards. In fact, of course, people have generally acted to extend and intensify the division of labour¹¹⁸.

In other words, very few people have become ascetics. And, when the occasion has arisen, very few people have reduced their participation in specialisation and

exchange, while increasing their own level of autarky. In fact people overwhelmingly have done the opposite — they have almost all acted to reduce autarky and to intensify specialisation and exchange, above the degree previously reached. Thus in people's actions, the division of labour has been extended through the millennia, so that from the small face-to-face group, it grew eventually to cover the globe — this last from the late seventeenth century onwards. And so population was enabled to expand to its present level, in the later twentieth century.

This specialisation and exchange are mutuality and peaceful interdependence — all participants indirectly but mutually assist each other to attain their several goals (says Mises). It will be seen that Mises has extended and amplified Mandeville's insights. Each can succeed only as everyone succeeds. As specialisation and exchange grow — as the division of labour becomes ever-more intensified and extended — interdependence and mutuality become ever greater and ever tighter (not that anyone sees it that way). In sum: to participate in the division of labour is to enter into and maintain a “complex” of peaceful “mutual relations”, direct and indirect, with other human beings. This entire “totality of inter-human relations” is what underlies the term ‘society’. Thus the division of labour is social cooperation, the social tie *par excellence*:

“...it makes friends out of enemies, peace out of war, society out of individuals”¹¹⁹.

People Are Social Beings

Mises points out that archaeological evidence, the earliest documents, and reports made about remote tribes all show that even at a very early date and even in social isolation, humanity appears as “already highly differentiated societal groups”¹²⁰, practising some degree of the division of labour. Mises first published this observation in 1949 (in the first edition of *Human Action*). Since then, there has been considerable further archaeological work. This has brought out a major break and transition from around 35,000 B.P. into the Upper Palaeolithic. In this period, certain items travel over much longer distances from their origins than previously — these goods include certain types of stone (for tools), different kinds of shells, and beads (or tusks). Stone points are now hafted into wooden holders; there is evidence for woodworking and textile-making. Flutes and iconic figurines are also now made, as also some kinds of shelters¹²¹. — In other words, the division of labour, both within the face-to-face group and amongst such groups, had grown far beyond its previous levels.

Mises underlines the fact that reason, language and the division of labour are the quintessentially human attributes. (Here he follows Smith

and Ferguson). These features are social — ie inter-individual; so humans are human precisely because they are social beings, interacting, interdependent, and mutually assisting one another through specialisation and exchange. It is through the appearance of such human, ie inter-individual attributes that humans emerged from their non-human past (Mises points out)¹²². — As a human being, therefore, everyone is born into and acts within, a specific set of historical circumstances: “These circumstances are determined by all the ideas and events of the preceding ages as well as by those of his own age”¹²³. People are not abstract entities: they live as members of their families, of cultural and social groups. People follow various occupations, and certain religious, meta-physical, political, social ideas. By their actions, they manifest membership of a variety of social, political, religious and other groups — ie, they associate with one another for a variety of purposes. Thus people’s actions are directed by “[i]nheritance and environment... They suggest to [them] both the ends and the means”, as also values and ideas. People influence one another in their thinking and acting, and some individuals link together more closely in this respect. This “tremendous power of consuetude” also determines “the course of events”¹²⁴.

But social change there is. Changes in customs, habits, ideas, and fashions always originate with one or a few individuals, and then spread as others accept these innovations and initiate them. Thus repetition and imitation are “fundamental factors in social evolution”. Changes in ideas are always responses to some pre-existing ideas. Such changes result in dropping some views and adding others to a given stock (observes Mises)¹²⁵.

Acting on the Rules of Social Cooperation

Now, society — the division of labour — is not an end in itself. Rather, it is “the great means for the attainment of all ends” for practically everyone¹²⁶. — Mises reiterates this insight more often perhaps than any other. — Mises also sees that the division of labour is therefore ends-independent:

“As social cooperation is for acting man a means... , no unanimity with regard to value judgements is required to make it work”¹²⁷.

Specialisation and exchange bring peace *without* agreement on ends:

“The market economy makes peaceful cooperation among people possible in spite of the fact that they disagree with regard to their value judgements”.

Society and division of labour develop only as people follow appropriate rules in their actions, ie they observe “the moral rules which the establishment, preservation and intensification of social cooperation require”. Mises

includes here the common law, of course, as the foundation of long-term economic development. He observes that changing business conditions lead to the development of “new branches of law” from “older business customs and practices”. Because society is a means, the moral and legal rules that create and preserve society are likewise means for the achievement of people’s ends. To violate those “rules that make life within society possible” is to contribute to social disintegration, in however small a way, — and people can and do, of course “act antisocially”. Social bonds survive because people mostly do observe the “rules of conduct indispensable for life within society”. ‘Justice’ therefor can only refer to life lived with other humans: it “refers always to social cooperation”, and to some established set of rules. The only test of rules of conduct is how far they support and promote the division of labour — ie social cooperation amongst people. Thus “[s]ocial utility is the only standard of justice”. — It will be noted that Mises here adopts the Burkean standard — *vide* Burke’s observations on the anti-Popery laws ¹²⁹.

Evolution: From Society to Biology — and Back

Mises was the first to observe that the principle of evolution was first enunciated in the study of social phenomena and only later taken over by biology (through Milne Edwards in 1827). Mises also emphasises that “evolution signifies the process which led from past conditions to the present”. It is a “fatal error” (he says) to confuse “change with improvement and evolution with evolution toward higher forms of life”. When Darwin’s ideas returned to the social sciences, the origin of the idea of evolution was forgotten, and so there “arose that monstrosity, social Darwinism”. The latter doctrine cannot see that society is peaceful collaboration; ie “[e]very struggle suspends in effect the social community” ¹³⁰.

The Rise and Fall of Civilisations

From the above we may see why Mises finds that “The history of mankind is the record of a progressive intensification of the division of labour”. Thus there proceeds an “evolution from the economic self-sufficiency of households, villages, districts, and countries, to the world-embracing market system of the nineteenth century...” Parallel with this economic interdependence, goes the development of law and peace: “The circle of those who combined to keep the peace amongst themselves was at first very limited. The circle widened...through millennia, until the community of international law and the union of peace extended over the greatest part of humanity...” The various civilisations are the differing attempts made by different groups to cope with the fundamental problem of

scarcity — the various ways people have found, for improving their conditions, and surviving better ¹³¹.

Mises underlines the fact that Western civilisation is a latecomer: “the early foundations of civilisation were laid by peoples of other races”. These older Eastern civilisations “developed philosophy and science long before the ancestors” of the Western Europeans “emerged from primitive barbarism”. The Greeks built their astronomy and mathematics after learning from Eastern accomplishments. Later “a remarkable Muslim culture [flourished] in Persia, Mesopotamia and Spain. Up to the thirteenth century, Arabian learning” equalled “the contemporary achievements of the West”. In the days when the ancient civilisations of China and India “excelled in philosophy and poetry”, they were also ahead of or equal to, “any of their contemporaries” in material achievements ¹³².

But these last “were followed by periods of material decay or...stand-still”. The Roman Empire, too, reached “a high level of the division of labour” and then “sank back into an almost money-less economy”. As the “economic order” became “less productive”, classical civilisation disintegrated: technology, art and science all decayed far below the high levels achieved once; many advanced skills and techniques could no longer be practised ¹³³.

Thus Mises emphasises that history and the division of labour do *not* move in a straight line: “there was neither uniformity nor continuity in the succession of historical events”. In history “we can clearly discern periods of decay...when the division of labour has retrogressed”. Thus “social stand-still and...retrogression are historical facts...” In addition, peace is not easily attained: “one of the determinants of the present state of mankind is that there were thousands of years of armed conflicts”. Predatory groups such as “Huns and Tatars, Vandals and Vikings, Normans and conquistadors [have] played an enormous part in history”. But such anti-social groups as could not be tamed, disappeared: “Those barbarian groups who did not substitute working for plundering disappeared from the historical scene” ¹³⁴.

Mises stresses that in all advanced civilisations of both West and East, social cooperation is carried out through contracts, whether between individuals or families. Beyond this, he asks pertinently: “Why did the peoples of Western Europe adjust themselves to the scarcity of all things on which human well-being depends in a way entirely different” from the Eastern civilisations? His answer: the Western Europeans developed “a legal and constitutional system which...provided the opportunity for large-scale capital accumulation”. In sum, “the key stone of Western civilisation” is a secure “sphere of spontaneous action” for the individual ¹³⁵.

Analysis and Historical Experience

To sum up so far: Mises analyses how the world-wide Great Society developed, in and through people's actions. As people acted so as to manifest and extend the division of labour, they experienced the resulting material and non-material returns. As they (mostly) evaluated these returns to be worthy trying for, they developed and followed the legal and moral rules that extended and intensified the division of labour. Thus people peacefully and unwittingly (in Mises' own words)¹³⁶ continued to extend and deeper the division of labour — in effect strengthening continually the bonds of interdependence and mutuality that are the outcome of specialisation and exchange. Mises emphasises that the Great Society's development could not be and was not, designed or planned in advance. Nor does he say anywhere that people are completely and fully aware of this process. Rather, they each know only what they undertake themselves; and in pursuing their several ends, people utilise legal and moral rules, and the ties created through the division of labour, amongst their means. Thus Mises points to what is demonstrated in people's activities: the actual situation which has resulted from their actions over the generations.

How is the division of labour extended? What is the inter-individual process involved? — One person or (more likely) a number of people gradually extend the division of labour, beyond the level previously attained. This means they have to consider first, however vaguely and dimly, the possibility of changing their actions, however slightly. Others then copy this innovation — but here too there has to be at least a vague preliminary notion of trying out this change, however small it might be. Thus for the overwhelming bulk of people, participation in the division of labour, whatever its level, is a matter of doing what others do — of following custom and habit, and simply taking in the underlying ideas with very little thought, if any at all. In different historical contexts, the division of labour has proceeded at very different rates: it came to a virtual standstill in many situations; in others it decayed to a lower level; in some it progressed far beyond the levels ever reached elsewhere or at other times.

Thus the world-wide Great Society develops only as and when people's ideas and actions conduce towards its evolution through history. This process cannot be automatic therefore, nor can it be deliberately planned or designed to follow an advance blueprint. The global division of labour — mutuality and inter-dependence — is an historical development. — It will be noted here that Mises has systematically *generalised* Menger's analysis of the gradual evolution of money and indirect exchange in people's actions. Here too people were concerned with their own aims — to reach their goals more 'economically'. But in doing so, they *also* — in the same actions — gradually evolved a new usage, which spread through imitation and repetition (to use Mises' phrase).

This new practice eventually facilitated the extension of the division of labour far beyond anything that could have been envisaged. This then massively facilitated the achievement of people's aims — including new ones that no-one could even have imagined before they emerged.

Mises emphasises that the existence of the social phenomena being studied is learnt only from experience: He points out that “only experience can show whether the division of labour and language exist in fact”. He underlines that “the division of labour...is a datum”. So too “experience alone can tell us that different linguistic systems are to be found...”¹³⁷. And again,

“It cannot be deduced a priori that between the totality constituted by humanity...on the one hand, and the individual, on the other, stand the totalities constituted by people, race, state, and linguistic community; this can be ascertained only through experience”¹³⁸.

And also:

“Only experience can teach us that there are lions and microbes and that their existence can present definite problems to acting man...”

In sum: “The existence of the external world is given through experience...”¹³⁹.

Thus the objects of study are the products of historical experience — they are the real actions of actual people. These actions are historical circumstances that can be specified only by reference to time, place and people involved (this last does *not* mean ‘named and known persons’). In certain historical circumstances, people's actions changed over time, so as to manifest certain socio-economic formations — among them, the common law and the market order. Only after these formations appeared in people's actions — ie in history — could they first be discerned *tout court* and then the analytical problems they presented be recognised:

“The mental grasp and analysis of the problems present in a calculating market system were the starting point of economic thinking which finally led to general praxeological cognition”¹⁴⁰.

Historical phenomena are ‘complex’ — the compound outcome of many *analytically* — distinct and historical influences. Therefore their analysis has certain components, of necessity.

Mises begins from the insight that historical particulars can make sense only in terms of general concepts about action. These general categories cannot come from the historical materials themselves, since it is they that have to be arranged and elucidated. Rather, in organising these materials, historians utilise analytical categories and concepts that have been already developed:

“It is impossible to speak of war and peace unless one has a definite conception of war and peace before one turns to the historical sources”

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Even if new ideas have to be used, these are developed first, then utilised in re-examining the historical materials. (Mises goes on) Many organising ideas are “simple and scarcely disputed theories”. These “by their very character, are non-scientific” but they remain *general* statements, covering all cases. Other ideas are “platitudinous” on the surface, but summarise key analytical concepts: a s in the term “land hunger” which contains in it — once the implicit reasoning has been made explicit — the law of diminishing returns. But with more complicated situations, as with German reparations in the inter-war period, ordinary reasoning is inadequate: any links it might suggest between happenings will be logically unsustainable (Mises underlines). — Not that the historical materials will demonstrate this — they cannot, being complex phenomena awaiting analysis. Rather it is the *reasons* for bringing various developments together as part of the same historical phenomenon, that will turn out to be erroneous. This means the historian may also miss some other key chain of influence also operating at the same time and place (Mises points out) ¹⁴².

Thus historians definitely need systematically-developed concepts that enable them to go far beyond the obvious:

“...the historian needs all the knowledge provided by the other disciplines, by logic, mathematics, praxeology, and the natural sciences”

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Each of the disciplines can help to analyse only one aspect of the historical reality, ie a reality which consists of the specific actions of particular people in a particular context of time and place. All these (non-historical) disciplines, in other words, can be only *auxiliary* to the study of history, ie of various historical contexts. Thus if these theories are inadequate, or historians’ knowledge of them is insufficient, or historians select “an erroneous theory”, either through “ignorance or...[because] it enjoys greater popularity”, their “examination and analysis of the material will be vitiated”. In short, Mises emphasises that historians need a sound grasp of all these disciplines before they investigate the historical materials, if their investigation is to be at all fruitful ¹⁴⁴.

Now, historical research *is* humans inquiring systematically into the actions of other human beings, in a particular historical context. Historical study, Mises points out, is one example of Empedocles’ observation: “knowledge is of like by like” ¹⁴⁵. — As human action itself is the element common to *all* actual historical actions of *all* people, these concrete historical actions are classifiable into one or other general category of action. In other words, all

concrete actions *are* specific instances of some general type of action. Therefore, the most important auxiliary discipline of all for historians, is the general abstract analysis of action — ‘praxeology’, in Mises’ term.

What does a general analysis of action involve? How is such a general analysis developed? As we shall see, the systematic analysis *has* to start from the ideas and perceptions already present in all human minds. These perceptions and ideas, common to all, are systematically refined and clarified to provide a set of analytical tools which has been thoroughly worked out, to penetrate well beyond the obvious surface appearances of, and links amongst, people’s actions.

Action Is Subjective

Now, the objects of analysis — historical developments generally and, amongst these, social formations in particular — consist of the actual actions of real human beings. But “action” is not, and cannot be, a *physical* category: it does not, and cannot, refer to the materiality of physical movements and of physical objects. Action becomes action only because a human mind is present: it is the *meaning* infused by a mind into physical motions and things that make them actions utilising means to achieve ends (I repeat here the quotation used earlier, for reinforcement):

“...all experience concerning human action is conditioned by the praxeological categories and becomes possible only through their application. If we had not in our mind the schemes provided by praxeological reasoning, we should never be in a position to discern and to grasp any action. We would perceive motions, but neither buying nor selling, nor prices, wage rates, interest rates, and so on. It is only through the utilisation of the praxeological scheme that we become able to have an experience concerning an act of buying and selling....Unaided by praxeological knowledge, we would never learn anything about media of exchange. If we approach coins without such pre-existing knowledge, we would see in them only round plates of metal, nothing more. Experience concerning money requires familiarity with the praxeological category *medium of exchange*”¹⁴⁶.

In every historical context there is a larger or smaller array of physical objects that people use as means. But these objects become means of various kinds *only* through people’s *subjective* appraisal. (Again I re-use a quotation, but now somewhat truncated):

“means are not in the given universe, in this universe there exist only things. A thing becomes a means when human reason plans to employ it for the attainment of some end and human action really employs it

for this purpose....It is of primary importance to realise that parts of the external world become means only through the operation of the human mind and its offshoot, human action. External objects are as such only phenomena of the physical universe and the subject matter of the natural sciences. It is human meaning and action which transform them into means. Praxeology does not deal with the external world, but with man's conduct with regard to it"¹⁴⁷.

Mises cites the example of free and scarce goods. External — historical — experience provides the objects; the categories in which they are classified and made meaningful are already present in human minds:

"only experience tells us that not all things in the external world are free goods. However, it is not experience but reason, which is prior to experience, which tells us what is a free and what is an economic [scarce] good"¹⁴⁸.

Concrete acts not experienced so far are rendered intelligible only because they can be classified into some general meaningful category. Mises gives the example (which we've met before) of a traveller from the 'high capitalism' (Sombart's phrase) of early twentieth-century Germany, who comes across a remote tribe. In due course he recognises that their "strange behaviour"¹⁴⁹ is really exchange of goods and services — even though he has hitherto experienced only the sort of exchange found with a far more extensive division of labour. Mises points out that it is the — pre-existing — general abstract category of exchange which makes this (mental) comprehension possible: the new circumstances are comprehended by being classified 'correctly', no matter how greatly they differ *in concreto* from the previous instances experienced. It must be emphasised here, as Mises does elsewhere, that this refers to a grasp of people's *actions* — ie *what* they are doing, the subjective *meaning* of their actions. This last is quite distinct and separate from, people's emotions and psychology generally. An impulsive or random purchase, and one carefully considered, are all alike purchases, with identical ramifications and implications. Only analysis will bring out these effects and their extent; they are entirely separate and distinct from the emotional and psychological events that *preceded* the actions.

To continue: in the real world there are found only concrete historical actions — of particular people, undertaken at a specific time and place. The subjective meanings that classify actions, and that alone make these happenings intelligible — are found *only* in human minds; these fundamental categories cannot be learnt (a last re-quotation):

"What we know about the fundamental categories of acting — action, economising, preferring, the relationship of means and ends, and everything else that...constitutes the system of human action — is not

derived from experience. We conceive all this from within....a priori, without reference to any experience. Nor could experience ever lead anyone to the knowledge of these things, if he did not comprehend them from within himself”¹⁵⁰.

In short, we think of, and act towards, other humans as if they too were acting beings:

“Our thinking about men and their conduct, and our conduct toward men and toward our surroundings in general, presuppose the category of ‘action’”¹⁵¹.

Comprehension and Understanding: the Everyday Level

Thus people already have certain general ideas about action. But since people are concerned only with daily living, not the professional, systematic study of human action, these ideas are vague, inchoate, unrefined — in a word, these ideas have *not* been systematically thought through. Nevertheless, it is through these — somewhat murky — conceptual lenses that people, sufficiently for their purpose, classify and categorise the actions of their fellow-humans, and so ‘comprehend’ the general aspects of these actions¹⁵².

But besides their analytical side, actions also have a non-analytical aspect: their concrete content, their specific and unique features. Precisely because the uniqueness of actual — historical — actions are beyond the reach of general analytical categories, the *non*-analytical aspects of people’s actions have to be and are, ‘understood’:

“...understanding is the mental grasp of something we are unable to bring under rules and explain through them”¹⁵³.

“understanding does *not* deal with the praxeological side of human action” [*italics added*]¹⁵⁴.

Thus ‘understanding’ — *verstehen* — is the grasp of the concrete, the specific, the particular, — *as* concrete, specific and particular, as itself and nothing else.

Mises points out that ‘understanding’ has two components: Firstly, “[i]t is the knowledge of the social environment in which a man lives and acts”. Thus “[i]t is what everybody learns from intercourse with his fellows”. Therefore understanding “is a precipitate of historical experience”. But ‘understanding’ is also “an offshoot of introspection”. In putting both together, understanding gives insights that “[a]ll people are eager to get”, insights into “people’s valuations and plans” — ie into the *content* of people’s actions¹⁵⁵. Mises emphasises that, because of this, every human being practices ‘understanding’, of necessity, from infancy onwards:

“It is a technique employed in all inter-human relations. It is practiced by children...by businessmen...by politicians and statesmen...”¹⁵⁶.

In short, “[i]n observing the conditions of his environment, everybody is an historian”¹⁵⁷.

To sum up: in their everyday interaction with each other, people already:

i. ‘comprehend’ their fellow-humans’ actions in some fashion — ie classify and categories these actions, using some sort of general concepts, abstract concepts common to all human beings;

ii. ‘understand’ what their fellow-humans are doing — ie people apprehend the unique *content* of these actions, the specific value-judgements involved, the particular aims desired.

Comprehension: the Professional Level

For purposes of systematic analysis, these everyday perceptions and ideas, as commonly-held, can only be a starting-point, of course. That is because the ordinary “daily thinking of everyone” accepts ideas uncritically; it contains “prejudices and misunderstandings of all kinds, fallacies and errors...” Clearly “scientific reasoning” has to “go further”, pushing the analysis as far as it will go; it has to build on solid foundations. Mises points out how the general analysis of human action is built up: Everyday ideas about action are analysed, defined precisely, all their implications are brought out, and they are “purg[ed]...of all the unessential[sic] elements that imprecise reasoning may have mixed in...” Thus “the procedures applied by everybody” in their daily interaction with fellow-humans, are systematised and clarified, to then become “methods of scientific inquiry”¹⁵⁸.

The Demarcation of Action from Non-action

Analytically speaking, this means that the area under study has to be clearly demarcated. In other words, the field of action has to be clearly distinguished from that of non-action. Thus the critical distinction is between “a being that chooses ends and the means for the attainment of those ends” and “a being driven exclusively by instincts and physiological impulses”. The chasm is unbridgeable: “There are no transitory stages between action and non-action”. A number of implications follow — implications that clarify and sharpen the boundary between action and instinctive/ physiological processes: *a.* This means that: “The opposite of action is not *irrational behaviour*” [italics in original], but rather that which “cannot be controlled by...volition” — viz., “self-acting impulses, instincts, physiological processes. Or, in other words,

the opposite of action is whatever requires to be studied through the natural sciences of physiology, biology, neurology, etc. *b.* It also follows that “wherever the conditions for human interference are present”, there “to refrain from interfering” also “determine[s] the course of events”. Thus in all situations where it was known that action could have had some influence on the outcome, there the failure to act *is* a matter of volition (if there is coercion, then obviously the volition is that of the coercer). In such situations, therefore, not-acting has to be classified — for *analytical* purposes — as a form of action: because it *also* helps to bring about the outcome. *c.* It further follows that: “He who acts under an emotional impulse also acts”- ie the consequences and ramifications are attached to the *act* which is undertaken; these results appear regardless of the presence or absence of emotions surrounding the action. E.g. whether a purchase or sale is deliberate or impulsive, all the *same* consequences follow, independent of the emotion involved. — Analytically, it is these interrelated consequences and ramifications that historians have to know, in order to discern the hidden, less obvious links amongst people’s actions. *d.* The analysis of action has to abstract from the *content* of ends, and the motives behind actions ¹⁵⁹ — because analysis is concerned with action as an abstract, general characteristic. Action is using means to achieve ends, so *in abstracto*,

“action involving the exchange of material goods against immaterial goods differs in no significant respect from action involving the exchange of material goods alone” ¹⁶⁰.

In all instances, there is “both taking and renunciation”; the difference is in the concrete *content* of what is actually aimed at and what actually sacrificed, *not* in the abstract nature of the action itself. The conservative farmer who sticks to old, tried-and-true methods, and the aristocratic landowner who refuses to use his coat-of-arms in differentiating the products of his estate — both act ¹⁶¹: they give up that which they value less for that which they value more. Both sacrifice money income to retain non-material values; tradition in both cases, and family dignity additionally, with the landowner. Both actions affect the allocation of material resources. Thus, for analytical purposes, the term “end”, means ‘whatever people aim at — whether material or non-material’; it does *not* mean only material values, “expressed in money”. Indeed, Mises points out that any attempt to distinguish *analytically* between “economic” and “non-economic” ends is “ridiculous” ¹⁶². — To vary an example which he uses: To buy special clothing for a religious ritual and to purchase gaudy clothes for a grand night out — are both alike the use of means to achieve ends. Both alike represent the foregoing of *other* ends considered worth sacrificing. Therefore, both have the *same abstract general* consequences; it is the

factual *content* which differs. (The pipeline network is the same, but different materials are sent through under different circumstances).

So too unsuccessful or mistaken actions still use means and aim at ends:

“the concept of action does not imply that the action is guided by a correct theory...and that it attains the end aimed at. It only implies that the performer of the action believes that the means applied will produce the desired effect”¹⁶³.

(A knowledge of how the pipeline network operates is still essential, whether the materials sent through are sent in error or not, or to the wrong destination). Thus because there have been, and still are, people who believe its efficacy, “[m]agic is in a broader sense a variety of technology”¹⁶⁴.

In short, praxeology’s “subject matter is erring man”. And because action is subjective, therefore:

“An end is everything which men aim at. A means is everything which acting men consider as such”¹⁶⁵.

e. Mises points out that even with those individuals regarded as mentally and emotionally disordered, it can be seen that they use means to pursue ends — *except* that, in the eyes of those “who consider [themselves] normal and sane”, the means selected are “contrary to purpose” and “the reasoning determining [the] choice of ends [is] nonsensical”¹⁶⁶.

Mises also stresses that there remain puzzles still in animal and plant behaviour: “animals and even plants react in a quasi-purposive way; while the “instinctive behaviour of animals...raises questions which nobody can answer satisfactorily”. But these issues are quite separate and distinct from the analysis of human action: the use of means to attain ends, with all the general implications following¹⁶⁷.

f. Anything which is *not* a concrete, historical action of some person, is part of the natural world¹⁶⁸. Thus the category of action also clearly demarcates the social world — the field of praxeological analysis and historical study — from the natural world, studied through the natural sciences. And so Mises *analytically* separates non-action: instinctual behaviour, responses to stimuli, reflex actions — from *human* actions: which are volition, the use of means to achieve ends. The *former*, to repeat, are in the sphere of the natural sciences, such as neurology, physiology, biology, etc. The specific area of action is demarcated and covered by the analytical categories developed for comprehending the *analytical* aspects of the various concrete historical actions of actual human beings.

Everyday Ideas and Analytical Concepts

We may note here the differences between the everyday sense of two terms, and the *analytical* demarcation which Mises identifies with the same terms.

In ordinary usage, ‘rational’ means ‘cold, calculating, controlled, emotionless, bloodless’; while ‘conscious’, as an adjective, means ‘deliberate, carefully-considered, fully aware’. The opposite of both, in everyday use, is: ‘emotional, impulsive, careless, unconsidered, unaware’, etc. For Mises, on the other hand, the terms ‘rational’, ‘conscious action’, are used in opposition to: ‘instinctive/reflexive behaviour’, ‘involuntary bodily processes’.

This demarcation serves for analytical purposes only, it has no practical function. — In daily life, it *does* matter whether people are impulsive and scatter-brained, or have some mental or emotional disorder, or whether, on the contrary, they seem to be reasonably sane, and they are careful, cool and reticent. It also makes a difference whether people are greedy, selfish and materialistic, or abstinent, selfless and high-minded, and whether they succeed in achieving their objectives or not. Similarly, doing nothing is, for everyday purposes, the opposite of being active. All this is because, in our ordinary affairs, we deal and live with the concrete *content* of our own and other people’s actions.

But analysis *has* to distinguish between the abstract, general aspects of people’s actions, and the concrete, historical content of those same actions. Thus Mises is concerned to separate out — mentally — the *analytical* side of people’s actions from all these other aspects. From here the analysis can proceed, step-by-step, to unfold all the general, abstract relationships and interconnections amongst actions, bringing out the less immediate, less obvious, more distant links and results. This process builds up the general categories into which actual, historical actions can be fitted.

Praxeology: The General Analysis of Action

That is, what does the general analysis of human action involve? How are these general categories arrived at?

a. Mises points out that praxeology “does not deal in vague terms with human action in general...” Rather it “begins its investigation from the individual action” — ie from a “concrete action which a definite man has performed at a definite time and place”. This act is thought through — *not* as an historical circumstance of time and place, but as a particular instance of a *general* category: the investigator studies “what is necessary and universal in its performance”, ie its abstract, general aspect. Thus “the starting point of praxeology is...reflection about the essence of action”¹⁶⁹. This last is that

which is common to all actual historical actions, the category of action itself, stripped of *all* concrete historical content. — It is *absolutely essential* to remember this is what follows. The general analysis of action, it cannot be repeated too often, analyses only *one* aspect of people's real actions.

All historical actions have in common the one subjective meaning: they are all instances of people acting — using means to achieve ends. That is why all concrete actions fall logically into the one, the most general, category — that of action *per se*. But action *in abstracto* itself has further subjective attributes: which means there are further general aspects of historical actions to be brought out. These general abstract features do not proclaim themselves: analysis is required, to make explicit and to spell out fully all that is implicit, and contained in the abstract, general characteristic, 'action'. When these implicit attributes — the further implications of the category of action — are worked through, they form a set of additional abstract, general meanings to be ascertained in particular historical actions — meanings that are found there because all these actions ultimately have the general subjective meaning, 'action'. So historical actions can be further classified into additional categories, according to which subjective implication(s) of action they manifest. And where these abstract subjective attributes are linked together, there the historian has pointers to links in people's actual actions.

b. Now in *logical* terms, and for purposes of analysis only, the general classifying categories precede the particular items to be classified. That is, one must *first* have some set of categories in mind, *before* asking: which category does *this* item fit into? Hence Mises points out:

“...the category of action is *logically* antecedent to any concrete act”
[italics added] ¹⁷⁰.

This category is the broadest of all; it therefore contains further sub-categories — ie abstract aspects of concrete acts:

“The very category or concept of action comprehends the concepts of means and ends, of preferring and putting aside, viz., of valuing, of success and failure, of profit and loss, of costs” ¹⁷¹.

“In dealing with every action we encounter [these] fundamental concepts...” ¹⁷².

Thinking through the implications brings out a systematic set of interrelated classifications, to help categorise actual historical actions:

“As thinking and acting men, we grasp the concept of action. In grasping this concept, we simultaneously grasp the closely correlated concepts of value, wealth, exchange, profit, and cost. They are all necessarily implied in the concept of action and together with them the

concepts of valuing, scale of value and importance, scarcity and abundance, advantage and disadvantage, success, profit, and loss. The logical unfolding of all these concepts and categories in systematic derivation from the fundamental concept of action and the demonstration of the necessary relations among them constitutes the first task of our science”¹⁷³.

The further implications of action include the categories of autarky, barter, indirect exchange and money. Mises underlines that it is from historical study that the concrete historical actions to be classified are obtained:

“whether or not [these conditions] are present in a particular case can be shown by experience only”¹⁷⁴.

In other words, it is not the actual *content* of people’s actions which is being studied here — but the *categories* into which they fit.

c. Mises is adamant that praxeology is strictly the analysis of human action only; praxeology is *not* simply an exercise in deduction from some selected axiom:

“The starting-point of praxeology is *not* a choice of axioms and a decision about methods of procedure...”[italics added]¹⁷⁵.

He is emphatic that any theorem purporting to relate to action *must* be solidly anchored in the fundamental category of abstract human action, through a chain of faultless reasoning; otherwise, it is just a pronouncement in a vacuum:

“Praxeology...draws its strength from the starting-point of, its deductions,...the category of action. No economic theorem can be considered sound that is not solidly fastened upon this foundation by an irrefutable chain of reasoning. A statement proclaimed without such a connection is arbitrary and floats in mid air”¹⁷⁶.

Mises’ point is clear: selecting an axiom and deducing conclusions from it is just an intellectual exercise. In opposition to this, praxeology is demarcated by the reality of its content and aim: the content is (the study of) the general, abstract aspect of the social reality; the aim is the deeper analysis and comprehension of this aspect. Thus in both content and aim, praxeology is one thing; the building of intellectual castles in the air, is another.

The implications of action *in abstracto* — the various classifications of historical actions — are made explicit through deduction from the abstract *fact* that people use means to achieve ends. Mises points out that deduction *does* tell us something more than hitherto:

“cognition from purely deductive reasoning...opens for our mind access to previously barred spheres”. It “render[s] manifest and obvious what was hidden and unknown before”¹⁷⁷.

Thus the quantity theory, for example, provides knowledge which becomes available only after systematic inquiry; this knowledge has been very hardly won:

“in the concept of money all the theorems of monetary theory are already implied. The quantity theory does not add to our knowledge anything which is not virtually contained in the concept of money. It transforms, develops, unfolds[;]...However, nobody would deny the cognitive value of the quantity theory. To a mind not enlightened by economic reasoning it remains unknown. A long line of abortive attempts to solve the problems...shows that it was certainly not easy to attain the present state of knowledge”¹⁷⁸.

Since action is real, Mises characterises the implications — *when correctly and faultlessly drawn* — as “perfectly certain and incontestable”. However, mistakes are inevitable and inquiries may be misled¹⁷⁹. Hence, Mises is emphatic that all analysis *has* to be grounded on the bedrock of action:

“[m]an is not fallible...[h]e can never be absolutely certain...that what he considers as certain truth is not error. All that man can do is submit all his theories again and again to the most critical re-examination. This means for the economist to trace back all theorems to their unquestionable and certain ultimate basis, the category of human action, and to test by the most careful scrutiny all assumptions and inferences leading from this basis to the theorem under examination... this procedure is [not] a guarantee against error. But it is undoubtedly the most effective method of avoiding error”¹⁸⁰.

Thus Mises makes it crystal-clear that he is concerned only with the general abstract aspects of historical actions. Hence, it is also clear that he is *not* saying anything about any philosophical position on the search for absolute truth. Indeed, he says bluntly in the very first sentence of his last work: “This essay is not a contribution to philosophy”. He also points out that... “philosophers...have ignored the sciences of human action. Their contributions have been useless for praxeology”¹⁸¹.

d. To recognise that people’s actions in general have meaning, is to take a step away from everyday perceptions of action, in the direction of an analytical comprehension. To proceed down this path is to develop a systematic analysis of action, such as historical study needs. Mises emphasises (as mentioned before) that historians, being human, use general ideas about action to organise their research, whether they realise this or not: like

“M. Jourdain [who] was astonished to learn that what he had always been speaking was prose”¹⁸².

In sum: Three sorts of ideas are available to professional students of people’s historical actions. **1.** Everyday, unexamined, unrefined, unclarified, uncritically-accepted perceptions, *not* developed for purposes of systematic analysis. **2.** Popular and widely-accepted ideas, also immediately obvious, but which can be shown on systematic examination, to be “logically untenable” and “contradictory”¹⁸³. **3.** Systematically-elaborated categories of human action, *not* necessarily obvious, as they serve to bring out precisely what is *not* manifest, and requires extensive further thought.

As mentioned previously, in many cases the interconnections and relationships amongst historical developments are manifest. But where such links do *not* appear at once, or where further analysis would show that the visible links are in fact misleading, there the *kinds* of ideas about human action that historians use, crucially shape the picture drawn. This may then be incomplete, distorted, or defective in some other way. These problems are not visible; they appear when the general ideas used are brought to the surface and examined¹⁸⁴. The object of praxeological analysis is, as before, to help bring out relationships that would be otherwise hidden.

e. Praxeology is *not*, of course, the study of history; praxeology is auxiliary only. Therefore its abstract analysis “does not convey to us the full knowledge of reality” Praxeological “concepts and theorems” are “not in themselves... the totality of factual knowledge about all things”. Analysis provides only the “mental tools opening the approach to a complete grasp of reality”¹⁸⁵.

‘Understanding’: the Specific Tool of History

The historical reality consists, of course, of unique historical circumstances: the particular actions of particular people at specific times and places, actions that make up various unique combinations and complexes of historical circumstances. Investigation of this historical reality requires therefore a thorough and critical knowledge of the sources — the residues left behind by human action. These residues are variously archaeological, geographical, documentary, literary, architectural, industrial, artefactual, statistical, etc, according to the context being studied. It is through these residues that historians learn what people actually did and thought.

The analytical disciplines can help to elucidate only the analytical aspects of these actions, of course. As Mises states, analysis is “indispensable”, but in itself it “do[es] not make it possible to answer those questions” the historian “has to deal with”¹⁸⁶. After the analysis is finished, historians still have to

‘understand’ the uniqueness of the actions and circumstances they are studying (he points out). Thus ‘understanding’ is the historian’s specific skill — it

“is precisely the method that the historical sciences...employ in dealing with the unique, the non-repeatable, that is...the simply historical”¹⁸⁷.

Historians can ‘understand’ because they are themselves human beings. Mises is emphatic that ‘understanding’ is a “scientific grasp” of actions — it is decidedly neither approval nor empathy:

“To understand an individual case does not mean to justify or to excuse it”.

“Empathy (*Einfühlung*) and understanding are two radically different attitudes”¹⁸⁸.

Empathy is emotional, as in the “aesthetic appreciation” of a work of art. Understanding places it in its historical context. Once the analytical disciplines have reached their limit, understanding takes over. When historians learn about a “foreign milieu” through the study of “special sources”, they practice ‘understanding’. Economic history “above all” requires ‘understanding’¹⁸⁹.

Finally, ‘understanding’ tries to estimate the relative significance of the various influences and factors acting on and in a particular complex of historical circumstances. Historians may agree on the facts, as found in the sources, and in their general understanding of a case, but disagree about the ‘relevance’ of the individual components at work. Thus “[t]he fullness of reality can be mentally mastered only by...resorting both to” praxeological comprehension and historical understanding, as well as “the teachings of the natural sciences”¹⁹⁰.

Mises has the highest regard for historical study: it is both practical and enlightening: “...history is not a useless pastime but a study of the utmost practical importance”. It makes us “understand the situation in which [we have] to act”¹⁹¹.

And it further:

“opens the mind toward an understanding of human nature and destiny. It increases wisdom. It is the very essence of...a liberal education”¹⁹².

Mises sets high standards for the historian — detachment, impartiality and truth-seeking:

“History...looks upon events with the eyes of an unaffected observer”¹⁹³.

“A historian must first of all aim at cognition. He must free himself from any partiality”¹⁹⁴.

“The freedom of the historian is limited by his endeavour to provide a satisfactory explanation of reality. His guiding star must be the search for truth”¹⁹⁵.

Elton and Loyn on Historical Investigation

It is well worth comparing what Mises says with the observations of two senior and highly-respected historians: Prof Sir Geoffrey Elton and Prof H.R. Loyn.

Elton notes that people’s intentions and actions are what produce historical evidence:

“...all evaluation of all historical evidence must start from one basic question: how and with what end in mind did this come into existence?”¹⁹⁶.

People’s actions create the materials that historians examine:

“...the bulk of our evidence...is produced by people doing things”¹⁹⁷.

Historical sources are the residues of people’s actions:

“...the true sources [of history]...are all the deposits of past human action...in all its forms”¹⁹⁸.

“History deals with “the extant deposits of human experience (action and thought)...”¹⁹⁹.

Elton agrees that the historian’s humanity does play a role in studying other human beings:

“...I accept that being human gives one a better chance to understand other humans than being in-, sub-, or super-human would do”²⁰⁰.

Elton emphasises that history is an expert discipline in its own right:

“the historian...is not a philosopher, scientist or imaginative artist but simply an historian working by the rules and standards of his own craft”²⁰¹.

Prof H.R. Loyn also insists that history is in fact a highly technical discipline, which aims at getting as close to the historical truth as possible:

“...this discipline is more exacting and more technical than often appears to be the case...The techniques involved in the framing of proper questions,...the collection and assessment of historical evidence, above all in the subtle relationship between evidence and the propriety of the question, are complex and learnt only through hard experience...The techniques required in the writing of history...are equally complex...bound to absolute ideas relating to the

critical handling of evidence,...the possibility of achieving satisfactory answers to historical questions, and above all to the possibility of achieving something approaching historical truth”²⁰².

It will be seen that Mises’ work *complements* the appraisals made by these leading historians. Mises articulates historians’ practice, and systematically expounds both the analytics and the non-analytical aspects involved. Thus Mises has developed, extensively and thoroughly, both of Menger’s observations: theory deals with certain aspects of all phenomena; history deals with all aspects of certain phenomena.

The Economic System

We saw above (Chap 3) that Menger, using the term, ‘the national economy’, identifies an economic formation which is *not* an economy at all. Rather, economies proper (firms, households, etc) are the elements that form this larger order through their interactions. In other words, Menger sees that individual ‘economies’ — production and consumption units — integrate themselves into an overall formation which includes *all* such units. He is nowhere concerned with single, isolated ‘markets’ — ie groups of businessmen dealing in a single, isolated commodity or service.

Mises too recognises this overall economic formation — which he describes rather than names. He too nowhere deals with ‘markets’ — single detached groups of businessmen buying and selling a single detached product. He consistently analyses the all-inclusive market *order* and the comprehensive price *structure* — as all-embracing formations, the outcome of the participation of *all* people engaging in the division of labour. For this reason he is emphatic that equilibrium is an “imaginary state”; it is “hypothetical” and a “purely imaginary construction”; it is “unreal” and “self-contradictory”. The assumption of “stationary economic conditions” is an “expedient...not an attempt to describe reality”. In reality there is constant change: “In life everything is continually in flux”²⁰³. With real-world circumstances, equilibrium can never be reached:

“In the world of reality there is no stationary state, for the conditions under which economic activity takes place are subject to perpetual alterations...beyond human capacity to limit”²⁰⁴.

The “evenly-rotating economy” requires a world which is “perfectly rigid and immutable”. Therefore, it can be achieved only in a lifeless world:

“this tendency [towards an ERE] can never attain its goal...in a universe which is living and not dead”.

In short, people’s actions produce real prices, *not* equilibrium prices:

“The activities of...entrepreneurs or of any other actors on the economic scene are not guided by...any such things as equilibrium prices and the evenly rotating economy...entrepreneurs take into account anticipated future prices, not final prices or equilibrium prices”²⁰⁶.

In opposition to equilibrium and the ERE, the market order actually manifests itself in people’s actions, and binds them together:

“The market process is the adjustment of the...actions of the various members of the market society to the requirements of mutual co-operation”²⁰⁷.

Because the market order is human action, it is not mechanistic:

“There is nothing automatic or mechanical in the operation of the market”²⁰⁸.

As the division of labour is extended in people’s actions, the market process appears there; market phenomena, such as prices, are thus the composite outcome of the actions of all participants in the exchange process, compound reflections of their valuations:

“The market is not...a thing, or a collective entity. The market is a process, actuated by the interplay of the actions of the various individuals cooperating under the division of labour. The forces determining the — continually changing — state of the market are the value judgements of these individuals and their actions as directed by these value judgements. The state of the market at any instant is the price structure, ie the totality of the exchange ratios or established by the interaction of those eager to buy and...to sell. There is nothing inhumane or mystical...The market process is entirely resultant of human actions. Every market phenomenon can be traced back to definite choices of the members of the market society”²⁰⁹.

Mises insists on:

“the fact that prices are not a product of the activities of a special group of people, but the result of an interplay of all members of the market society”²¹⁰.

Although prices reflect in composite the several valuations of all participants in the market process, this cannot be obvious, of course, to single individuals, taken in isolation. To such individuals, it seems plain that prices are simply given — their own actions can have no influence:

“[Prices] are social phenomena as they are brought about by the interplay of the valuations of all individuals participating in the operation of the market. Each individual, in buying or not buying and in selling or not selling, contributes his share to the formation of the market price. But the larger the market is, the smaller is the weight of each individual’s

contribution. Thus the structure of market prices appears to the individual as a datum to which he must adjust his own conduct”²¹¹.

A range of ‘economic’ phenomena are the complex outcome of the interactions of all people in the market process. But again for each individual in isolation, these phenomena appear to be quite external to their own actions:

“conditions of work...are, like the height of wage rates itself,...commodity prices, and...articles produced for mass consumption, the product of the interaction of innumerable people participating in the social process of the market. They are...mass phenomena which are...little subject to modification on the part of a single individual”.

The one integrated process of interaction amongst people achieves three outcomes simultaneously: *(i)* the relative price structure; *(ii)* the allocation of resources to the production of the different final outputs; *(iii)* the incomes of the various participants:

“The pricing process is a social process. It is consummated by an interaction of all members of the society. All collaborate and cooperate, each in the particular role he has chosen...in the framework of the division of labour. Competing in cooperation and cooperating in competition, all people are instrumental in bringing about the result, viz., the price structure of the market, the allocation of the factors of production to the various lines of want-satisfaction, and the determination of the share of each individual. These three...are different aspects of one indivisible phenomenon which our...scrutiny separates into three parts. In the market process they are accomplished *uno actu*”²¹³.

Thus prices are not self-contained, isolated units:

“It would be absurd to look upon a definite price as if it were an isolated object in itself...In this collection of things considered valuable by...acting men, each particle’s place is inter-related with those of all other particles. What is called a price is always a relationship within an integrated system...the composite effect of human relations”²¹⁴.

Thus only interactions amongst individuals can yield prices:

“Prices are market phenomena. They are generated by the market process and are the pith of the market economy. There is no such thing as prices outside the market. Prices cannot be constructed synthetically...They are the resultant of a certain constellation of market data, of actions and reactions of the members of a market society”²¹⁵.

To sum up, in Mises’ words:

“The market is a social body; it is the foremost social body. The market phenomena are social phenomena”²¹⁶.

Therefore, Mises repeatedly emphasises “the general interconnection of market phenomena”²¹⁷. This is in-built in human action:

“an inexorable interconnectedness of phenomena is present...in the field of human action as such...”²¹⁸.

Fundamental economic issues are only seen when the interconnections amongst activities are realised:

“Economics does not allow of any breaking up into special branches. It invariably deals with the interconnectedness of all the phenomena of action. The catallactic problems cannot become visible if one deals with each branch of production separately”²¹⁹.

The analyst must remember the economic system is in fact a seamless web; it is only analytically — mentally — that it has to be broken up for better comprehension:

“The market process is...indivisible. It is an indissoluble intertwining of actions and reactions, of moves and counter-moves...the insufficiency of our mental abilities enjoins upon us the necessity of dividing it into parts and analysing each...separately. In resorting to such artificial cleavages we must never forget that the seemingly autonomous existence of these parts is an imaginary makeshift of our minds. They are only parts...they cannot even be thought of as existing outside the structure of which they are parts”²²⁰.

The economist has to place every issue within the economic system as a whole:

“The economist must never be a specialist. In dealing with any problem he must always fix his glance upon the whole system”²²¹.

‘Competition’ and the Role of Businessmen

Consistent with his concentration on analysing the market *order*, Mises discerns an inter-individual process diffused throughout this “system of mutual cooperation”; this general process he terms ‘competition’. It has three main aspects. Firstly, it solves the problem of selecting people to fulfil the various productive functions found in this system:

“Where there is social cooperation, then some variety of selection must be applied”²²².

Combativeness is the opposite of ‘competition’. This process discovers the people most suited to each job to be performed:

“competitors aim at excellence and prominence in accomplishments...The function of competition is to assign to every member of a social system that position in which he can best serve the whole of

society and all its members. It is a method of selecting the most able man for each performance”²²³.

In the system of widespread division of labour this cannot mean everyone has a “guaranteed right” to “choose...the place in...the division of labour he likes best”²²⁴. Job openings, and success in performing any job, both depend on ultimately producing final products that are purchased by consumers, ie people in their aspect as final buyers. As the market process is continual change, jobs follow inexorably:

“None of these [consumer] decisions is made once and for all; they are revocable every day. The selective process never stops. It goes on adjusting the social apparatus of production to the changes...It reviews again and again its previous decisions and forces everybody to submit to a new examination of his case. There is no security and no such thing as a right to preserve any position acquired in the past”²²⁵.

‘Competition’ is also the process which solves the problem of discovering and filling consumer requirements. This cannot be done through mindless copying of successful businessmen:

“competition does not mean that anybody can prosper by simply imitating what other people do. It means the opportunity to serve the consumers in a better or cheaper way...to fill the most urgent of the unsatisfied wants of the consumers or to purvey to them at a cheaper price than their old purveyors...”²²⁶.

‘Competition’ requires that the newcomer can *attempt* all this

“without being restrained by privileges guaranteed to those whose vested interests the innovation hurts”²²⁷.

Since consumers purchase a *range* of final products, and since all chains of production ultimately yield final outputs, ‘competition’ is the other side of scarcity and is therefore all-pervasive:

“In the world-embracing public sale called the market...[e]ach entrepreneur represents a different aspect of...consumers’ wants, either a different commodity or another way of producing the same commodity. The competition among... entrepreneurs is ultimately a competition among the various possibilities open to men to remove their uneasiness as far as possible by the acquisition of consumers’ goods... The competition between...entrepreneurs reflects the prices of consumers’ goods in the formation of...prices of...factors of production. It reflects in the external world the conflict which the inexorable scarcity of...factors of production brings about in the soul of each individual”²²⁸.

Scarcity inescapably limits the numbers who can enter any single line of production:

“...competition is always restricted by the inexorable scarcity of... goods and services. Even in the absence of institutional barriers... to restrict the number of those competing, the state of affairs is never such as to enable everyone to compete in all sectors of the market. In each sector only comparatively small groups can engage in competition”²²⁹.

If existing capacity in a line of production can meet demand, then scarce resources are wasted in building more capacity in that line:

“If the existing plants are sufficient, it would be wasteful to invest more capital in the same industry”²³⁰.

Scarcity therefore pushes investment into those lines that ultimately “fill the most urgent among the as yet unsatisfied needs of the consumers”²³¹.

And so, since productive resources are always scarce, all goods have to ‘compete’ to maintain their relative position:

“There is always catallactic competition on the market...every commodity competes with all other commodities”²³².

From all the above it follows that producers who were successful in the past, if they wish to maintain the value of their investments, have to limit the range of *new* alternatives offered by other producers to people as consumers:

“The rich, the owners of...already operating plants, have no particular...interest in free competition. They are opposed to confiscation and appropriation of their fortunes, but their vested interests are...in favour of measures preventing newcomers from challenging their position”²³³.

In sum:

“It is precisely the fact that the market does not respect vested interests that makes the people concerned ask for government interference”²³⁴.

Finally, Mises is explicit that the market process takes people as they really are; it is *not* necessary to posit they are perfect beings:

“It must be emphasised...that the market is peopled by men who are not omniscient and have only a more or less defective knowledge of prevailing conditions”²³⁵.

It is now clear that the functioning of the market process cannot occupy the same dimension as neoclassical notions of perfect competition, perfect markets, Pareto-optimality, *et hoc genus omne*. Once again, Mises is analysing an aspect of the historical reality, ie of people’s actual actions.

It is also now crystal-clear that business behaviour cannot explain the emergence and functioning of the market order. What ties the latter together is the production of a range of final outputs in the face of a scarcity of resources (since, to repeat, all production chains eventually turn out final goods and services). Mises denies explicitly that ‘economics’ — the study of human action *in abstracto* — is concerned with business activities. As he puts the view which he then opposes:

“A popular opinion considers economics as the science of business transactions... The businessman is the doer of things about which the economist merely talks and writes. Hence, a businessman has... a better founded and more realistic knowledge, inside information, about the problems of economics...”²³⁶

Mises goes on: “However, economics is not specifically about business...” Human action deals with everyone’s conduct; therefore ‘economics’ covers “all market phenomena”. The latter are the outcome of everyone’s participation: “The economist... deals with matters that are present and operative in every man”²³⁷. So it follows that

“[t]he businessman is, in his capacity as a businessman, *not* more closely related to or involved in the process that produces market phenomena than anybody else” [italics added]²³⁸.

Mises points out that businessmen and union officials are considered to have superior economic insight, because of their status: “it is assumed... the trade union official and the entrepreneur are qualified by... their office alone” to explain and decide economic questions. But the analysis of the market order (Mises goes on) “requires a process of thought” which can “comprehend the general interconnection of economic phenomena”. Without this, one gets bogged down in the details, in “the particular and the accidental”; one cannot see “the general and the essential”. So far as businessmen and union officials go, Mises does not mince his words: they “enjoy a spurious prestige which should at all costs be destroyed... It is time these amateurs were unmasked”²³⁹.

Prices, Quantities and Statistics are Complex Historical Facts

We now come to the question: What role do statistical and price data and other quantities of the historical reality, play in the study of human action?

In the historical reality, people utilise various quantities of various real goods and other products. People’s — historical — actions thus establish specific exchange ratios for those particular things, as we saw above. These prices and quantities are actual prices and actual specific quantities of specific real

goods and services, exchanged by particular people at a particular time and place, ie they are historical data. In the historical reality, there are only such specific concrete exchanges; taken together, they form the price structure:

“A market price is a real historical phenomenon, the quantitative ratio at which at a definite place and...date two individuals exchanged definite quantities of two definite goods...It is ultimately determined by the value judgements of the individuals involved. It is not derived from the general price structure...What is called the price structure is an abstract notion derived from a multiplicity of individual concrete prices. The market does not generate prices of land or motorcars in general nor wage rates in general, but prices for a certain piece of land and for a certain car and wage rates for a performance of a certain kind”²⁴⁰.

Not only prices but all quantitative magnitudes are particular features of a particular historical environment:

“All measurable magnitudes that the sciences of human action encounter are quantities of the environment in which man lives and acts. They are historical facts...”²⁴¹.

The one-way historical flow encompasses prices and other quantities along with its other components:

“The prices of the market are historical facts expressive of a state of affairs that prevailed at a definite instant of the irreversible historical process”²⁴².

Because actual prices and quantities are among the concrete contents of human action, they can provide local information only:

“In the field of human action all quantitatively determined magnitudes...do not convey any knowledge...beyond the specific historical constellation that generated them”²⁴³.

So statistics too are historical materials — the outcome of what particular people did or what happened to them, in a particular historical context, ie at a specific time and place. These historical data too are numerical in character: “Statistics provides numerical information about historical facts”²⁴⁴. Being historical, these materials are concrete and specific to a particular context: “Statistical figures relating to economic events...tell us what happened in a non-repeatable historical case”²⁴⁵. Statistical sources complement other historical sources in providing the facts of a particular historical situation. Historians have to know and utilise both kinds of data:

“Statistics is one of the resources of historical research. There are in the field of human action certain occurrences and events characteristic

features of which can be described in numerical terms. Thus eg the impact of a definite doctrine upon the minds of people does not permit of a numerical expression. Its “quantity” can be ascertained only by the method of... understanding of the historical disciplines. But the number of people who lost their lives in struggles to arrange, by means of wars, revolutions and assassinations, social conditions in agreement with a definite doctrine can be precisely determined in figures if all the documentation... is available”²⁴⁶.

Numerical constants in the natural world are in direct contrast to statistical data, which are “limited to certain geographical areas and historical periods”²⁴⁷:

“Whatever can be established [from statistical investigations] has only historical significance, whereas the ascertainment of the specific gravity of different substances, for example, has universal validity”²⁴⁸.

Prices and other quantities embody perpetually changing historical circumstances, not fixed physical features:

“exchange ratios... are permanently fluctuating. There is nothing constant and invariable in them... They are not facts in the sense in which a physicist calls the establishment of the weight of a quantity of copper a fact. They are historical events, expressive of what happened once at a definite instant and under definite circumstances”²⁴⁹.

It is not certain that the same exchange ratio may appear again, but if it does, then the question is: do the same circumstances still prevail? Or have they recurred once more? Or is this ratio —

“the outcome of the interplay of a very different constellation of price-determining factors”²⁵⁰?

In sum: prices and quantities are historical circumstances, the outcome of concrete human actions, whether these actions are past or yet to come: “A price is necessarily a historical fact either of the past or of the future”²⁵¹. We may now see why Mises says:

“Statistics is a method for the presentation of historical facts concerning prices and other relevant data of human action. It is not economics... The statistics of prices is economic history”²⁵².

We may remind ourselves that by ‘economics’ Mises means the analytical study of human action, — the other side of this coin is the study of concrete human action, ie history. — Now, actual prices, quantities and statistics are specific to the historical circumstances that produced them. These circumstances, including their quantitative side, change as people change the *content* of their actions — ie the concrete means used and/or the concrete ends pursued. But

to analyse human action, the categories and classifications utilised have to be empty of all concrete historical content, leaving only the abstract, general meaning. Thus these general categories are not quantitative; rather, the historical *data* classified include quantitative materials.

It should now be clear that when Mises contrasts quantitative historical materials with natural measurements and constants, he is *not* setting apart — in neoclassical terms — the exact measurements of the natural sciences from the mere approximations and estimates that are the most the social sciences can aspire to. Rather, he points to a fundamental divide between the natural world and the social world: “In the orbit of natural events...there is no such thing as action”²⁵³. It follows that the natural sciences cannot analyse that which does not exist in their world: “Action is a category that the natural sciences do not take into account”²⁵⁴.

To extend this line of reasoning: as natural scientists do not study human action professionally, they naturally have no knowledge of the historical nature of the social reality. Therefore, neither do philosophers of science, neoclassical economists or philosophers of economics. And so for neoclassicals, date and place are merely identifying marks to distinguish one quantitative data-set from another. From the historian’s standpoint we may add: from the mid-nineteenth century onwards, two great historical developments occurred, that were the pre-conditions for neo-classical economics to become a (self-styled) science. First, there was the dramatic and continuing success of the natural sciences. Then there was the outstanding expansion and development of global economic activity, as well as in the US. The result was the generation of vast amounts of quantitative materials — millions upon millions of goods and commodities of all types and grades, and therefore equal millions of prices and quantities and statistics of all kinds. Naturally neoclassical economics put the two together — quantitative techniques and quantitative data, exactly as the sciences did. So now neoclassical economics can, at a minimum, aspire to follow the hard sciences. As the latter do not know human action, the distinction between the analytics of action and concrete action, history, is either incomprehensible or verbal quibbling. Therefore, it is the same for the neoclassicals.

Capital Goods and Capital Accumulation

Since Mises is providing analytical tools to help comprehend people’s real activities — their actual use of real means to pursue actual ends, Mises cannot see ‘capital’ as a lump of plasticine:

“There is no such thing as an abstract or ideal capital that exists apart from concrete capital goods...capital is always embodied in definite

capital goods and is affected by everything that happens...to them”

²⁵⁵.

New capital likewise consists in concrete goods:

“The additional capital is already in the very moment of its coming into existence embodied in concrete capital goods” ²⁵⁶.

a. Mises’ analysis of capital goods follows Menger. Mises too points out that goods are classified according to the actual rise to which people put them: “The same goods can be looked upon as capital goods or as consumers’ goods” ²⁵⁷. If a quantity of final goods is used to sustain workers while they finish a project, then these final outputs are in fact capital goods.

Following Menger, Mises too divides “[e]conomic goods” into “orders” according to the way they are used “to satisfy human wants”. Goods that do so directly, without “[depending] on the cooperation of other economic goods” are “consumers’ goods or goods of the first order”. Other “[m]eans...can satisfy wants only indirectly when complemented by the cooperation of other goods”. Such means are “producers’ goods or factors of production or goods of a remoter or higher order”. A capital good, in “cooperation [with] complementary producers’ goods”, turns out either a final output, or another capital good which then has to “[combine] with other producers’ goods [to] finally bring about a consumers’ good” ²⁵⁸. Thus Mises too recognises that capital goods have to form capital combinations in order to produce anything at all. With Menger, Mises too sees that capital goods can be classified according to their ‘distance’ from the final outputs they contribute to producing:

“It is possible to think of...producers’ goods as arranged in orders according to their proximity to the consumers’ good for whose production they can be used” ²⁵⁹.

Just as Menger does, Mises too sees in people’s subjective valuations the moving spirit of capital accumulation, but he develops this insight much further. — Once people have satisfied those wants they regard as immediately most urgent, they wish to provide for later periods in the future (Mises begins). Such provision, in other words, is an end which (some) people wish to pursue. Now looking beyond the immediate instant, people value consumption in the nearer future more highly than in later periods. If they did not, they would be eternally postponing consumption: since every ‘day’ they are faced with the same choice: consumption in a nearer or a some later instant of time ²⁶⁰. In short, people have some particular future in mind, for which they wish to provide:

“Action is not concerned with the future in general but with a definite and limited fraction of the future” ²⁶¹.

Different people have different ideas about the ‘nearer’ future for which they wish to start making provision ‘today’. Many, like the grasshopper, are content to let tomorrow look after itself. Others are concerned with the next few weeks, months, years; still others prepare for their descendants. Everyone strikes their own balance, which of course changes as circumstances and valuations change. In short: people’s varied valuations of ‘future’ consumption, and the various time-periods they severally aim at, determine the overall extent to which they allocate their resources for this purpose: “What restricts the amount of saving and investment is time preference”²⁶².

Mises is emphatic that selection of some level and type of ‘future’ consumption is a choice exactly in line with the selection of various types and quantities of final outputs for ‘current’ consumption. *Both* sets of choices are valuations made in the context of an irremediable scarcity; both kinds represent the use of means to achieve particular ends. There is nothing psychological here: no over-estimation (of the ‘present’), no under-estimation (of the ‘future’) — people simply make some choice about utilising their scarce means to obtain certain ends — in certain later time periods:

“...psychology can never determine the validity of a praxeological theorem”²⁶³.

b. Production processes take various periods of time to yield final outputs. ‘Lengthier’ processes yield **i** more outputs, **ii** new outputs that cannot be produced in ‘shorter’ processes **iii** enable provision to be made further into the future. With ‘shorter’ processes, the opposite is the case. All production processes utilise such capital goods as have been already produced, together with current inputs. It is the *composite aims* of savers with respect to **i** the periods of future provision and therefore the production time taken, and **ii** the durability of the final goods produced, that determine **a** *how* the existing capital investments are used in what sorts of production processes and **b** the extent to which they are maintained and new capital goods produced²⁶⁴. In short:

“When...wants or...opinions concerning...methods of want-satisfaction change, the value of...capital goods is changed accordingly”²⁶⁵.

Menger saw earlier that the various production processes yielding final goods were subdivided amongst numbers of workshops and factories, each turning out only a very small part of the ultimate product. Mises extends this picture to sketch a general picture of production processes in the mid-twentieth century, “the age of electricity”. He too recognises that these processes cover the entire economic system:

“In the market economy production is a continuous, never-ending pursuit split up into an immense variety of partial processes. Innumerable

processes of production with different periods of production are in progress simultaneously... Production is distributed among numerous individual plants, farms, workshops, and enterprises, each of which serves only limited purposes... At each instant numberless processes are in progress some of which are nearer to, some remoter from, the achievement of their special tasks”²⁶⁶.

Goods move without ceasing through this complex network of production units: “The social process of production never stops”. Capital goods are gradually transformed by various firms into their final shape as consumption goods:

“The intermediary products or capital goods, the produced factors of further production, change hands in the course of events, they pass from one plant to another until finally the consumers’ goods reach those who use and enjoy them”²⁶⁷.

In short, capital goods are interim means, en route to an end:

“Capital goods are intermediary stations on the way... from the very beginning of production to its final goal, the turning out of consumers’ goods”²⁶⁸.

Since capital goods eventually yield final outputs, the various production processes obviously “complement one another” in doing so. But the heterogeneous capital goods involved must also form capital combinations (as we saw above) — utilising versatile resources and current inputs. Thus production processes also “[compete] for scarce factors of production”²⁶⁹. — Mises does not say so explicitly, but it follows that as people’s circumstances and ends change, different capital combinations become (or remain) viable, while others have to operate with fewer or different versatile resources and inputs, and others are dropped altogether. (Hayek develops this insight much further, see Chapter 5).

c We have seen that as people’s circumstances and/or ends change, capital goods are correspondingly utilised in different ways, in different production processes. Thus the relative ease or difficulty with which these goods can be shifted between uses in changing situations, is a key element in their changing valuations.

Capital goods, whether ‘fixed’ or ‘circulating’, range along a spectrum of versatility, from the completely or highly specific at one end, to the highly versatile and general purpose at the other. Equally, “convertibility” is determined by the uses to which a good might be put. A capital good may be, in general, very useful for some purposes, less useful for others, and quite unusable for still other aims. Circumstances can alter the degree of “convertibility”. Goods that

are relatively versatile under one set of circumstances, may be rendered much less so, and vice versa, as conditions change. Mises again is emphatic that “convertibility” is *not* a fixed intrinsic physical characteristic of the good, but follows from changes in the “data” — the market situation. These changes, actual or expected, alter the actual or potential uses for particular capital goods, and therefore the extent of their versatility — *in relation to* these changed opportunities²⁷⁰.

Any change in circumstances — any adaptation — imposes costs. Some capital goods may “become absolutely useless”, and the resources invested in them a waste. Other goods may be useable “after... a process of adjustment”, which means added cost. A third group may “be employed in the new process without any alteration”, but they could have been produced at lower alternate cost, had they been produced specifically for this new purpose in the first place. A fourth group is equally useful for both the new and the old projects. Finally, goods that are technically or geographically immobile are simply not replaced when circumstances change. Instead *i* technically different goods are produced, *ii* goods are installed elsewhere as needed.

As production processes become lengthier, the capital goods involved become less versatile and more specific: “the more the accumulation of capital proceeds, the greater becomes the problem of convertibility”²⁷².

Mises compares here handicraft tools and activities with industrial machinery and processes. Also, in the latter case, as goods move closer to final consumption, they become less and less “convertible”: compare iron, iron tubes, and iron machine-parts. Greater and greater difficulty is experienced in switching to alternative products, “the nearer [a process of production] has come to its termination, the turning out of consumers’ goods”²⁷³. — Again Mises underlines that the analysis is of the categories of human action, *not* “the physical properties of things”.

Capital goods are means for the pursuit of various ends, and some of the potential classifications of these means are analysed.

d All capital goods, whether “perishable or not, wear out or lose their value “through a change in the market data”. Thus “[t]here is no question of keeping a stock of capital goods intact. They are transient”. In due course all capital investments are used up and converted into final outputs: “All capital goods sooner or later enter into final products and cease to exist...”²⁷⁴. Capital goods have to be *deliberately* maintained and repaired, and eventually other investments have to be produced; they do *not* do this automatically, as a minor detail in their permanent existence. In short, capital investments are consumed continuously, but a larger or smaller process of capital accumulation *also* continues:

given that some people do wish to continue providing for future consumption²⁷⁵.

e As and when capital goods are accumulated continually, ‘lengthier’ production processes can be adopted. Such ‘lengthening’:

i increases the productivity of current input;

ii increases the quantities of final outputs produced;

iii most importantly, makes available goods that simply could not be produced otherwise; and so *iv* magnifies the incentive to save²⁷⁶.

Mises emphatically rejects the notion of an average period of production; what matters to people is the time *now* required to produce the various final outputs:

“[‘current’] capital goods are valued only with regard to their usefulness for future want-satisfaction. The “average period of production” is an empty concept. What determines action is the fact that in choosing among various ways which can remove future uneasiness the length of the waiting time in each cases is a necessary element”²⁷⁷.

To the extent that capital goods are already available, it is easier to implement lengthier production processes. Thus people are ahead by the time needed to save and produce these capital investments. In short, capital accumulation makes it possible to achieve ends sooner than otherwise; capital goods are, as it were, “labour, nature and time stored up”. Time is the difference between production with and without the assistance of capital. Thus

“[h]e who proceeds with the aid of capital goods enjoys one great advantage...; he is nearer in time to the ultimate goal of his endeavours”²⁷⁸.

Conversely, with a smaller accumulation of capital the time required to reach better provision of final outputs is that much longer:

“shortage of capital means that one is further away from...a goal... than if one had started...at an earlier date”²⁷⁹.

In other words, “capital shortage is dearth of time”. Additional capital investments allow ends further removed in time to be reached with a smaller decline in consumption:

“An increment in capital goods...makes it possible to attain temporally remoter ends without being forced to restrict consumption” [ie restrict it further than otherwise]²⁸⁰.

f All production ‘today’ — in the mid-twentieth century and later, rests on the capital accumulated in the past. Had previous generations consumed in due course whatever they saved, “the process of saving and capital accumulation

would have had to start afresh” each time — each generation would have started from scratch. But in fact people in the past continued to save and invest; we still benefit from this:

“We favourite children of the age of electricity still derive advantage from the original saving of the primitive fishermen who, in producing the first nets and canoes, devoted a part of their working time to provision for a remoter future”²⁸¹.

As people continued to accumulate capital investments through time, production processes were lengthened further and further, so the material prosperity of the mid-twentieth century is mostly inherited.

“Every single performance in this ceaseless pursuit of wealth production is based upon the saving and the preparatory work of earlier generations. We are the lucky heirs of our fathers and forefathers whose saving has accumulated the capital goods with the aid of which we are working today... We are better off than earlier generations because we are equipped with the capital goods they have accumulated for us”²⁸².

Capital accumulation doesn’t just yield material goods. It also makes possible and easier the pursuit of *non*-material aims and thus the growth of civilisation:

“saving and the resulting accumulation of capital goods are at the beginning of every attempt to improve the material conditions of man; they are the foundation of human civilisation. Without saving and capital accumulation, there could not be any striving toward non-material ends”²⁸³.

Again, Mises follows Menger here as well.

Why did capital accumulation progress so very much further in the Western developed countries? Because “they succeeded better in checking the spirit of predatory militarism”. Hence, there grew up, over a far longer period than elsewhere, “the political...conditions” and “social institutions required for large-scale saving and investment on a broader scale”. Capital accumulation over long periods of time was “by and large uninterrupted”. Therefore, by the mid-nineteenth century “the peoples of the West...had already attained a state of well-being which far surpassed that of...nations” that had not proceeded as far “in substituting the ideas of acquisitive capitalism for predatory militarism”²⁸⁴.

Mises lays great stress [as he should] on “the conditions of the later nineteenth century”. This period saw “the internationalisation of the capital market, together with free trade and...freedom of migration”. Virtually all areas with “known natural resources” had joined the global economic order:

“the greater part of the earth’s surface could be considered as integrated into a uniform, world-embracing market system”²⁸⁵.

Mises analyses the effects of the international lending of capital in the nineteenth century. The less developed areas, in particular,

“have been able, thanks to the foreign capital imported, to reap the fruits of modern industry at an earlier date. They were to some extent relieved from the necessity of restricting their consumption in order to accumulate a sufficient stock of capital goods”.

Thus the peoples of these countries saved time and came closer to the results of capital accumulation²⁸⁶. The LDCs obtained communication, production and transport facilities far sooner than the “scores of decades [that] would have passed” otherwise. Because of “this larger scale transfer of capital”, the LDCs received “the capital goods needed for an immediate application” of the “technological and therapeutical knowledge” developed in the West²⁸⁷. Thus real incomes and agricultural output rose:

“Real wage rates and farm yields are higher...than they would have been in the absence of foreign capital”.

Many DCs also gained from capital imports:

“European capital accelerated considerably the marvellous economic evolution of the United States and the British Dominions”²⁸⁸.

In sum: over the centuries, as social institutions changed appropriately, capital accumulation accelerated in Western Europe, so by the middle of the nineteenth century, supplies of various capital goods were immensely greater and production processes vastly ‘longer’ than in the LDCs. A global economic order grew further in the nineteenth century, so capital goods were transferred from Western Europe to the other developed areas that were expanding rapidly — North America and Australasia, as well as to the LDCs. Politically speaking, parts of the latter “joined the community of the international capital market” only because “colonial regimes” brought about “the institutional setting indispensable for the importation of capital”. Other regions, like “Eastern and Southern Europe”, joined “of their own accord”²⁸⁹.

Thus in the DCs especially, but in all other areas too, it is because the means — the capital goods — were built up in the past, that today’s goals are achievable.

g Because in the past capital investments were made, maintained and modified such that production processes were changed and lengthened repeatedly, therefore today, in the mid-twentieth century (and later) people can provide that much further into the future, and have the range, quality and quantities

of final outputs that they do. But because this process occurs in the historical reality, it too is historical, ie contingent and circumstantial, as we see now.

We use today to achieve our goals, the means produced by action in the past:

“The intermediary products available today were manufactured in the past by our ancestors and ourselves”²⁹⁰.

But these inherited investments are *not* malleable clay, able to be instantly and infinitely re-shaped; they are particular facts:

“All material wealth is a residuum of past activities and is embodied in concrete capital goods of limited convertibility”²⁹¹.

Thus past actions inevitably influence — but do *not* determine — the selection of ends and therefore of means in the present. In other words, people can never write on a completely clean slate:

“The capital goods accumulated direct the actions of the living into lives which they would not have chosen if their discretion had not been restricted by binding action accomplished in the past. The choice of ends and of the means...is influenced by the past”²⁹².

Here, as on numerous other occasions, people have two alternatives: they can obtain their ends and apply desired production methods sooner, or they can do both at some period more distant in the future²⁹³.

To obtain ends and use new methods sooner, requires that existing capital investments, and therefore production processes, are adjusted and modified as much as possible, while minimising the extent to which goods and process are totally abandoned. This in turn requires that these new ends and new methods are themselves modified and adjusted to *some* extent at least. The greater the extent to which new ends and new production methods require that existing investments and processes are totally dropped, to that extent the longer the time taken to accumulate the greater varieties and larger quantities of *new* capital goods needed for these new ends and methods.

To sum up in Mises' words: When circumstances change

“We must either leave unused a great part of the capital goods available...or we must adjust our production processes as far as possible to the specific character of the capital goods available”²⁹⁴.

This is because

“We are not rich enough to renounce the services which still utilisable capital goods could provide”²⁹⁵.

Thus past actions — and irremovable scarcity — create the conditions under which people act today:

“Capital goods are a conservative element. They force us to adjust our actions to conditions brought about by our own conduct in earlier days and by the thinking, choosing and acting of bygone generations”²⁹⁶.

So people generally find they have to adapt the changes they wish to make to the scarcity of resources — ie, to such existing capital resources as are useable for their purposes. Existing investments are

“a factor that forces men not to deviate too hastily from the course chose by their forebears”²⁹⁷.

The quantities, types and location of investments all embody *i* the knowledge prevailing *at the time each investment was made*: knowledge with respect to “natural resources, geography, technology and hygienics”; *ii* Production plans based on ideas “concerning ends and technological procedures”, again as prevalent at the time of investment.

In sum: actual concrete capital goods are historical entities — they are specific historical facts, produced in a particular historical context, embodying the specific ends pursued, the technical knowledge available, and the specific natural resources utilised in that context. — Labour skills should be added here. — That actual investments *i* fit into ‘shorter’ or ‘longer’ production processes; *ii* are used in stages nearer to, or further from, final consumption; *iii* are aimed at providing for consumption in time periods nearer or more distant in the future; *iv* raise labour productivity — all these are the general abstract characteristics of a particular collection or set of actual investments. In any historical context, the actions of consumer-savers — whoever they are — determine in composite: *i* how far existing investments are re-used for new purposes, in new/modified capital combinations. *ii* how far existing investments are run down and new capital goods produced — goods that reflect newer historical circumstances with respect to: ends pursued; the length of production processes; natural resources and technology used; etc.

Thus capital accumulation — extension of the capital structure — is an historical process, among the particular developments in a particular historical context. In all circumstances, production units adjust to the overall inter-firm production processes of which they are the compositive elements: “[e]very enterprise has to adapt itself to the given situation...”²⁹⁹.

In the next chapter, we shall see Hayek’s extension and deepening of this analysis. He examines the ‘capital structure’ more closely. Hayek analyses: *i* the desired time-shape of people’s consumption as the key to the utilisation of capital goods — so that the central question is: ‘in what way and how far do *these* capital goods — newly-produced or already existing — help to provide the desired time-shape?’ *ii* how this time-shape rests on the heterogeneity

of *all* capital investments, whether ‘fixed’ or ‘circulating’ *iii* how the overall ‘capital structure’ — the composite of all production processes — is ‘lengthened’ or ‘shortened’ — as versatile resources are shifted amongst stages, changing the capital combinations used in each stage. Thus ‘fixed’ investments are also affected, as are the *kinds* of ‘fixed’ and ‘circulating’ investments produced. *iv* the kinds of price relationships — ie changes in returns, both negative and positive, and in capital gains and losses — that induce and reflect changes in the overall capital structure, the composite of all inter-firm chains of investments.

Mises and Laissez-faire

Mises is held to be pre-eminently a *political* writer, both by those who favour and those who oppose, ‘laissez-faire capitalism’ and the ‘free market’. Thus his works are seen as a mine of arguments to support this political position — ie a storehouse of attacks to be used against the activities of government officials — viz., taxation; the issue of orders, decrees, directives to government subjects; expenditure of revenues under strictly prescribed heads.

Mises’ writing style is plain and transparent — so much so that his breadth and depth are well hidden. But he is also abrasive, pungent, withering and caustic, and it is abundantly clear that he does *not* suffer fools gladly. Any serious student of Mises’ *analysis* faces a number of difficulties; we may see how Hayek sets these out.

Hayek points to Mises’ “pellucid and deceptively simple prose style”. Despite this, “Mises’ arguments [in *Socialism*] were not easily apprehended”. They “tacitly presuppose an understanding of economic processes”. In general, Mises “often” does not spell out his arguments fully, so that it is only “after some reflection [that] a justification could be found that he had not made explicit”³⁰⁰. Hayek also feels that after the publication of *Socialism*, Mises

“became so strongly convinced that socialist aspirations were based on... a failure to comprehend the task which the economic system had to perform that his later attempts to develop social theory and his defence of a libertarian political order often became inextricably intertwined”³⁰¹.

The two, however, *have* to be separated: since the social analysis is absolutely indispensable for comprehending the nature of the developments experienced in the historical reality. For the historian, his writings contain commentaries on the major doctrines and government policies relating to society and the ‘economic’ order, found from the late nineteenth to the mid-twentieth century. It will be seen that the touchstone which Mises applies to these doctrines and policies is whether they support and elucidate the fabric of social cooperation, or whether they disparage, obfuscate, undermine and destroy the

ideas and the practice of the “social division of labour”. Similarly, Mises places his analysis of the pricing process, money, exchange, wages, capital and other “market phenomena” squarely in the framework of an overall market *order*.

Such analysis is a quite separate and distinct enterprise from the following:

a. supporting/undermining the activities of government officials towards taxpayers and other government subjects.

b. praising/condemning the personal qualities of businessmen and their conduct of business.

In both cases, the criterion used is: how strong/effective/persuasive are the arguments being advanced?

Historians face a completely different set of issues. Historians begin with the historical materials under study. The question then is: What additional light does this analysis throw on these historical developments? What hidden interconnections does it bring out? How does it extend our comprehension of what happened? — Mises’ works contain not only analytical lenses but also sharp and unsparing commentaries on the views and ideas that were widely held up to the mid-twentieth century, on the nature and functioning of the *kind* of economic order which is inseparable from the growth of ‘Western’ — now international — civilisation.

FOOTNOTES CHAPTER 4

1. Mises not interested in Austrians: Ludwig von Mises, *Notes and Recollections*, trans. Hans Sennholz (South Holland, Ill: Libertarian Press, 1976) p. 33. Only economic history, no economic laws, no analytical economics, Mises a consistent historicist: *Notes*, p. 120.
2. Mises’ interest in history, opportunities in school of law: *Notes*, p. 1: Degree course: *Notes*, p. 2. Dominance of Younger German School: *Notes*, pp. 2, 7, 38; Ludwig von Mises, *The Historical Setting of the Austrian School of Economics* (New Rochelle, N.Y: Arlington House, 1969) pp. 14, 23-27, 30-31. “Austrian School” as term of contempt: *Historical Setting*, pp. 10-11, 14, 40.
3. Mises’ objections to Historical School: *Notes*, ch. 1. Mises’ repulsion: p. 7. Glorification of Prussian government; no scientific problems dealt with: p. 5. Clumsy data publications: p. 9. Mises on his own teacher, Mises’ first publications; p. 6. Future research plans: pp. 6-7.
4. Mises a thorough statist, but anti-Marxian: *Notes*, p. 61. His belief in social reform and opposition to liberalism: p. 17.
5. Mises became an economist after reading Menger: *Notes*, p. 7. Mises’ views demolished: pp. 120-21. Research into housing etc: pp. 19-20. Bohm-Bawerk: p. 40. “Further study of economics”: p. 16. — The chronology of Mises’ attendance at the University of Vienna is based on information supplied by Mises on a job application, reprinted (in translation) in Margit von Mises, *My Years with Ludwig von Mises*

- (2nd ed, Cedar Falls, Iowa: Centre for Futures Education, 1984) pp. 199-201. Mises entered the University of Vienna in late 1900 and studied there initially for two years. Then he underwent a year's military training (as a reserve officer of artillery) and returned to university in late 1903. He finished in February 1906 with the degree of doctor of laws.
6. "A polemic essay": *Notes* p. 34. "a special work"; dissatisfied with foundations of dispute: *Notes*, p. 121.
 7. "Mises' initial interests...": Peter Klein (ed) *The Fortunes of Liberalism: The collected Works of F.A. Hayek, Vol IV* (London: Routledge 1992) p. 138. Mises' historical erudition and knowledge: pp. 129, 151. Mises "better informed...": p. 155. Mises' opinion of Historical School confirmed: p. 156. Mises' daily encounters with Historical Schools' teachings: p. 143. Mises' on German academic economics: pp. 143-44. Bohm-Bawerk's influence on Mises' liberalism: p. 144, also p. 127.
 8. Ludwig von Mises, "Epistemological Relativism in the Sciences of Human Action" (1962) repr. in *idem, Money, Method and the Market Process*, ed. Richard M. Ebeling (Norwell, Mass: Kluwer 1990) pp. 40-41.
 9. Quotations from Ludwig von Mises, *Epistemological Problems of Economics* (1933; Princeton, N.J.: Van Nostrand 1960) -: "From the outset...", p. xvi. "to clear the way...", "the necessary preliminary...": p. viii.
 10. "The purpose...": *Epistemological...*, pp. x111-xiv. "the untenability..."; scarcity only in a money economy: p. 7. Marginal utility theory only for a free economy: p. 95.
 11. *Epistemological...*, p. xv.
 12. "What is under...", "What is denied...": *Epistemological...*, p. xiv.
 13. *Epistemological...*, pp. xi-xiii.
 14. *Epistemological...*, p. xi, also see Ludwig von Mises, *Theory and History* (London: Jonathan Cape 1958) p. 204.
 15. All quotes from *Epistemological...*, p. xvii.
 16. *Epistemological...*, pp. xii-xiii; *Theory and History*, pp. 204-205.
 17. *Epistemological...*, pp. xiii-xiv; *Theory and History*, pp. 203-204.
 18. "the effect...", "content...with": *Epistemological...*, p. 101. "the age...": p. 105. "The Historical School failed...": p. 102.
 19. *Epistemological...*, p. 101.
 20. *Epistemological...*, pp. 99-100.
 21. *Epistemological...*, pp. 101, 105.
 22. In addition to references below, see also *Epistemological...*, pp. 95-96.
 23. Ludwig von Mises, *Human Action* (3rd rev. ed., Chicago: Regnery 1966) p. 4.
 24. As quoted in F.A. Hayek, *The Road to Serfdom* (1944; University of Chicago Press, 1976 pb. ed.) p. 190n.
 25. "the lofty idols...": *Human Action*, p. 762. "power..."; "notion of power.": Ludwig von Mises, "The Great German Inflation" (1932) repr. in *Money, Method*, p. 99. "The study of...": *ibid*, p. 98.
 26. All quotes from *Human Action*, p. 647.
 27. *Money, Method*, p. 99.
 28. "refute..."; "compiled..."; "This, they wrote...": *Human Action*, p. 762. "the economic aspects..."; "British...": p. 761. Also see pp. 701, 268.
 29. Menger, *Problems*, p. 4.
 30. Mises, *Epistemological...*, p. 79.

31. As mentioned above, seven of the essays reprinted in *Epistemological Problems* had been published previously, between 1928 and 1932, but they had all been planned (and then revised) as a unity (p. xvi). The second chapter, first published in 1929, is entitled “Sociology and History” and uses the term ‘sociology’ throughout for the general theoretical study of human action. But elsewhere in the book the terms ‘praxeology’ and ‘praxeological’ occur on pp. 180, 186, 199, 200, 204, 205 — ie from the years 1928, 1931 and 1932 (the years in which the essays concerned were first published). The first chapter was written especially for the book (p. xvi); the term ‘sociology’ is used once for the general study of human action (p. 17) and the term ‘praxeology’ once (p. 14). ‘The science of human action’ is part of the title of chap. 1 and of section 6 of Part I of the same chapter. Other references are found on pp. xviii, 4 (twice), 5, 6, 13, 17 (thrice), 68 (twice). All these references are from chap. 1 except for the last, from chap. 2 (ie dating from 1929). ‘The sciences of human action’ (in the plural) occurs on p. 1 and p. 200 (this last dates from 1931). ‘The science of action’ is used on pp. 30, 31 (chap. 1). It would seem that Mises plumped initially for the term ‘sociology’ when referring to the theoretical study of human action, while also using the terms ‘praxeology’ and ‘the science of human action’. Then he gradually concentrated on the last two, as he came to realise that the study of human action was a distinct discipline, subsuming both subjectivist economics and history.
32. “the term, ‘sociology’...”: *Notes*, p. 123; also see *Epistemological...*, p. viii. Mises appears to have formulated his main objections to Weber’s view of (subjectivist) economics by 1931 — see his brief comments on p. 148 of *Epistemological Problems* (the essay in which the comments were made was first published in that year; also see pp. x, xiv, 5). The preface to the German edition of the book is dated January 1933, and he still uses the term ‘sociology’ in chap. 1 (first published only in the book). — so the inference is that it was only after the preface was finished that Mises realised that the term ‘sociology’ could not be used to refer to the general study of human action.
33. Subjectivism gained from classical economics: *Epistemological...*, p. 213. “greatest benefit...”: p. 214. “that brilliant...”: *Human Action*, p. 231.
34. “a universal, timeless...”; “could not...”: *Epistemological...*, p. 180.
35. *Epistemological...*, pp. 93, 174-76; *Human Action*, pp. 62-63; Ludwig von Mises, *The Ultimate Foundation of Economic Science* (Princeton, N.J.: Van Nostrand 1962) pp. 74-76.
36. “comprehending the most...”: *Epistemological...*, p. 175. “the act of...”: p. 179. “the classical economist...”: p. 175. “whatever did not...”: p. 93. “were unable to...”; “the regarded...”: p. 175. “with [this] scheme...”: p. 180.
37. “pertinently described”; “over-simplified formula”: *Ultimate*, p. 75; “economic and non-economic action”: *Epistemological...*, p. 175; “business-like conduct...”; “this...classification...”: *Ultimate*, p. 75; consumer is “everybody”: *Epistemological...*, p. 93; *Human Action*, p. 62; *Ultimate*, p. 77. “removed economics...”; “a phantom...”: *Ultimate*, p. 77. Homo economics cannot be used for historical research: *Human Action*, p. 62 (“various aims and desires”); not based on “concrete data”: *Epistemological...*, p. 180; “fictitious”: *Human Action*, p. 64; “complex phenomena...”; not an “ideal type”: *Human Action*, p. 62. In relation to the *homo economics*, Mises refers to “the absurdity of this doctrine”: *Ultimate*, p. 75; he also says: “The maxims of the businessman cannot be applied to the action of the consumers, which, in the last analysis, governs all business” (*Epistemological...*, p. 176).
38. *Epistemological...*, p. 161 (all quotes).
39. “the transition...”, *Epistemological...*, p. 124 fn. 5; “propositions...”, p. 167; “great...”, “pioneers”, p. 171; “ramifications”, p. 167; “details”, “elaboration”, p. 141; “basic”, p. 167.

40. *Epistemological...*, p. 174: all quotes and 'Bohm-Bawerk's analysis'.
41. *Epistemological...*, p. 178.
42. *Epistemological...*, p. 177.
43. *Epistemological...*, pp. 177-78. Quotes from p. 178.
44. Mises' criticism of Menger: *Epistemological...*, pp. 167, 171-74; "imaginary" p. 167; "psychologism" to "pioneering": p. 23 fn 27; "subjectivist...", p. 124 fn 5; early passages: Menger, *Problems*, p. 36, also quotes; "observation/experience" to "untypical"? *Notes and Recollections*, pp. 121-22.
45. *Epistemological...*, p. 119.
46. *Epistemological...*, p. 78 ("possibility"); p. 72 ("the character"); *Human Action*, p. 405 (Mises recognised; "praxeological"); p. 408 ("the fundamental"; also later quotes).
47. Menger, *Problems*, p. 142 fn. 51 ("atoms", "the social", "the human"); *Principles*, pp. 46-47 ("empirical").
48. Menger, *Principles*, p. 48 fn 4 (translators); Mises, *Ultimate*, p. 77 (motives).
49. Menger, *Principles*, p. 108 ("man"); p. 52n4 ("good"); p. 58 ("higher-order"); p. 89 ("knowledge").
50. Menger, *Principles*, p. 89 ("in planning", "without").
51. Menger, *Principles*, pp. 63, 86-87 (subdivided).
52. Mises, *Socialism*, p. 46 ("Law"); *Human Action*, p. 654 ("Property"); *Socialism*, pp. 43-46 (social contract); p. 74 ("Marxism's"); p. 297 ("Bolshevists"); *Human Action* p. 194 ("conscious"); p. 267 ("the market"); p. 195 ("the emergence"); p. 407 ("indirect"); p. 267 ("began"); p. 265 ("from savagery"); p. 468 ("evolution").
53. *Ultimate*, p. 61 ("Political"); *Theory and History* pp. 195-96 ("the historical"); *Human Action*, p. 319 ("their fathers", "unwittingly"); *Socialism*, pp. 46-47 (private law); *Socialism*, pp. 512-513 ("All this").
54. *Human Action*, p. 506.
55. *Human Action*, p. 760 ("isolated"); *Ultimate*, p. 86 (Gresham's Law); *Human Action*, p. 760 ("philosophers"); *Socialism* pp. 298-99 (Kant); *Money, Method*, p. 41 ("discovery").
56. *Human Action*, p. 199 ("historical", "The mental"); p. 65 ("could"); *Epistemological*, p. 25 ("all its").
57. *Epistemological*, p. 12.
58. *Epistemological*, p. 1 ("It is"); *Money, Method*, p. 3 (historians); p. 37 ("regularities"); p. 3 ("clarify"); p. 37 ("extraneous", "inherent"); pp. 3, 37 (Historians); *Human Action*, p. 2 ("With righteous"); *Epistemological*, p. 3 ("scattered"); also see *Money, Method*, p. 3; *Human Action*, p. 1 ("sequence"); p. 2 ("human action"); p. 1 ("economics").
59. *Human Action*, p. 2 ("normative"); *Epistemological*, p. 4 ("discoveries"); also see *Money, Method*, p. 38; *Human Action*, p. 1 ("logic"); *Money, Method* p. 4 ("were compelled"); also see *Epistemological* p. 3.
60. *Human Action*, pp. 2-3 ("forced"); p. 2 ("only"); p. 3 ("Until"; "converted"; "modern"; "general"; "Nothing"); pp. 232-234 (general and universal); *Ultimate*, pp. v, 54 ("not a contribution").
61. *Notes*, p. 123 ("had drawn", "For a long").
62. *Socialism*, pp. 295-97 (organism and organisation); pp. 289-90 ("absurdity"); also *Money, Method* p. 5; *Socialism* p. 292 ("when organisms").
63. *Socialism*, p. 292.

64. *Socialism*, pp. 295-96; p. 296 ("organisation"); p. 295 ("a living rose"); p. 296 ("To seek"); p. 295 ("The collectivist").
65. *Ultimate*, p. 36; *Socialism*, pp. 296, 290, 291; quote: p. 296 ("Classical").
66. *Socialism*, p. 513 ("So mysterious"; "Kant's *Nature*"; p. 316 ("reverted"); pp. 318-319 ("unable"); p. 316 ("ends in", "peculiarly").
67. *Ultimate*, p. 45 ("history"); *Human Action*, p. 59 ("scope"); p. 47 ("all the data"); *Epistemological*, p. vi ("history, that is"); *Human Action*, p. 59 ("A historical").
68. *Money, Method*, p. 40 ("Every"); *Epistemological*, p. 100 ("The historian").
69. *Human Action*, p. 49 ("indispensable"); *Theory and History*, pp. 292, 301, also see p. 296. Quote from p. 292.
70. *Epistemological*, pp. 99-100, p. v; *Money, Method*, p. 5; *Ultimate*, p. 42. Simple vs complex: *Epistemological*, pp. 99-100; *Money, Method*, pp. 4-6, 18, 40; *Epistemological*, p. v.
71. *Human Action*, p. 59.
72. *Human Action*, p. 647.
73. *Epistemological*, p. 101; p. 28 ("Theories", "the terms"); p. 2 ("The study"); p. 99 ("simple sentence").
74. *Epistemological*, p. 1.
75. *Epistemological*, pp. 99-102, 105, 122-24. Quotes: p. 99 ("The only"); pp. 122-23 ("History cannot"); p. 123 ("subject"); p. 140 ("unessential"); p. 123 ("practice"); p. 124 ("in order"); p. 139 (Sombart).
76. *Epistemological*, pp. 28, 101; *Human Action*, pp. 51, 653; *Money, Method*, pp. 9-10. Quote: *Human Action*, p. 51.
77. *Money, Method*, pp. 17-18 (all quotes up to Linguistics); *Human Action*, p. 30 (Linguistics to end of para).
78. *Human Action*, p. 49 ("suffice"; "historians"; "There always"; "It is"); pp. 49-60 ("because"); *Ultimate*, p. 48 ("Understanding"); *Theory and History*, p. 265 ("It is").
79. *Money, Method*, pp. 26-32, also see pp. 9, 12-13; *Epistemological*, pp. 12, 130-37; *Ultimate*, p. 50; *Human Action*, pp. 57, 55, 50. Quotes: *Money, Method*, p. 13 ("a full charter"); p. 27 ("its bearing").
80. *Epistemological*, p. 27.
81. *Epistemological*, p. 27 (all quotes).
82. *Epistemological*, p. 140 (all quotes).
83. *Human Action*, p. 38 ("No facts"); *Epistemological*, p. 64 ("technological"), also see pp. 62-65; *Human Action*, p. 37 ("A peasant" and following quotes); also see pp. 36-38.
84. *Epistemological*, pp. 102-104; *Human Action*, p. 37. Quotes: *Epistemological*, p. 103 ("intellectual interests" down to "stop short"); *Human Action*, p. 37 ("European"); *Epistemological*, p. 103 ("the practice"; "conversation"); p. 104 ("what other"), also *Human Action*, p. 37.
85. *Human Action*, p. 35.
86. *Human Action*, p. 26.
87. *Human Action*, p. 24 (all quotes).
88. *Human Action*, p. 24 ("impossible"; "in addressing"); *Ultimate*, p. 71 ("understanding"); p. 49 ("Action").
89. *Human Action*, p. 40.

90. *Epistemological*, pp. 13-14.
91. *Human Action*, p. 64.
92. *Money, Method*, p. 24.
93. *Ultimate*, p. 16.
94. *Ultimate*, p. 15 ("Experience"); p. 48 ("Understanding").
95. *Ultimate*, p. 8.
96. *Ultimate*, p. 44. Also see *Human Action*, pp. 198, 40.
97. *Human Action*, p. 13 ("Action"); also see *Money, Method*, p. 19; *Human Action*, p. 25 ("Thinking"); *Habit: Human Action*, p. 47, also see *Money, Method*, p. 20; Opposite of action: *Human Action*, p. 20; *Epistemological*, pp. 65, 122; *Money, Method*, p. 23.
98. *Human Action*, p. 92.
99. *Ultimate*, p. 40.
100. *Money, Method*, p. 11.
101. *Human Action*, pp. 11-12; quote: *Money, Method*, p. 21.
102. *Epistemological*, p. 208.
103. *Theory and History*, p. 271 (both quotes).
104. *Epistemological*, p. 3.
105. *Money, Method*, p. 24.
106. *Ultimate*, pp. 43-44; quote for p. 44. Also see: *Human Action*, p. 59; *Theory and History*, p. 161.
107. *Ultimate*, pp. 43-44; quote for p. 44. Also see: *Human Action*, p. 59; *Theory and History*, p. 161.
108. *Epistemological*, p. 24 ("As thinking"); *Money, Method*, p. 8 ("a knowledge"; "people wish").
109. *Epistemological*, p. 211 (both quotes).
110. *Human Action*, p. 158 ("great human society"; "all men..."); p. 170 ("all nations"); p. 169 (Great Society). Society is not God-given or the result of a social urge/contract: *Socialism*, p. 515 (also see pp. 290-91, 298-99); *Human Action*, p. 143, 160; *Epistemological*, pp. 57-58. Society is not an anthropomorphic super-being: Ludwig von Mises, *Epistemological Problems of Economics* (1933; Princeton, N.J.: Van Nostrand 1960) pp. 40-43 (also: society is not God-created); *idem*, *The Ultimate Foundation of Economic Science* (Princeton, N.J.: Van Nostrand 1962) pp. 78-83, 105-109; *Human Action*, pp. 145-47, 151, 52; *Theory and History*, pp. 58-61, 250-51, 254-56; *Money, Method*, pp. 32-34. — For Mises' own analysis, see *Socialism*, pp. 289-311, *Theory and History*, pp. 250-59.
111. Menger: *Problems*, p. 143fn. "collective wholes" etc: *Human Action*, p. 42. Collectives are invisible: *ibid*, p. 43. "Society as a whole": *Theory and History*, p. 253; also see pp. 253-54. "Direct cognition": *Epistemological*, p. 43. "Everything social" and "Every form...": *loc. cit*. "A collective whole" etc: *Human Action*, p. 43. Also see: *ibid*, pp. 143, 188; *Ultimate*, pp. 79, 81.
112. *Socialism*, p. 291 (ants); Herds etc: *Theory and History*, p. 234; *Human Action*, p. 160. Greater productivity: *Theory and History*, p. 234; *Epistemological*, pp. 42, 110, 113; *Human Action*, p. 144, 145, 179; *Socialism*, pp. 293-94, 299, 306. Variety: *Human Action*, pp. 160-61; *Socialism*, p. 301: "society starts from the smallest associations". People make connections: *Human Action*, p. 144; *Theory and History*, p. 234.
113. Actions not reflex: *Human Action*, p. 20; *Epistemological*, p. 65; quote: *Human Action*, p. 188.

114. *Human Action*, p. 47.
115. *Human Action*, p. 144 (return from actions; better achieved).
116. *Human Action*, pp. 164-65; *Socialism*, p. 303; *Theory and History*, p. 111.
117. *Human Action*, pp. 176, 197; *Socialism*, p. 44. Population growth etc: *Theory and History*, pp. 173, 343; *Human Action*, pp. 155, 165, 171, 264-65, 616, 864-66, 837; *Socialism*, p. 293fn.
118. *Human Action*, pp. 146, 160; *Epistemological*, p. 112.
119. *Human Action*, pp. 194, 197; *Socialism*, pp. 297-98, 306-307; *Ultimate*, p. 79; quotes: *Human Action*, p. 143 ("complex"); *Theory and History*, p. 251 ("totality"); *Socialism*, p. 295 ("it makes"); also see p. 316: "society is peaceful collaboration"; and *Human Action*, p. 273.
120. *Human Action*, p. 160.
121. Clive Gamble, *The Palaeolithic Societies of Europe* (Cambridge University Press, 1999) pp. 287, 314-322, 329-337, 387-414.
122. *Human Action*, pp. 43, 165; also see pp. 177, 184; *Socialism*, pp. 291-92, 322, 398; *Theory and History*, pp. 252, 56; *Ultimate*, pp. 104-105.
123. *Theory and History*, pp. 159-60; quote: p. 18;6.
124. *Theory and History*, pp. 190, 191, 257-58; *Human Action*, p. 46; quotes: *Human Action*, p. 46 ("inheritance and environment"); *Theory and History*, p. 195 ("tremendous").
125. *Theory and History*, pp. 160, 192, 188; also see p. 188 and *Ultimate*, p. 82. Quote: *Theory and History*, p. 261 ("fundamental")>
126. *Socialism*, p. 297 ("great means"); society is a means: *Human Action*, pp. 148, 165, 176, 179, 184, 205, 262, 265, 319, etc; *Theory and History*, pp. 51, 52, 58, 61.
127. *Theory and History*, p. 56.
128. *Human Action*, p. 693.
129. *Human Action*, p. 883 ("moral rules"); also see *Ultimate*, p. 105. Common law: *Socialism*, p. 44. *Ultimate*, p. 110 (New branches"); *Human Action*, p. 80 ("rules"); p. 149 ("rules of conduct"); p. 721 ("refers"); *Theory and History*, p. 54 ("social"). Rules are means: *Human Action*, pp. 720, 761; *Ultimate*, p. 105. Also see *Human Action*, pp. 720-21; *Theory and History*, p. 54.
130. *Socialism*, p. 291; *Human Action*, p. 192 ("evolution", "fatal error"); *Socialism* p. 316 ("arose"; "every"); also see p. 314.
131. *Theory and History*, p. 234 ("The history"); *Human Action* ("an evolution"); also see p. 476, and *Socialism*, pp. 69, 314; *Money, Method*, p. 33. *Socialism*, p. 69 ("The circle"); *Theory and History*, p. 220 (various civilisations).
132. *Human Action*, p. 89 ("the early"); *Theory and History*, p. 375 ("developed", "a remarkable"); p. 338 ("excelled").
133. *Theory and History*, p. 369 ("were followed"); *Socialism*, p. 309 ("a high", "less productive"). Social regression: *Socialism*, pp. 306-311; *Human Action*, p. 767-69.
134. *Theory and History*, p. 368 ("there was"); *Socialism*, pp. 301, 309-310; quote: p. 301 ("we can"); p. 310 ("social"); *Human Action*, p. 650 ("on of", "Huns", "those"); *Epistemological*, p. 113.
135. *Human Action*, p. 197; *Theory and History*, p. 245 ("Why", "a legal"); p. 374 ("the keystone").
136. *Human Action*, p. ; also see *Socialism*, p. 512.
137. *Epistemological*, p. 43 (all quotes).
138. *Epistemological*, p. 14.

139. *Epistemological*, p. 13 (both quotes).
140. *Human Action*, p. 199.
141. *Epistemological*, p. 1.
142. *Epistemological*, p. 1 (“simple”); p. 99 (“by their”); p. 2 (“platitudinous”, “land hunger”); pp. 98-99 (Dawes Plan).
143. *Theory and History*, p. 301.
144. Auxiliary: *Epistemological*, pp. 100, 105, 124; also see p. 2; *Human Action*, pp. 49, 61; *Theory and History* pp. 301-302 (“an erroneous”, “ignorance”); also see pp. 292-93, 296.
145. *Epistemological*, p. 134; *Ultimate*, p. 42.
146. *Human Action*, p. 40; also see p. 35.
147. *Human Action*, p. 92.
148. *Epistemological*, p. 14.
149. *Epistemological*, p. 140.
150. *Epistemological*, pp. 13-14. Also see *Theory and History*, p. 293.
151. *Epistemological*, p. 14.
152. Comprehension; pre-existing ideas: *Ultimate*, p. 48; *Epistemological*, pp. 28, 130-45.
153. *Epistemological*, p. 12.
154. *Ultimate*, p. 50.
155. *Theory and History*, p. 266 (“It is the” down to “offshoot”); p. 265 (“all people”).
156. *Theory and History*, p. 265.
157. *Human Action*, p. 58.
158. *Epistemological*, p. 28 (“daily” down to “go further”); p. 140 (“purged”); *Ultimate*, p. 48 (“the procedures”). Also see *Human Action*, p. 58.
159. *Ultimate*, p. 8 (“a being”); *Human Action*, p. 198 (“There are”); also see *Ultimate*, p. 44; *Human Action*, p. 20 (“The opposite”); *Ultimate*, p. 11 (“self-acting”); also see *Epistemological*, pp. 65, 122; *Human Action*, p. 13 (“wherever”), also *Epistemological*, p. 34; Emotions: *Human Action*, p. 16 (“He who”); also pp. 11-12, *Epistemological*, p. 34 (also motives).
160. *Epistemological*, pp. 147-48.
161. *Human Action*, p. 12 (“taking”); *Epistemological*, pp. 84-85.
162. *Epistemological*, p. 84 (“expressed”); also see pp. 34, 61, 94 and *Ultimate*, pp. 75-76; *Epistemological*, p. 176 (“economic”).
163. *Human Action*, p. 37.
164. *Human Action*, p. 37.
165. *Human Action*, p. 93. Also see *Epistemological*, pp. 62-65.
166. *Human Action*, p. 12.
167. *Human Action*, p. 28 (“animals”); *Ultimate*, pp. 9, 34 (action).
168. *Ultimate*, p. 42.
169. *Human Action*, p. 44 (“does not” down to “what is”); p. 39 (“the starting”).
170. *Human Action*, p. 35.
171. *Ultimate*, p. 8.
172. *Ultimate*, p. 44.
173. *Epistemological*, p. 24. Also see *Human Action*, pp. 40, 64; *Ultimate*, pp. 8, 44, 64.
174. *Epistemological*, p. 24. Also see pp. 13, 14, 20, 43-44; *Ultimate*, pp. 41, 44.

175. *Human Action*, p. 39.
176. *Human Action*, p. 68.
177. *Human Action*, p. 38.
178. *Human Action*, p. 38.
179. *Human Action*, p. 68 (“perfectly”); p. 39 (mistakes).
180. *Human Action*, p. 68.
181. *Ultimate*, p. v (“This essay”), also p. 54. *Human Action*, p. 39 (“philosophers”).
182. *Epistemological*, p. 101. For previous para: pp. 99-102, 105, 122-23.
183. *Epistemological*, p. 101.
184. *Theory and History*, pp. 208, 292-93, 296-98, 301-02.
185. *Human Action*, p. 38 (all quotes).
186. *Human Action*, p. 49.
187. *Epistemological*, p. 12.
188. *Human Action*, p. 50 (both quotes).
189. *Human Action*, p. 50 (“aesthetic”); *Theory and History*, p. 266 (“foreign”); *Epistemological*, p. 12 (Economic history).
190. *Human Action*, pp. 50, 55, 57, 68 (relative significance); pp. 646-47 (“the fullness”).
191. *Theory and History*, p. 291 (“history”), p. 293 (“understand”).
192. *Theory and History*, p. 293.
193. *Theory and History*, p. 298.
194. *Theory and History*, p. 48.
195. *Human Action*, p. 57. Also see p. 49, *Theory and History*, pp. 274, 277.
196. G.R. Elton, “Two Kinds of History” in R.W. Fogel and G.R. Elton, *Which Road to the Past?* (New Haven, Conn: Yale University Press 1983), p. 92.
197. “Two Kinds”, p. 92.
198. “Two Kinds”, p. 91.
199. “Two Kinds”, p. 92.
200. “Two Kinds”, p. 96fn.
201. “Two Kinds”, p. 102.
202. H.R. Loyn, “Anglo-Saxon England: Reflections and Insights”, *History*, Vol. 64 (1979) p. 171.
203. *Socialism*, p. 163; *Human Action*, pp. 710, 711, 256; *Socialism*, p. 163 (“stationary”).
204. *Socialism*, p. 196. Also see p. 122; *Human Action*, p. 711.
205. *Human Action*, p. 258 (“perfectly”); p. 250 (“this tendency”). — hereafter *HA*.
206. *HA*, p. 329
207. *HA*, p. 258.
208. *HA*, p. 335.
209. *HA*, pp. 257-58.
210. *HA*, p. 62.
211. *HA*, p. 331; also see p. 397.
212. *HA*, p. 613.
213. *HA*, p. 338.
214. *HA*, p. 392.
215. *HA*, p. 395.

216. *HA*, p. 315.
217. *Socialism*, p. 23; also see *HA*, pp. 390, 614, 760, 873.
218. *HA*, p. 761.
219. *HA*, p. 874.
220. *HA*, p. 333.
221. *HA*, p. 69.
222. *HA*, p. 117 (both quotes).
223. *HA*, p. 117.
224. *HA*, p. 275.
225. *HA*, p. 311.
226. *HA*, p. 276.
227. *HA*, p. 276.
228. *HA*, p. 338.
229. *HA*, p. 275.
230. *HA*, p. 275.
231. *HA*, p. 275.
232. *HA*, p. 278.
233. *HA*, p. 82.
234. *HA*, p. 337.
235. *HA*, p. 379.
236. *Ultimate*, p. 77.
237. *Ultimate*, p. 78 (all quotes).
238. *Ultimate*, p. 77. Also see *HA*, pp. 232-34.
239. *Socialism*, p. 23 (all quotes).
240. *HA*, p. 393.
241. *Ultimate*, p. 62. Also see *HA*, p. 351; *Theory and History*, pp. 9-11.
242. *HA*, p. 233.
243. *Ultimate*, p. 64.
244. *Ultimate*, p. 56. Also see p. 63; *Theory and History*, p. 89.
245. *HA*, p. 56.
246. *Ultimate*, p. 55. Also see *Theory and History*, p. 89.
247. *HA*, p. 352. Also see *Theory and History*, pp. 9-11.
248. *Epistemological*, pp. 117-118. Footnote omitted.
249. *HA*, p. 210.
250. *HA*, p. 210.
251. *HA*, p. 217.
252. *HA*, p. 351.
253. *Ultimate*, p. 7.
254. *Ultimate*, p. 6.
255. *HA*, p. 503.
256. *HA*, p. 504.
257. *HA*, p. 495.
258. *Socialism*, p. 37 (“economic goods”, “orders”); *HA*, p. 93 (“cooperation”; “other means”; “producers goods”); p. 94 (“cooperation with”; “combine with”).

259. *HA*, p. 94.
260. *HA*, pp. 479-86 (future provision); p. 490 (immediately); p. 484 (postponing).
261. *HA*, p. 480-81.
262. *HA*, p. 491.
263. *HA*, p. 488.
264. *HA*, p. 498-99.
265. *HA*, p. 504.
266. *HA*, p. 491; earlier quote: p. 492.
267. *HA*, p. 491.
268. *HA*, p. 493; also see pp. 503, 514; *Epistemological*, p. 218.
269. *HA*, p. 491 ("complement"); p. 94 (capital combinations); p. 492 ("complete").
270. *HA*, p. 503-504; *Epistemological*, p. 218.
271. *HA*, p. 503; *Epistemological*, p. 218.
272. *HA*, p. 505.
273. *HA*, p. 504; quote: 494.
274. *HA*, p. 514 ("perishable", "there is"); p. 517 ("All capital").
275. *HA*, p. 492.
276. *HA*, pp. 482, 490, 529, 530.
277. *HA*, p. 489.
278. *HA*, p. 493 (both quotes); also see p. 497.
279. *HA*, p. 497.
280. *HA*, p. 497 (both quotes).
281. *HA*, p. 492.
282. *HA*, p. 492.
283. *HA*, p. 260.
284. *HA*, p. 497 — all quotes except "social" — p. 500.
285. *HA*, p. 501 (all quotes).
286. *HA*, pp. 497-98 (quote: 498).
287. *HA*, pp. 497, 502; quote: 498.
288. *HA*, p. 502 (both quotes).
289. *HA*, p. 501 (all quotes).
290. *HA*, p. 507.
291. *HA*, p. 506.
292. *HA*, p. 506.
293. *HA*, p. 507.
294. *HA*, p. 507.
295. *HA*, p. 513.
296. *HA*, p. 506.
297. *HA*, p. 506.
298. *HA*, p. 506 ("natural"); p. 507 ("concerning").
299. *Epistemological*, p. 229.
300. *Fortunes*, p. 140 ("pellucid", "arguments", "tacitly"); p. 158 ("after").
301. *Fortunes*, p. 127.

CHAPTER 5

The Analysis Developed: Hayek

I

Hayek at University

Like Mises, Hayek read law at the University of Vienna. As he went there immediately after the First World War, he was allowed to finish in three years instead of four. He read law “in order . . . to do economics”, but his degree included psychology, in which he was “about equally interested” at the time. The single remaining lecturer in psychology came back seriously ill from the War; after his death, Hayek had to teach himself from reading the literature. He finally settled on economics for practical reasons: it held the opportunity for a job ¹.

Hayek had “more or less decided to do economics” during his war service in Italy. His first serious reading was of “two volumes . . . which were as poor specimens of economics as can be imagined.” He later marvelled that they did not put him off the subject permanently. Then, like Mises, Hayek became an economist only after reading Menger: “Mises says . . . this book [Menger’s *Principles*] made him an economist. Having gone through the same experience, I know what he means.” Hayek was apparently directed to both of Menger’s books by Othmar Spann (from whose seminar he was shortly thrown out.) Hayek also found Spann’s own book somewhat helpful in grasping the significance of the logical analysis of means and ends in economics. But he “really got hooked” through Menger’s *Principles*: “Such a fascinating book, so satisfying.” In retrospect, Hayek recognised that both the *Principles* and the

Investigations into Method had exerted a “decisive influence” on him, which he did not realise at the time. He “probably derived more” from these two works, particularly the general sociological analysis of the *Investigations*:

“This conception of the spontaneous generation of institutions is worked out more beautifully there than in any other book I know”².

Thus all four of the major Austrian economists were directly influenced and changed through Menger’s writings — not only Bohm-Bawerk and Wieser but also Mises and Hayek. In Hayek’s case, this was because Wieser was temporarily absent from the University, as a member of the Austrian cabinet, up to 1919. It was during the final year of his degree (1920-21) that Hayek first studied under Wieser. Since Hayek’s was a law degree, economics constituted only a small part: one subject in one of the major exams. In Wieser’s absence, economics was taught by the same Karl Grunberg — the “Marxist economic historian” and follower of the Younger German School — who had supervised Mises. Later Spann also taught the subject. When Wieser returned, he lectured mainly to the law students, who had only this one course in economics. Otherwise, Hayek reports that “any professional competence we had largely to acquire by our own reading and from the teaching of men for whom this was a part-time labour of love”³. Amongst these last was Mises, but Hayek met Mises for the first time only after his degree (see further).

Of his legal subjects, Hayek says he retained some of his study of modern law, but it was the extensive course on legal history, especially Roman law, which provided such “legal knowledge” as remained with him. Hayek later said that he was “by original training ... a lawyer.” This was in 1954; but in 1967, in an essay on Mach, Hayek stated, “... during the three years that I was officially enrolled as a law student, I divided my time about equally between economics and psychology, while my law studies were merely a sideline”⁴. Nevertheless, these legal studies helped profoundly to determine his view of the role of economics in analysing the real world (see further).

But apart from the three subjects of law, economics and psychology (the last mostly self-taught, and also much of the second), Hayek attended a huge variety of lectures at the University, on an enormous range of other subjects, including the history of art and classical Greek drama. He was also an “outstanding member” of a number of seminars. Despite studying “half a dozen other subjects”, Hayek got a first in his law degree, which he obtained a few weeks ahead of his closest friends (he passed the final exam in October 1921). He wrote the thesis for his higher doctorate under Wieser, obtaining this higher degree in early 1923⁵.

Hayek's Years with Mises

But as soon as Hayek passed his exams, he set out to find a job. The story of his first encounter with Mises is well-known. Mises had charge of a temporary government office which handled the settlement of international private debts between Austria and her erstwhile opponents (debts dating from before 1914.) Hayek arrived with a note from Wieser, who described Hayek as a “promising young economist.” Having read this, Mises looked at Hayek: “I’ve never seen you at my lectures!” Mises gave Hayek a job nonetheless and later assisted him significantly to visit the U.S. (for 14 months). When the office was wound up, Mises tried to get Hayek into the Austrian Chamber of Commerce [purely an advisory body to government] to form an economic research unit. When this failed, Mises set about securing the funding for the Austrian Institute of Business Cycle Research, which he founded in January 1927, mainly “because he had to help Hayek find the right start in life.” Hayek dealt with the organisational details, but Mises persuaded government departments and trade bodies, among others, to provide the funds. Thus Hayek worked with Mises for some ten years, during which he saw Mises almost daily. In May 1924 (after his return from America) Hayek was admitted into Mises’ famous *Privatseminar*, surely one of the most influential such groups this century⁶. Hayek left Vienna in 1931 to take up a visiting post and then the Tooke Chair at the LSE.

Mises on Hayek

Mises’ opinion of Hayek is clearly gauged from Mrs von Mises’ observation made during Mises’ final teaching years at New York University: “Lu[dwig] met every new student hopeful that one of them might develop into a second Hayek”⁷. Three inferences are clear: One, Mises regarded Hayek as the standard against whom he assessed all his students thereafter. Two, Mises hoped one day to find someone to equal Hayek, not surpass him. Three, Mises was still searching as his teaching career ended.

Hayek on Mises

Hayek, on the other hand, is more explicit and categorical in his assessment of Mises. He finds Mises to be “one of the most original thinkers of our time in the field of economics and social philosophy.” Hayek sees in Mises “a width of view and an intellectual spaciousness”, akin to that of an eighteenth-century philosopher. Mises (says Hayek) “must be compared to ... Voltaire or Montesquieu, Tocqueville and John Stuart Mill.” Hayek is emphatic that Mises “was ... never a real specialist”, hence the Viennese academics were right in their instinct that “he would not quite fit into their circle”, even though

he knew more about economics than most holders of university chairs in the subject. Hayek sums up Mises thus:

“Mises’ work as a whole covers far more than economics in the narrower sense. His penetrating studies of the philosophical foundations of the social sciences and his remarkable historical knowledge place his work much closer to that of the great eighteenth-century moral philosophers than to the writings of contemporary economists.”

Hayek himself refers to “my great master, Ludwig von Mises” (and more often, in interviews, to “my master, Mises”.) In 1978, he summed up Mises’ lasting influence on him: “I am to the present moment pursuing the questions which he made me see, and that, I believe, is the greatest benefit one scientist can confer on one of the next generation.” Hayek also says of Mises: “There is no single man to whom I owe more intellectually . . .” He describes his ten years under Mises as “a long, close collaboration”, during which Mises “became the chief guide in the development of my ideas”. Although Mises was never his teacher formally, Hayek counts himself a “pupil” and a “close disciple” of Mises, stating: “I have probably learnt more [from him] than from any other man.” Mises’ *Socialism* had the most profound impact on Hayek: after he read the book, “the world was [never] the same again.” Hayek underscores this influence repeatedly. He estimates that *Human Action* will produce similar intellectual results in due course, through the work of those who read it at a decisive moment in their intellectual development⁸.

Hayek’s Criticism of Mises

Hayek made one criticism of Mises on a number of occasions: that he was a rationalist utilitarian, who pushed the “a priori character of economic theory” too far. Hayek felt this last was the outcome of Mises’ professional isolation: Mises first had to battle the German historicists; then he found himself in reaction to the “dominant scientific positivism,” prevailing especially in America. So Mises “was driven to certain exaggerations”, as with his “teaching that all economic theory had a logically deductive *a priori* character.” Hayek said (some four and a half decades later) that he wrote ‘Economics and Knowledge’ to persuade Mises that the whole of economic theory could not be worked out a priori — only the pure logic of choice, i.e. of individual action, could be so deduced. But with many people interacting through the market, “the crucial processes were those by which information was transmitted among individuals.” These processes were “purely empirical”. Hayek says he was “then largely unaware that he was developing a rather neglected part of the Mengerian tradition.” Mises did not take criticism kindly at all, but unexpectedly he “even approved the article”, seemingly unaware that “it was a criticism of his

views". Hayek feels that Mises took this silently, "but no longer was prepared to reconstruct his by then fully developed system..."⁹.

Hayek made the above statements some 46 years after he first wrote "Economics and Knowledge" (it was his presential address to the London Economic Club on 10 November 1936; published in *Economica*, 1937). At an informal gathering organised by the present writer (in Menlo Park, California, in June 1975) Hayek was reminded he had actually made the point in 1933, in his article on "Price Expectations,..." He then remarked that once his work had been published he never read it again. So Hayek, in the 1980s, was clearly unaware that his article, written in late 1936, in fact developed *Mises'* reference to the "division of knowledge" which paralleled the division of labour in a market order. Mises first observed this in his 1920 article on socialist calculation which was incorporated into *Socialism*. Hayek's 1936 article not only acknowledges the latter (in a footnote), it italicises the phrase (in the text) and uses it twice. Hayek later referred (in a footnote to his essays on Scientism) to "the division of knowledge on which impersonal social processes rest" and then (in 1945) to "a co-ordinated utilisation of resources based on ...divided knowledge." So the same Mengerian influence in fact reached Hayek both directly *and* via Mises¹⁰.

Furthermore, Mises *did* modify his own position: in *Human Action* (p.66) he says that "the only elaborated part of praxeology" so far — subjectivist economics — concentrates on those problems useful for "the comprehension of reality." Therefore "[e]conomics does not follow the procedure of logic and mathematics." Rather it combines aprioristic reasoning with "the application of its theorems to ... concrete historical and political problems." In presenting its results, "aprioristic theory and the interpretation of historical phenomena are intertwined." Mises points out that its "subject matter" enjoins this "singular and logically somewhat strange" procedure upon economics. It requires "caution and subtlety" and Mises warns against "a careless confusion of the two epistemologically different methods implied." — This reads like at least an *attempt* to incorporate Hayek's point, although Mises does not mention Hayek's article.

Hayek felt that Mises' rationalist utilitarianism was not entirely compatible with the latter's "basic subjectivism" and conceded more to the Anglo-American position than the "Austrian methodological tradition" warranted. But Hayek also described Mises as "a child of the rationalist age of enlightenment" who could never shake loose from the view that reason could always do better than "mere habit." Hayek says Mises remained a rationalist utilitarian to the end. On two occasions, Hayek cites specific passages from Mises. One is

taken from *Theory and History* (p._); Mises says there [I omit a couple of sentences not germane here]:

“The ultimate yardstick of justice is conduciveness to the preservation of social co-operation. Conduct suited to preserve social co-operation is just, conduct detrimental to the preservation of society is unjust ... The problem is to organise society for the best possible realisation of those ends which men want to attain by social co-operation. Social utility is the only standard of justice...”

Hayek comments: “Though this is more rationalistically expressed than I would care to do, it clearly expresses an essential idea.” He immediately adds: “But Mises was of course a rationalist utilitarian in which direction ... I cannot follow him”¹¹.

We may note here that Burke had earlier linked justice and social utility. For Burke there were “only two [,] foundations of Law [;] ... equity and utility”. By the latter Burke says explicitly he means “general and publick utility” which is “derived directly from [,] our rational nature”, and from everyone’s interest as “a member of the commonwealth.” To this, Burke puts in opposition a “partial and limited” utility, such as that of “a robber” — i.e., a “domestic enemy.”¹² — Even with the substantial differences in historical circumstances and therefore in expression, it seems quite clear that both Burke and Mises are extremely close in the *content* of their ideas here.

To continue: As an instance of “extreme rationalism”, Hayek cites a passage from *Socialism* in which Mises says that ‘all social co-operation’ emanates from ‘rationally recognised utility’. Hayek feels this statement is “factually mistaken”: the socioeconomic order which so benefits humans was never designed by anyone, nor were its benefits seen in advance. Rather (says Hayek), people learnt to prefer something which had already been long in operation. But at this point Hayek says that this indeed is what Mises’ analysis has shown; and so “Mises as much as anybody has helped us to understand something which we have not designed.” Hayek feels that Mises, to his great credit, did emancipate himself from “that rationalist-constructivist starting-point”¹³. Thus even as Hayek characterises Mises as a utilitarian rationalist, he is impelled to qualify this assessment, to recognise that Mises’ work carries on Menger’s analysis of social formations. We have seen earlier just how Mises does this.

II

In the late twentieth century, political philosophers, legal theorists, the separate sections of neoclassical economics — all move in self-contained airtight compartments. Therefore Hayek’s work is conventionally broken up into a number

of hermetically-sealed boxes, such as capital theory, monetary theory, trade cycle theory, the socialist calculation debate, political philosophy, jurisprudence, legal theory, methodology, the history of ideas and so on. (And no doubt as further subdivisions appear in due course, Hayek's work will be further fragmented). It is the historian specifically who has to recognise that the work of Menger, Mises and Hayek constitutes an analytical and historical unity, as we saw earlier: — they all three investigate the analytics of individuals' actions, the interconnections amongst these actions and the resulting social and economic formations that develop historically. We now note Hayek's contributions.

Menger on Capital

We begin with the production structure. Menger, Mises and Hayek all saw that the analytical unit consisted of: *a.* the entire range of final goods and services being turned out in a particular historical context and therefore *b.* all the various production chains, made up of specific investments (in *both* "fixed" and "working" capital) yielding this particular range of first-order goods. In what follows I shall first set out the general abstract components of the analysis, then illustrate how these analytical components actually appear in concrete, historical materials (these illustrations are my own).

Menger (as noted earlier) saw that even in the simplest hunting-gathering societies, people deliberately provided for their future requirements; i.e., they allocated resources to production processes yielding a range of different consumption services in some future period, close though this "future" might be. Then people began producing goods of slightly higher orders, further from final consumption. Over time, they moved into the production of goods of ever higher orders, continuing progressively to move ever further from the consumption stage, until, in the late nineteenth century, the existing inter-firm production chains were lengthy enough to provide for consumption up to a decade ahead ¹⁴.

In sum, Menger says people specifically allocate resources "now" to production processes that will yield a variety of consumption services in future periods. Thus people gradually build up production chains consisting of goods of successively higher orders, that correspondingly yield first order goods further and further into the future. To illustrate the *principle*: A small handmade fishing net, thrown from the shore, is made relatively quickly, "produces" small quantities of fish rapidly and wears out as fast. A fishing boat requires a vastly greater range of complementary inputs and skills, takes much longer to build, and provides more fish over a far longer period of time. These however, are only two isolated capital items, separated for purposes of exposition from the

investment chains in which they are links; and fish are only one of a range of consumption goods produced from an array of investment chains. These chains, as Menger saw, are made up of specific investments in combination. Some investment goods are more versatile: they can be moved to stages closer to, or further from, final consumption. Other capital goods are more specific (in this sense). The outputs of any single firm are clearly only a small portion of any production chain, which consists of complementary outputs from innumerable firms. Menger described a *sequential* division of labour here, which can be extended through time (or contracted, according to circumstance).

Mises (as we saw above) stressed that all such production chains are adaptations to a particular set of historical circumstances. Scarcity of resources means the slate can never be wiped clean. As circumstances change, particular existing investments have to be re-adapted; *new* investments have to be adjusted to those *already* existing. Thus every capital structure is inescapably an historical formation, made by continuous adjustments to changing situations¹⁵.

The Average Period of Production

Hayek elaborates on and extends all these insights into the time-structure of production. The question arises: Did Hayek work first with the notion of the average period of production and then abandon it for a multiperiod theory? When did he first analyse an *inter-firm* production process of the type that Menger and Mises analysed? When did he realise that the investments of various firms actually formed investment chains that led to final outputs? The answer: In fact, from his essay on imputation (for his higher doctorate; published in 1928) to *The Pure Theory of Capital* (1940), Hayek consistently developed Menger's and Mises' analysis of an inter-firm production process leading to a collection of final outputs; Hayek says explicitly that he is building on Mises¹⁶. Hayek's writings contain only a few passing references to an average period of production, all from the years 1929-34. The concept is only mentioned — it plays no part in the analysis, which is concerned throughout with inter-firm investment chains. Thus in the second edition of *Prices and Production*, 36 pages (in Lecture III) are devoted to analysing such inter-firm investment processes; there is one mention (p. 42) of an average period of production, which is never used¹⁷.

The Capital Structure

Taking therefore a composite picture from Hayek's various analyses¹⁸: The time-“length” of this inter-firm production structure determines *simultaneously*: i. the range, quantities, qualities and types of final goods and services

produced *ii*. how far into the future this same flow of final outputs can continue *iii*. the extent to which this time-shape of consumption can be varied, if consumer-savers so desire (in composite). In other words: the “existing” production structure, whatever its time-“length” (“shorter” or “longer”), makes available certain supplies of goods over certain time-periods. *Within* these limits, people can set, and change, their preferred time-shape of consumption. *1*. They can continue as is *or 2*. Within the limits mentioned, they can increase consumption in the near future, *beyond* the level *already provided for*. To do this, the provision “now” being made for later time-periods has to be reduced. In which case: *a*. in these periods, a restricted range and smaller quantities of final outputs will be available; *b*. they will be available for a shorter overall period into the future than previously provided for. This means a “shortening” of the existing production structure. *Or 3*. people can reduce the provision being made “now” for consumption in nearer time-periods, below the level previously made. Such a reduction concomitantly releases versatile resources, to go into production stages furthest from final consumption. Thus more resources are moved into those inter-firm production chains that yield final outputs in yet later time-periods, i.e. periods extending even further into the future than already provided for. This further “lengthening” of the production structure *also* improves provision at these later dates — a wider and better range of first-order goods in larger quantities are made available then, together with *new* such goods.

Clearly, the “shorter” the existing capital structure, the narrower are the limits within which these preferences can be realised. Conversely, the “lengthier” the structure, the greater the achievable variation in the time-pattern of consumption.

Any production structure is an historical phenomenon, part of the specific and changing circumstances forming a particular historical context. These circumstances include consumer-savers’ desired changes in the future time-shape of their consumption. Adjusting the existing complex of investment chains to all such changes is a continuing historical process; it involves continuing changes in all these various investments: many are modified and/or re-positioned; others are dropped; new investments are added. It is through such alterations in the actual chains of concrete *existing* capital goods that, for example, a desire to provide further into the future than currently allowed for, is fulfilled. Thus the “length” of any production structure and any changes in it, are historical developments.

The Capital Structure in Anglo-Saxon England

To clarify these and other key aspects of the production structure, I now set out two illustrations, putting these abstract points into more concrete form. Let us begin with the relatively “short” production chains found in an Anglo-Saxon village living primarily on subsistence agriculture. Households rely on their current crops and livestock to carry them to the next harvest. Any food stocks might cover one or two bad harvests at most. Village craftsmen — blacksmith, potter, woodcutter/charcoal-burner, ironworker, cobbler, leatherworker, carpenter — are all part-time farmers as well, while also producing craft goods for immediate barter or sale in the village or nearby market. As compared with the global production chains of the late twentieth century, final outputs are extremely simple, narrow in range, and scant in quantity. They consist of coarse foodgrains; simple, coarse, handmade clothing and footwear; and only a few or more household items such as coarse woollen blankets; wooden stools, benches, bowls, platters; perhaps a knife or two. Only a very few, relatively unspecialised, intermediate goods are produced — intermittently, in very small quantities: eg iron ore, from surface mining; charcoal, small iron bars, clay, fences, yarn, leather, and the like. These are produced with a few simple hand-tools, made by the blacksmith. Production processes are extremely “short” and many occur in the household itself — eg the output of cloth, clothing, simple footwear. The most important such process, subsistence agriculture, uses only simple tools: eg wooden ploughs, hoes, spades, etc; all produced intermittently, in ones and twos. The division of labour is also comparatively narrow; specialisation and exchange are highly limited, relative to later historical periods with a more extended production structure.

Furthermore, if these “existing” flows of final outputs are to be maintained, the various investments composing even so short a production structure would have to be replenished or replaced. Livestock herds would need to be kept up, grain stocks and seed grain set aside, agricultural and craft tools and implements repaired and then replaced, labour and other inputs re-invested at the time needed in agricultural and craft production, and so on.

“Extending” this capital structure would involve principally agricultural investments: better crop rotations, more and/or better implements (for ploughing, weeding, harrowing, harvesting etc), better seed, more and better fertiliser, more ploughing, more weeding etc. These investments require more resources in stages somewhat further removed from final consumption. For example, more/improved implements require more iron, charcoal, etc, plus more craft labour (blacksmith, ironsmith, etc.). This means higher payments than before — whether in grain or some other good(s), which means a bigger reduction than otherwise in “current” grain consumption or stocks, on the

farmer's part. If grain output is close to subsistence, then any further reduction is highly risky. *If*, however, using these better implements allows grain output to be maintained at a higher level, *then* some of the additional grain can be set aside to exchange for the larger quantities of craft outputs and services needed for repairs and replacements. And craftsmen, in turn, will have to use more resources to repair and replace their own tools, furnaces, etc.

Continued higher output of grain then allows better crop rotations including more fodder crops and the diversion of more land to meadow and pasture for more and better-fed livestock. — Meadows require haying implements and skilled labour. — This increases the supply of fertiliser and livestock products which allows further specialisation and exchange and so on. Thus: extending the capital structure and increasing specialisation are two sides of the same coin.

The above is an oversimplified account but I believe it illustrates the general principle.

In sum: in comparison with the world-wide production processes of the late twentieth century: this relatively “short” production structure of the Anglo-Saxon period supplies only a tiny range of first-order goods in very small quantities and for only a very short time-period into the future. Household production is very significant; correspondingly the division of labour is relatively limited. There is very little scope for varying the time-shape of consumption; in particular to extend provision beyond one or two seasons ahead.

The Global Capital Structure

Consider now the global capital structure which began developing from around the mid-eighteenth century onwards, which now binds all peoples firmly together. To get an idea of the historical phenomenon involved, imagine the vast array of specific goods and services available in the nearest shopping centre. Now think of all the goods and services in all shopping centres throughout the developed world from North America through Western Europe, parts of South Africa, then Australasia and Japan. Take any one good and mentally trace through *every single* production process, input and skill needed to provide that one final good, including all land and sea transport, insurance and legal services. There is no stopping point other than the entire world capital structure. Some comments nevertheless:

The production chains involved are obviously incomparably “lengthier” than in Anglo-Saxon England, with an immensely vaster range of final consumption goods. These last include hundreds of thousands — perhaps millions — of items available only *through* such “lengthier” investment chains:

— to name only one or two, there are CDs, TVs, dishwashers, cars, electrical home tools, mass produced books, magazines, pianos, etc. etc. The production processes likewise are composed of hundreds of thousands of various *kinds* of “intermediate” goods and “fixed” assets eg retail shops, stocks of retail goods, lorries, warehouses with stocks, an immense variety of machinery, equipment, goods-in-progress, containers and packaging, spare parts and components, steel, other metals, raw materials, steel mills, etc, etc. All outputs are unimaginably better in quality and produced in quantities unthinkable in earlier historical circumstances when production chains were far “shorter”.

It is impossible to enumerate all the various outputs produced as components and final products of this world-wide capital structure. It is equally impossible to list all the varieties and types of distinct occupations and specialisms that are necessarily part of all the production processes involved, down to the final consumption stage. For each individual firm or production unit, their various outputs (goods and/or services) are only tiny segments of links in a particular succession of production processes leading to some final output(s). All these activities of the innumerable firms and individuals involved are linked together and coordinated through prices and returns, on the various items produced or producible.

The Time-Shape of Consumption

Now to analyse the time-shape of consumption in this global production structure: As we go from the final consumption stage to production stages successively more distant, the intermediate goods-in-progress can be expected to issue in due course as finished consumer goods at time periods that move successively further into the future. Thus consumer goods now in warehouses can be expected to move into the retail stage fairly soon. Consumer goods still being worked on in factories will be ready for final consumption only at a later “date” than the goods in warehouses now: the goods still in factories need finishing, then they have to be distributed.

Moving back, stage by stage, further and further away from final consumption: various inputs and intermediate goods are now being prepared to go into factories; inputs are now passing through steel mills, sawmills and the like; iron ore, coal and other minerals are currently being mined while timber is growing in forests and plantations. The goods in each of these sequential stages can be expected to issue as final consumption goods at periods successively more distant in the future: The intermediate goods being readied now for the factory have to go through the manufacturing, finishing and distribution processes. The inputs now passing through steel mills, sawmills, etc have to be further

worked on and converted into intermediate products, then pass through the various manufacturing and finishing stages, then be distributed. The iron ore, coal, timber, etc. have to go through steel mills, sawmills etc, then the various preparation, manufacturing, finishing and distributive stages. Thus in a “lengthy” production structure, intermediate products passing successively through various stages emerge as consumption goods in successive future periods. Clearly the “lengthier” the capital structure, the further into the future will consumer goods continue emerging.

In due course, *if* nothing else intervenes, all the intermediate goods now being worked on in all production stages will have finished their progress to final consumption. This means that to maintain the “current” quantities, qualities, range and time-shape of consumption outputs, investments must *continue* to be made to continuously replenish the various flows of inputs and intermediate products in each successive stage. For instance, mining and timber-cutting have to continue, to provide a continuing flow of coal, iron ore, other minerals and timber. Such investment processes are even further removed from final consumption; they too are integral to maintaining the “current” time-shape of consumption. Furthermore, the different kinds and varieties of production equipment, the machinery of all types, such as machine tools, mining machinery, steel-making equipment, machines for producing cars, fridges, washing machines, TVs, CDs, tinned fruit, soap, cereals, clothing.....*et hoc genus omne*, will all wear out, each in due course. So, to maintain the “current” flows and time-shape of consumption beyond this point, all these manifold types of machinery and equipment have to be not only repaired and maintained, but replaced eventually as needed. To do all this, such production processes have to be going on “*currently*” that will provide, at the times needed in the future, the specific sorts of capital items — the particular kinds of machinery — required. With such an extended capital structure, technical changes can be tried out and successful ones embodied in new machinery quickly, so such change is rapid. Thus over time, the capital structure incorporates technical developments amongst all its other historical features. Finally, buildings, of course, need repairs, maintenance, replacement, including technical and design changes, as they occur.

To summarise: in the “lengthy” production structure here outlined, from the late twentieth century, in every production stage *en route* to final consumption, there are immense quantities of innumerable types of goods-in-progress and other inputs being worked on and moved into the next succeeding stage. Thus each “stage” also uses massive investments in a vast variety of plant, equipment and machinery. At all stages, a range of transport services are used, which means further substantial investments in a range of vehicles, ships, etc,

to be utilised as needed. Finally, production is under-way “now”: firstly, to continue the flow of goods-in-progress, secondly, to provide a continuing flow, through future periods, of plant, equipment and machinery, including technical changes, and *new* types. All these production processes are subdivided amongst all the innumerable firms involved, and lead ultimately to a vast variety of final outputs, including leisure. Concomitantly, this extremely “lengthy” capital structure generates a minutely subdivided division of labour, with an immense array of particular and changing functions. — Table 5.1 gives an *attempt* to visualise *some* of the features outlined above.

Table 5.1		
The Time-shape of Consumption		
Stage of Production	Goods Passing Through	Services/Inputs Being Added/Used Up
Retail shops	Huge range of consumer goods — ready to go home.	Transport, buildings, shop-fittings, shelving, offices, equipment, etc.
Warehouses	Consumer goods waiting to go to retail shops.	Buildings, fittings, shelving, forklifts, lighting, offices, phones, etc, etc.
Finishing stages	Goods-in-progress — finished, packed.	Workshops/buildings; finishing, packing materials.
Factories (consumer goods)	Goods-in-progress being produced, worked on, taken to finishing stages.	Machinery — huge variety of inputs of all kinds.
Rolling mills, machine shops, etc	Intermediate products being prepared for next stage of production. Machine parts being prepared.	Machinery of various descriptions; inputs being used up; eg steel products, other intermediate metal products.
Woodworking shops	Wood products being worked on.	Wood products being used up.
Kilns	Drying timber.	
Steel mills	Iron ore, coal, other ores, etc being converted into steel products.	Mills, machinery, furnaces, fuel, etc; offices and equipment. Mineral inputs.
Sawmills	Timber being worked on.	Machinery etc.
Mines	Iron ore, coal, other minerals.	Mining machinery, lighting, ventilating, equipment to remove ores, coal.
Timber plantations	Growing timber.	Saws etc to cut timber as needed.

Various factories, workshops, mills, etc.	Replacements for: Retail shop fittings Warehouse fittings Machinery for finishing stages Machinery for consumer goods factories Machinery for rolling mills, machine shops, woodworking shops, etc Machinery for steel mills, sawmills Mining and ventilating machinery	Various inputs being used up.
	Machinery to replace machines producing replacement machinery. Other items: various rubber items, lubricating oils, fuels, bricks, brick kilns, transport, legal services, insurance, etc, etc, etc.	

Notes:

1. All the above production processes are being carried on ‘*now*’.
2. But the goods being worked on will issue forth as final outputs at time-periods *successively further* into the future. Thus goods in retail shops will go home in a few days; the timber *now* being planted will become furniture only much further into the future. But the trees *must* be planted ‘*today*’ for this future output to appear in future time-periods. Similarly, the replacement machinery now being prepared for future renewal of (eg) a steel mill, will contribute to the emergence of final goods at time-periods even further distant into the future. But these preparations *must* be made ‘today’, *if* the steel mill is to be renewed at the time determined upon.
3. The ‘current’ level/range/quality of final goods is the outcome of similar production processes set in train in *past* time-periods.
4. All this reflects the *composite preferred* time-shape of consumption of the body of consumer-savers. As these preferences change, versatile inputs are shifted into stages further from/close to the consumption stages; and the *rates* at which goods-in-progress flow through these stages are correspondingly speeded up/slowed down, within the possible limits.

5. New technology is incorporated into machines as they are replaced; the pace of renewal/replacement depends on the time-preferences of consumer-savers.

Gains and Losses are Essential

This whole complex of production chains is formed, maintained and changed in accordance with returns — operating profits and losses, capital gains and losses — on the various specific investments (“fixed” *and* “circulating”) making up each of the “links” in every “chain”. Since each individual investment is only part of a link in an investment chain, profit and loss are *equally* essential: it is through these that the various separate investments in separate firms are linked together to form a chain ending with final consumption. As — historical — circumstances change, particular investments will have to be altered to maintain the chain and its contribution to the range of final outputs, themselves changing. So, capital and operating losses remove the mal-investments that no longer “fit”, while better adapted investments, including new ones, earn profits and capital gains.

To maintain the ‘current’ range, quantities, qualities and time-shape of final goods and services, means maintaining the inter-linked price-cost relationship — the chains of returns — on all the various and changing investments — intermediate products, equipment, buildings etc — making up just those production chains yielding just this collection and type of consumption services.

Clearly, such a production structure has very substantial scope for varying the flow of final outputs in different time-periods, according to the changing preferences of consumer-savers. Its immensely greater “length” provides immense quantities of final goods and services. Correspondingly, this permits far wider limits within which the time-shape of consumption can be varied. Putting this first in abstract terms: changing to a different time-shape of consumption means changes in the “length” of the overall production structure (making it “longer” or “shorter” than “currently”). This means concomitant changes in *returns* in different production stages, so as to bring about corresponding shifts in investments, both “fixed” *and* “circulating”.

Lengthening the Capital Structure

Suppose consumer-savers wish to increase provision in time-periods more distant into the future, *above the level already provided for*. This means in these more distant periods, they seek to raise the quantities, qualities, and range of final outputs, including new ones, beyond what had been hitherto allowed for. To achieve this goal requires an additional “lengthening” of the production

process involved — additional, that is, to that already embarked upon. These further processes have to be added on “today”, ie investments have to be further expanded *now* in stages furthest from final consumption, with new links added to the various investment chains.

Changes in returns — in cost-price relationships — in the different production stages, bring about these adjustments. Initially, the desire to provide more “today” for additional and improved consumption in more distant time-periods manifests as a relative slowing in “current” purchases of final outputs (that is, “saving” rises *above* previous, expected, levels). This slowdown is smaller or larger, according to consumer-savers’ changed time-preferences. Thus, returns are reduced correspondingly in stages closest to final consumption — the price-cost gap is narrowed, below producer expectations, on those processes bringing final outputs forward in the relatively closer future. There is now a slower rate of flow of consumer outputs in nearer time-periods: eg retailers and wholesalers now find stocks lasting longer and begin to reduce them, the rate of production slows in consumer goods factories. Rather more quantities of versatile resources (eg. steel, labour, raw materials, etc) are released. Correspondingly, in stages further from final consumption, returns rise, as (alternate) costs are reduced, in line with the additional versatile resources now available.

To put all these in somewhat more concrete form: as returns fall on production processes nearest final consumption, there is a concomitant reduction in the flows of steel, intermediate products, raw materials, labour, fuel and other versatile resources into these processes. This in turn means a reduced rate-of-flow of final goods, eg TVs, CDs, washing machines, furniture, etc, in the near or very near future. Instead, rather more steel, raw materials, fuel, labour and intermediate goods, than previously allowed for, go into areas remoter from final consumption, eg the production of mining machinery, steel-making equipment, machine tools, other types of machinery and equipment, etc. New types of capital goods are produced. More bricks go into factories and plants in these stages, rather fewer go into consumer goods factories, shops, warehouses, etc. More/larger brickworks are built. More timber is used for pit props, and in factories and workshops, relatively less for furniture, bird tables etc. Timber is left to grow longer; more trees are planted to mature later. Mining and other investments are increased, to provide an enhanced flow of minerals in future.

In time: as timber plantations yield more trees, more timber is available to help produce additional furniture and the like. More bricks mean more housing. A larger flow of minerals goes into larger and/or more numerous steel and other plants, with more and/or better equipment. Outputs go from there to more and/or larger factories, again better equipped.

There are more and newer types of intermediate products, as well as more and better production machinery of all kinds. Some investment goods are much reduced in use; others are dropped altogether. Taking *one* example only: consider what happens so that accelerating quantities of CDs and CD players are produced while output of records and record players is severely cut back; or when computers replace typewriters. A large number of *inter-related* changes have to occur in all production stages — from those far removed from the final output, right down to the retail stage. Many investments become economically unusable; *new* investments and intermediate goods are produced. Plants, factories, equipment, machinery: some types are no longer useable; *new* types are produced and expanded considerably; many are modified.

All these increased/improved/new outputs are as yet moving through production stages further removed from final consumption. These intermediate products will be further worked on and reach the final stage — eventually, at periods further in the future. For those stages near consumption: there is now available an enhanced flow of better/new intermediate products; the resources necessary to enlarge/improve consumer goods factories are also being produced. Thus from these nearer stages, more/better/new types of final goods flow into bigger wholesale and retail sectors. As all these larger/improved flows of goods-in-progress move into stages close to consumption, costs are reduced there, returns rise and so the rate of flow of final outputs rises. All this occurs at dates *later*, into the future.

In the interim, while investment chains are being thus “lengthened”, the rate of flow of final outputs is reduced relative to what it would have been otherwise, as noted above. As these “longer” chains are “completed”, the larger/improved flows of goods-in-progress in due course reach the retail stage and being to issue forth as improved consumption services. For these chains to *be* completed, the price-cost relationships — the pattern of relative returns in the various stages — that bring about such a lengthening need to be maintained *throughout* this interim period. *So long as* consumer-savers’ time-preferences are unchanged, they will continue to “save” to the extent necessary in the interim — ie they will do nothing to change this rate of flow and thus change these price-cost relationships. It is clear that “saving” in the sense necessary here **cannot** be a financial aggregate deflated by some price-index. “Saving” rather refers to *the maintenance of the price-cost relationships necessary to extend the capital structure*; which means acceptance of a necessarily reduced rate-of-flow of final products during such an “extension”. Similarly, if this extended structure is to be maintained — ie if the improved flows of final services are to be retained — the production processes that produce all the new/added intermediate products and “fixed” assets in all stages must continue. This means

again: maintenance of the relevant price-cost relationships — ie a continuation of “this” set of time-preferences on the part of consumer-savers.

Shortening the Capital Structure

Suppose now consumer-savers wish to bring consumption forward to nearer periods in the future, again, *above the level previously provided for*. Then all the processes outlined above would be reversed. As purchases of final goods are speeded up, prices and returns rise above expectations while stocks are reduced more rapidly than allowed for. Production flows are speeded up in consumer goods factories. To do this, versatile resources are shifted into processes that yield consumer outputs more rapidly in the nearer future. Concomitantly, costs rise in stages furthest from final consumption; returns are squeezed in these areas. Outputs of machinery and “fixed” assets *furthest from final consumption* are slowed down (eg mining machinery, steel-making equipment, etc). And so on: reversing the sketch drawn above. — Patently, there are extremely wide limits within such an extended capital structure for varying the time-shape of consumption. But it is always the available resources, as determined by the “existing” production structure, which sets the limits within which such variations are achievable: scarcity, as always, limits choice.

Complexity of the Capital Structure

The above is, as said, only a bare sketch pointing to the extraordinarily complex production flows and interconnections actually found in even the most modest capital structure. Hayek himself said of his own attempt, in *The Pure Theory of Capital*, to delineate the principles on which production structures are formed: “...the things become so damned complicated, it’s almost impossible to follow it”¹⁹.

Clearly, this abstract analysis of the capital structure is a tool for *historical* study: to bring out the complex inter-connections amongst human activities in real historical contexts. Such notions as “an average period of production”; aging wine or growing timber; the average age of investments; even input-output analysis and the theories of multi-period production processes — all fail to bring out the key aspects of the historical reality that the capital structure is built on: the range of final outputs that people seek to obtain (including leisure); and the investment chains that produce this range, through time. Thus each final good or service is only *part* of a wider range of such final outputs; and with respect to all *non-consumption* outputs, the questions that need asking are: which final output(s) does this good/service ultimately contribute to? What are the *other* investments in the investment chain(s) in which it

helps to form a link? Where does it stand in relation to the final link — final consumption?

As mentioned, Hayek works throughout on refining and extending this abstract picture of the capital structure. We can now see why he explicitly repudiated the notion of an average period of production. Speaking in retrospect, he is quite negative about it: “The average period of production is a beautiful simplification, but doesn’t help you at all”. It is “crude”, and “so over-simplified as to mislead in the application”²⁰.

The Trade Cycle

Hayek’s analysis of the trade cycle is again explicitly a further development from Mises²¹. This analysis is not relevant here; it is only necessary to say that the trade cycle is *super-imposed on* the production processes constituting the — changing — capital structure in any particular historical context. The cycle is a combination of: *1.* an attempted further extension of the production structure, *beyond* that which corresponds to consumer time-preferences. This attempt is in response to an acceleration in the money-supply. *2.* This is followed by a shortening which brings investment chains into line with consumer-savers’ desired time-shape of consumption. Thus the changes making up the trade cycle are *additional to* all the other processes taking place; in particular, those that reflect consumer-savers’ time-preferences and adjustments of investment chains to ever-changing circumstances. In short, the primary analysis *has* to be of the production structure; the analysis of the trade cycle can only follow, as a contingent corollary. (For a fiercely condensed outline, see footnote²²).

In neoclassical economics, however, trade cycle theory is a self-contained unit. Hence, Hayek’s account of the cycle is likewise seen as similarly complete and independent. Sraffa’s noted exchange with Hayek, over the first edition of *Prices and Production*, is one of the earliest encounters between the Anglo-American neoclassicals of the time and the “Austrian” approach. Sraffa remains firmly within the Anglo-American framework. He, therefore, finds the analysis of the capital structure to be both obstructive and unintelligible; he is plainly irritated by such irrelevant “preliminaries”, whose “description [obscures] the main issue”. Not surprisingly, Sraffa *has* to focus on Hayek’s auxiliary monetary assumption (that MV is constant) and his tentative comments on monetary policy, and treat these as the central theory, fully-fledged and self-sufficient. Sraffa’s conceptual prism, in other words, filters out the cat and shows him only the grin — or perhaps a few whiskers. So Sraffa argues that it is completely irrelevant whether inflated or uninflated money is used to purchase “capital” [non-consumption] goods; consumption is still reduced

and the goods are just as [automatically] productive. Where the funds are inflated, there is class robbery: but the robbed party — the workers — cannot force the robber-capitalists to give up the goods. Thus Sraffa excuses himself from trying to grapple with the capital structure: “Hayek as it were builds up a terrific steam-hammer in order to crack a nut — and then he does not crack it.” So “we need not spend time criticising the hammer”²³.

Thus, Sraffa explicitly refuses to tackle the vital issue: the analysis of the interconnected investment chains that yield final outputs. Thus he cannot see that only *after* such an analysis is it possible to consider the effect of inflation on the formation of such investment chains. He chooses rather to criticise Hayek’s observations and comments on this effect, with no knowledge of *what* is being affected and, therefore, *how* it is affected. Instead, Sraffa develops some aspects of his own Ricardian theory²⁴.

Equilibrium

Hayek is generally considered an equilibrium theorist who then abandoned the concept, although some hold he remained true to the end. The historian’s question is different: When did Hayek realise the real world needed analysing? From this perspective, it is clear that Hayek never saw the depiction of equilibrium as a *ne plus ultra*: he was aware from the start that such a picture was only a tool, that beyond it still lay the analysis of reality.

Hayek’s observations on the preparatory role of equilibrium occur in the course of his analysis of the production structure and the trade cycle, and in his penetrating commentaries on the (im)practicalities of the various proposals for socialist economic calculation. He differentiates sharply between the representation of equilibrium and “the true functioning of the price mechanism”; he specifically investigates this last in separate essays (I examine these below).

Hayek’s ideas on the nature and role of equilibrium theorising are a direct development from Mises’ ideas. Mises refers to the “stationary state” as a necessary conceptual aid. But it could “never exist”; it was “a theoretical assumption to which there is no counterpart in reality.” So too the *ceteris paribus* assumption of the “static method” was an “indispensable fiction”²⁵. Hayek’s comments are similar: He refers to “an imagined static state of affairs.” Although “the static approach” is “an indispensable theoretical tool”, the assumptions necessary to use it “artificially create the data”. Equilibrium prices are “hypothetical”. Equilibrium theory can only handle “such changes in data as are predictable”, with “no deviation from the expected course of events”. If equilibrium is to extend through time, a necessary assumption is that changes in “wants and means of production” are all known to individuals at the outset.

In such a situation, everyone achieves the ends they seek. Although “this will never be seen in reality”, it allows the effects of change to be assessed. Equilibrium is thus “a foil” to highlight “the actual course of events”. Lastly, Hayek identifies equilibrium with the “modern theory of the general interdependence of all economic quantities”, as best exemplified by the Lausanne School ²⁶.

Concurrently with all these characterisations, Hayek repeatedly emphasises that such an equilibrium contains no money. Systematic analysis is still needed of how the inclusion of money changes and influences individual prices, especially when it takes the “alien” form of “bank credit”. One major example of how money alters non-monetary “equilibrium” prices is the trade cycle. The latter “show(s) empirically observed movements” that equilibrium theory is still inadequate to explain. In the course of the cycle, price changes initially do *not* lead to equilibrating changes in quantities; price expectations are falsified. Only later are all these rectified. In other words, people act on the basis of individual money prices and price expectations. A purely statistical relationship between some price *index* and some monetary *aggregate* says nothing about the individual actions that drive economic phenomena ²⁷.

Parallel with the above, Hayek also refers to an “equilibrium” — a regularity in economic inter-relationships, which is rooted in “the logic of economic action”, — individuals trying to make the most of their resources. This allows equilibrium analysis to be applied to all economic phenomena. Hayek emphatically rejects any “far-reaching indeterminacy” resulting from monetary influences — ie economic explanation is still possible in a money economy. From very early on, Hayek saw economic theory as Mises did: as a way of organising concrete data: “the task of theory is...to provide the framework into which any concrete assumptions” about individual actions “can be fitted”. Along with Menger and Mises, Hayek sees these concrete data as historical in nature, the “constantly changing object(s)” of theoretical explanation. Actual historical fluctuations contain a vast variety of features and differ greatly amongst themselves. In the earliest of his (translated) articles, Hayek was well aware that statistical indices did *not* capture the data corresponding to analytical categories. Two key changes in particular, could not be so caught: *a.* relative shifts towards goods further removed from final consumption, *b.* how far these shifts correspond to the actual release of resources from processes nearer consumption for investment in processes further away. Even within the firm, management demarcations differ from theoretically significant categories. Hayek also emphasises that the range of real-world interest rates does *not* correspond to the “interest rate” of Austrian theory. The latter’s functions are performed rather by returns in different production stages ²⁸. Thus Hayek, right from the

outset, was concerned with developing analytical tools to study an historical reality.

In *The Pure Theory of Capital*, Hayek distinguishes between ‘static’ and ‘dynamic’ equilibrium, the latter being a refinement and extension of the intertemporal equilibrium which he had set out in his 1928 article. Even at that early date (as we just saw), he realised that it could handle the expected only, and therefore it was only “a foil” for comprehending reality. Twelve years later, in the *Pure Theory*, Hayek explicitly and repeatedly terms *any* picture of equilibrium, whether “static” or “dynamic”, as “fictitious” or “purely fictitious”. (There are nine such references in sixteen pages. Once, this “imaginary” state is said to be a “foil”. Twice, the idea that it refers to reality is called a “pretence”.) Hayek, in fact, feels that only two types of analysis are useful — a hypothetical equilibrium and an historical sequence:

“the only relevant distinction is between two methods, that of logical analysis of different plans existing at the one moment (“equilibrium analysis”) and that of causal analysis of a process in time. For this distinction, the terms statics and dynamics seem altogether inappropriate, and it would probably be better if they were to disappear entirely from economics”²⁹.

Hayek emphasises that equilibrium is only an “intellectual tool”. Its function is to “analyse in isolation a set of relationships...relevant for the explanation of actual events.” To explain “historical sequences...is of course the ultimate goal of all economic analysis”. Actual historical investments are adaptations to “a series of unforeseen changes”, so in most cases different goods will be produced instead, in due course. Thus, the real-world capital structure is in “a process of continual change”³⁰.

The Wider Context

As mentioned previously, Hayek is seen as having left the airtight box of economics for other sealed compartments, such as political philosophy, methodology, etc, from around the late 1940s. But, as Hayek puts it (in retrospect), he was “turn[ing] to general problems”³¹ somewhat later than Mises had done. In other words, Hayek considers he moved into a broader part of the same field of study. This is because Hayek continues throughout to develop the same framework which Menger established and Mises extended. All the phenomena that Hayek investigates lie within this framework — they are all analysed as the unforeseen outcome of the interconnected actions of individuals over time: the capital structure (above); the pricing system, the katallaxy, the common law, moral rules (all below).

Hayek's writings on the production structure and the trade cycle were discussed extensively in the journals between 1931 and (February) 1936. But these writings were part of a framework addressed to analytical issues that even then lay definitively outside the contemporaneous Anglo-American theoretical structure; his inaugural lecture on "The Trend of Economic Thinking" clearly illustrates this (I consider it below). At the time, of course, such a gulf could hardly be seen, if at all. From 1936 onwards, there is scarcely any reference to his work in the journals. And Hayek's writings from 1940 onwards, begin to contain some indications he was becoming aware of a certain distance (see below, on the economist's role).

The Trend of Economic Thinking

Hayek's inaugural lecture at the LSE, in May 1933, was addressed solely to "general problems", ie the general analysis of social phenomena. He built solidly on Menger and Mises here; certain of its key points are extended somewhat in his first article on socialist calculation. Thus Menger (as we saw) distinguishes between "pragmatic" ie designed, orders and those that result unintentionally from historical development — from people's actions aiming at various ends. Mises sets out the differences between an organisation, the outcome of a single will, and an organism, which manifests "mutuality". Hayek (in his inaugural lecture) uses Mises' terms and analysis: The lay mind identifies order with deliberate organisation only (says Hayek). This attitude is "probably the *last* remnant" of a "primitive" animism and anthropomorphism, abandoned in the natural sciences. But "society is an organism... not an organisation". So too are other "spontaneous institutions", including the economic system. With this, as with similar phenomena, "the spontaneous interplay of the actions of individuals" produces an organism whose parts are functionally interdependent. No human mind designed it, nor did people's actions aim at it. The economic system solves complex problems no-one realises exist; it functioned long before it was understood; it co-ordinates people's actions, through a complex mechanism. Only after "intense...systematic inquiry", are its existence and functions grasped, as the object of economic theory. Thus economic analysis begins with elementary facts that everyone knows, but it then pursues the implications systematically and comprehensively, far beyond the obvious, to discover the workings of an "unsuspected order", the "interdependence" and "coherence of economic phenomena". — These points are, of course, developments from Mises ³².

Again with Menger and Mises, Hayek sees in the Younger German Historical School, the chief antagonist of this 'economic' analysis. This School's economic ideas are those of the man-in-the-street (he says). It seeks to derive

regularities directly from historical materials. Naturally, failing in this, it then denies that economic phenomena are orderly; they are only a succession of independent historical events. Hayek goes on: the natural sciences have to begin with complex phenomena, surmise their basic elements and establish these through experiments. But the social sciences start from the directly and indisputably “known empirical elements” that form complex (social) phenomena; analysis then derives otherwise unobserved regularities. Thus, the social sciences are “empirically deductive”, and the pricing system solves “permanent economic problems [that are] independent of the historical framework”. — Some comments are in order. Hayek here follows Menger and Mises. Menger first pointed out this fundamental difference between natural and social phenomena; he realised historical data were complex, as did Mises; for the latter, “economic theory” means systematic reasoning about human action, reasoning which continues long past the immediately obvious ³³.

Furthermore, Hayek clearly is describing a specifically ‘Austrian’ position here, which has always been entirely distinct from anything in Anglo-American economics. In sum: for the older Austrians, economic theory studies social phenomena that have *a.* functioned for very long periods of time, *b.* emerged over these periods through the actions of unsuspecting individuals. Only after these phenomena are investigated, are their existence and functioning be recognised. In short, Hayek and the older Austrians, were analysing actual — abstract — features of actual historical developments. — Now clearly these are *not* natural phenomena, so natural scientists need not study them or realise what their analysis involves. Anglo-American economists, even by the 1930s, had already reached this ‘scientific’ position, it became further entrenched from the 1940s onwards. The development of neoclassical economics, as found in the late twentieth century, and the development of analytical tools for historians, as done by the older Austrians, are the development of two historically distinct and separate phenomena.

We shall see how Hayek gradually developed and extended this ‘Austrian’ position. Now Hayek did not write with a view to making things easier for the historian who followed; — his works have to be grouped thematically rather than simply set out chronologically. Nevertheless, I shall try to put these distinct thematic groups into a roughly chronological order, to see how his ‘Austrian’ analysis unfolded.

Socialist Calculation

We begin with his three essays on socialist calculation. In the first of these, Hayek surveys the various attempts made (or, rather, not made) up to then

(1935) to demonstrate *how* exactly all economic activities of all people, firms, etc, could be directed centrally, as if all were parts of a single organisation. In the other two essays, (1935, 1940), he analyses thoroughly the more prominent proposals offered.

Now Mises had earlier pointed out that, in analytical terms, ‘socialism’ meant a position of static equilibrium:

“...it is quite easy to postulate a socialist economic order under stationary conditions. We need only avoid asking how this stationary condition is achieved. If we do this there is no difficulty in examining the statics of a socialist community. All socialist theories and Utopias have always had only the stationary condition in mind”.

But — Mises underlines — equilibrium is an “imaginary state”, an “expedient” for analysing economic *change* ³⁴. Hayek develops his analysis out of this essential distinction: between a purely imaginary picture, drawn to help analyse the ever-changing reality, and the direct analysis of that constantly moving reality.

And so: for the socialist economists concerned, central direction meant depicting an equilibrium situation, which would be maintained or changed as necessary, through appropriate directives to the managers of the various economic units. For Hayek, the key issue is *practicality*: it has nothing to do with a “hypothetical equilibrium”, it has everything to do with “rapid and complete adjustment to the daily changing conditions in different places and different industries”. Hayek goes on to outline a host of practical problems that could not be grasped within the purely theoretical scheme of either “stationary equilibrium” or perfect competition ³⁵.

Thus Hayek emphasises that in order to decide how resources are to be used, *practical* information is needed; the central directors would have to know about the following: *a.* each and every item of ‘fixed’ capital and equipment — plant, buildings, machinery, etc. *Each* item is unique, in terms of location, state of wear, technical characteristics, etc. *b.* Each and every intermediate good — again each is unique with respect to: technical features; situations; age; ‘distance’ from final consumption; costs of and potential for use elsewhere; etc. *c.* Alternative technical possibilities of production in each plant, firm, etc, including potential adaptations that could be made according to changing circumstances. *d.* Types, quantities, etc, of all consumer goods *and* continuing changes in consumer tastes. *e.* And then there are all the remaining “special circumstances of time, place and quality”, also changing... As Hayek notes, to centralise all this is already “beyond human capacity”. But this is precisely the “amount and nature of concrete information required” to

make the best possible use of resources, so it will all have to enter into any proposed system of equations³⁶.

More than this: in the real world, there is incessant and unpredictable change in all particular circumstances: eg in the weather, people's health, the availability of some natural resource, temporary scarcities, etc. Only cumulative constant adjustments in all firms can maintain the flow of outputs. In a decentralised system, the result is those "frequent and...varied price changes" that are essential to "economic efficiency". And further: since all prices are inter-connected, a change in one price leads to changes in "hundred of other prices". But under centralisation, all this could "find no expression in prices", and price changes would have to be at longish intervals³⁷.

In short, Hayek is *not* referring purely and simply to the hundreds of thousands of simultaneous differential equations involved in depicting some equilibrium system. He is demonstrating *a.* all the constantly changing practical information which must be utilised to extract the "maximum" from the "available" resources *b.* the impossibility of centralising all this ever-changing circumstantial information into the central authority's equations *c.* the consequent impossibility of making and communicating all the constant changes in the concrete decisions needed³⁸. It should be added that it was the *socialist* economists who identified "prices" and equation-solving; Hayek was analysing the practicalities of this view. His three essays on socialist calculation cover some 89 pages; he devotes only about a page or so to the *number* of equations implied, — ie some 88 pages are concerned with practical real-world issues. — But these, of course, lie outside neoclassical economics.

Hayek analyses a further key function of prices: to determine "costs". As he points out, it is only in "a stationary state" that "costs" are precise, definite and objectively given cost curves. In the real world: *a.* the problem is to *discover*, "sometimes almost from day-to-day", the cheapest method of production. Here, the crucial player is often the outsider who actually provides alternatives at lower cost. *b.* The critical question is: which costs does it seem worthwhile to incur now? The answer depends on expected future prices, and whether prices realised then actually cover the costs incurred. Thus even the "current" organisation of production — eg how hard to run the machinery — reflects views about the future. *c.* Key prices, as for many capital goods, actually reflect product prices, since these instruments will never be physically replaced. Again, how hard to run this machinery? The relevant "cost" here is of alternative methods: but this in turn depends on returns in producing alternative products, ie their prices. *d.* Many capital goods are produced to order, after tendering by a differing group of producers for each order. How will the central authority fix these prices?³⁹

Hayek points out that the cumulative impact of all the continuous, mostly unforeseeable changes outlined earlier is to constantly shift resources *amongst* firms and to change the organisation of industries. The central socialist authorities would face the same changing circumstances; *how* resources are distributed amongst industries is “the difference between plenty and scarcity”⁴⁰.

Hayek underlines the practical problems arising at the most fundamental level, the firm; these include the following: *a.* the size of the firm, ie its plant and equipment and their valuation — ie estimates of future earnings; *b.* reinvestment, and whether to retain or remove the capital goods to another firm; *c.* how much risk “should” managers take? — as “there [is] no objective test of magnitude”. How far “should” losses be allowed to run? Could costs have been lower? — Decisions on these matters are vital to both the firm and the system’s overall functioning, but devotion to the greater good provides no criteria. Who will decide, on what basis, and bear the burden of mistakes? In a socialist system, firm managers and central authorities are all salaried state officials: what are the economic consequences of bureaucratic procedures and supervision?⁴¹

With private property, Hayek points out, none of these problems appear: capital and operating gains transfer resources to more successful entrepreneurs, while the less successful lose their capital through losses. And the entrepreneur who obtains and keeps resources also decides how much to invest, and selects the managers. Under socialism, on the other hand, successful managers get bonuses while unsuccessful ones are demoted⁴². — We may further point out here that these two are *personal* rewards and penalties, whereas the real issue is the change in resource allocation brought about through capital and operating gains and losses. — In other words, Hayek refers to an economic process which transfers resources amongst production units, *not* to purely personal incentives and disincentives.

Thus, Hayek compares the “results [achieved] by a competitive system based on private property” with the various proposals for a centralised socialist system. These three essays are a sustained and systematic delineation of the practical outcome of an actual functioning pricing process, and what might be expected *in practice* from a proposed socialist centralisation. It may be noted that Hayek does see private property as the foundation of the pricing system, despite the suggestion that only Mises realised this. And it is the *socialist* economists who remain firmly attached to static equilibrium, which is why Hayek insists on their “complete unawareness of the real problem”⁴³.

Earlier, Mises had noted the existence and the crucial role of an intermediary group of intellectuals who channelled ideas to the mass of the population — including and especially, the concepts of socialism. Original ideas first reach

“the circle of those capable of grasping and understanding what others have thought; through these intermediaries...ideas reach the masses and there condense themselves into the public opinion of the time”.

Socialism “[l]ike every other great thought...has penetrated to the masses only through the intellectual middle class”⁴⁴. Hayek systematically elaborated and extended this insight in his 1949 essay, “The Intellectuals and Socialism”. His analysis of the emergence and pivotal role of intellectuals — “professional secondhand dealers in ideas”⁴⁵ is remarkably penetrating and prescient of later developments.

Hayek had already seen that the kind of legal rules that prevailed, strongly influenced the character of economic activity. In the first two of his essays on socialist calculation, he denies that setting up a centralised administrative apparatus for the central direction of economic activity is the only conceivable way ahead. There is an alternative: assessing and improving the “permanent legal framework” within which competition operates and individuals adapt to economic change⁴⁶. I consider his further development of these ideas below; here I merely note the starting point of this line of analysis. What is important is that Hayek is looking to the real-world development of economic activity in an historical context. These historical inter-connections have to be brought out for historians to use.

The Pricing Process I

Now to Hayek’s direct examination of the actual workings of the pricing process: Hayek analyses this as a social phenomenon, formed out of the interactions of numerous individuals. The content of individuals’ actions reveal that they are actually interacting with countless other individuals far beyond their immediate range of “economic” contacts. Hayek indicates again the gulf between this analysis and the approach of the modern economics of the time. Hayek’s reflections also lead him to consider the *combination* of analytical tools needed to investigate the historical reality.

Hayek had already seen that, by following prices, people participated in a production process without knowing the full picture. The trade cycle is, therefore, a systemic disruption: price changes at first *dis*-equilibrate people’s economic activities. Only later do prices again function “normally”. In his 1933 lecture on “Price Expectations...”, Hayek now turns to the critical limitation of the equilibrium concept: its meaning is unambiguous only for the decisions

of a single self-sufficient individual or a centrally-directed group. But with a large number of people, their actions and responses necessarily succeed one another through time. “Equilibrium” now has to imply correct expectations with respect to both the future “objective data” and the future actions of those people they transact with. These expectations will or will not turn out to be mutually compatible, according to the prices on which they were based. Some “price constellations” will create expectations that are doomed to failure; other price arrays will do the opposite ⁴⁷.

Initially, Hayek was still concerned with the trade cycle: the “price guides” that entrepreneurs followed were usually reliable but in the cycle these guides led everyone to form expectations that were necessarily disappointed. Some three years later, in his address on “Economics and Knowledge”, he outlined the crucial insight: the question had been put back to front:

“before we can explain why people commit mistakes, we must first explain why they should ever be right”.

Hayek reiterated that the real problem was “the explanation of social relations”, ie “the interactions of a number of different individuals”. He now includes key steps that push the analysis far forward: the actions of even a single individual “take place successively through time”. So “equilibrium” implies the successful execution of a plan, which requires that the individual’s subjective knowledge remain unchanged. Where many individuals are involved in exchange, their actions are inter-dependent, so they can all achieve their goals only if all their plans are mutually compatible. Such compatibility is clearly a *sine qua non* for successful plan execution. In addition, if plan compatibility is to persist through time, everyone *also* has to correctly anticipate the “external” data. What would bring this about ⁴⁸?

Hayek observes that economics can be empirical only because there *is* a real-world tendency to “equilibrium”: ie “under certain conditions” people’s “knowledge and intentions” do come closer together and entrepreneurial expectations “do become more and more correct”. Empirically, knowledge — not just of prices but the entire range of economic possibilities and resources — is divided amongst people. But “spontaneous interactions” produce an outcome which, in effect, combines all this knowledge into the “economic” data. *How* this happens is the “central problem of economics” and indeed of “all social sciences” — Hayek here raises Menger’s question, and as noted earlier, he acknowledges Mises’ recognition of the “division of knowledge” ⁴⁹.

Hayek poses the real issue: “How is knowledge acquired and communicated?” How does “experience create knowledge?” Equilibrium requires effectively unchanged information and cannot deal with such changes, ie social

processes. Modern economics simply assumes the problem away: “the whole economic system [is] assumed to be one perfect market in which everybody knows everything”. Hayek notes that the questions posed above refer to social interactions, so the answers are in principle falsifiable — Hayek explicitly takes this point from Popper’s *Logic of Scientific Discovery*, — the original German edition. To tackle these questions, Hayek points out that the Pure Logic of Choice has to be clearly distinguished from the supplementary hypotheses relating “to the particular conditions under which...action is undertaken”. The former begins with facts common to all human minds to deduce universally-human general categories. Thus, the Pure Logic of Choice covers the entire field of human action. So, economic “facts” are actually subjective meanings under which various things are subsumed. But to explain social processes, we have to select those “ideal types” that appear most relevant to the real conditions. Hayek is emphatic this does *not* open fresh fields for empirical research; indeed, he expects nothing new from such research. The point rather is that questions of fact determine the applicability of economic propositions to the real world and it is necessary to be aware of this. Such applications are in principle falsifiable⁵⁰ — Hayek examines all these issues in considerable depth in his essays on “Scientism and the Study of Society” and in a number of other key essays, considered below.

The Pricing Process II

After an interval of some ten years, Hayek returned to the process of pricing in two articles on “The Use of Knowledge in Society” [1945] and “The Meaning of Competition” [1946]. Again he focusses on real world phenomena in contrast with modern economics, which he finds to be “entirely remote” from real world processes. Modern theory eliminates facts, while concentrating “on a long-term equilibrium which, in an ever-changing world, can never be reached”. Mathematical methods systematically *omit* precisely what needs explanation⁵¹ — Here Hayek follows Mises.

Hayek develops a number of important inter-related insights in these two articles, insights that were first outlined in his intervening studies on “Scientism and the Study of Society”. **1.** He explicitly lists “language, most of our cultural inheritance” and economic activities as “truly social phenomena”, whose analysis involves the same general issues. The pricing system “is not the product of human design”. Because people stumbled on it, civilisation and the division of labour could advance. **2.** The economic problem is one of discovery: discovering costs and prices and those outputs that satisfy consumer requirements most cheaply, as also the most suitable suppliers. All this involves adaptation to continuing change. **3.** The above means utilising all the fragmentary and

changing knowledge about particular circumstances, divided amongst people. In all firms, the physical and human resources are the result of “historical accident”. These existing resources have to put to the best uses known, or discoverable. 4. Knowledge is constantly communicated and acquired through price changes and the competitive process, which are social interactions. Passing through many intermediaries, they spread information and lead people to adapt to wider circumstances that they need not know directly. Relative prices and price changes are “condensed information” about the relative significance of commodities in “the whole means-ends structure”. Thus information is transmitted about changes in both objective data and people’s actions. Such changes follow necessarily from the competitive process. 5. Because information is spread, and price changes coordinate people’s actions, “coherence and unity” are created in the economic system and “the whole acts as one market”. Hayek emphasises that it is only the economist’s imagination which conceptually divides the economic system “into distinct markets for separate commodities”. 6. Hayek also emphasises that production involves humans, not statistical aggregates. Output continues though constant adjustments. Businessmen know that a change in management can change costs and turn profit into loss, or vice versa, with the same physical equipment. 7. Hayek relegates equilibrium firmly to the sidelines: it is illegitimate to extend the concept beyond the individual to “a social process in which the decisions of many individuals influence on another and necessarily succeed one another in time”. Thus, the study of equilibrium is “no more than a useful preliminary to...the main problem”⁵².

Again, it is clear that Hayek’s analysis was developing squarely within a distinctively ‘Austrian’ framework: the preparation of analytical tools to grasp the historical reality. Therefore, its evolution is quite separate from that of neo-classical economics.

Legal and Political Analysis: The Beginnings

We saw above that Hayek addressed himself not only to the economics of socialism but also to its political and legal corollaries. We now retreat back a decade to the inter-war period. The momentous developments of the time called forth major responses from both Hayek and Mises.

The 1920s and 1930s saw the rise to power and expansion of Nazi and Fascist regimes on the Continent, the continued consolidation of Communist rule in Russia, and the rise and expansion of Japanese militarism in the “Far East” (as the term then was). Simultaneously, in the “democratic” countries, opinion swung decisively towards economic and political centralisation, while

strong Fascist and Communist movements developed. Opinion at the time saw a chasm between the two types of regime. From the 1920s to about the 1950s, “socialism” meant, in economic terms, that the economic activities of all firms, individuals, etc, were all to be made parts of a single all-embracing organisation, centrally directed. The political and administrative machinery which a central directorate would need, was also widely discussed. It was felt that such ‘economic’ centralisation would enhance ‘freedom’ in all other matters.

Mises did not merely oppose these dominant views, he analysed them exhaustively, relentlessly, and ruthlessly, pursuing every possible logical implication and corollary. He laid out the full logical picture, from start to finish, in his monumental work on *Socialism*. Hayek, as noted above, was profoundly influenced by his work. He moved into this wider arena through “annoyance with the complete misrepresentation in English ‘progressive’ circles of the character of the Nazi movement...” He first wrote a memorandum for Beveridge, at that time head of the LSE; this memo became an article on “Freedom and the Economic System” published in April 1938. Hayek outlined the authoritarian consequences of economic centralisation:

“Economic life is not a sector of human life which can be separated from the rest; it is the administration of the means for all our different ends. Whoever takes charge of these means must determine which ends shall be served, which values are to be rated higher and which lower...in short, what men should believe and strive for”.

He also underlined the deep family resemblances shared by fascists and communists:

“The similarity between many of the most characteristic features of the ‘fascist’ and ‘communist’ regimes becomes steadily more obvious”⁵³.

Hayek now extended and combined all three analyses (working between 1938 and 1943): *i.* the totalitarian results of economic centralisation *ii.* the nature of a grown economic order *iii.* the *type* of “permanent” legal rules the latter worked under and the general nature of potential improvements. The article mentioned above became a pamphlet (in 1939) with the same title. There followed an article on “Planning, Science and Freedom” (November 1941) and, of course, *The Road to Serfdom* (written 1940-43)⁵⁴.

The Analysis of Social Phenomena

Simultaneously, Hayek followed three related investigations (whose publication, however, was somewhat drawn out): *iv.* he examined, in considerable depth, the intellectual origins, amongst the Saint-Simonians in the eighteenth century, of the view that the economic system was, or should become,

a deliberately-designed organisation, — ie the intellectual origins of the social-ist concept. This work was clearly well-formulated by early 1940; but “The Counter-revolution of Science” came out a little later, in February, May and August 1941 (in *Economica*). *v*. At the same time, as he tells us, he investigated the underlying unity and combined influence of Comte and Hegel — both believed the social order was designed. This essay was published only in 1951. *vi*. Concurrently, he further examined and delineated the broad analytical differences between natural and social phenomena; the general differences between organisations and ‘spontaneous orders’; and the errors resulting from seeing all social phenomena as designed. The analysis first enunciated in his inaugural lecture on “The Trend of Economic Thinking” was extended substantially in a series of essays on “Scientism and the Study of Society”. These came out (in *Economica*), in August 1942 and in February 1943 and 1944. — But Hayek had been already working on the subjectivity of social phenomena in late 1936. — The main analytical issues covered in the series were summarised as “The Facts of the Social Sciences” (delivered in Cambridge, 19 November 1942)⁵⁵.

Chronologically, Hayek published the analytical material first, in these essays. After this, he went on (in his publications) to identify those thinkers — including Mandeville, Ferguson, Smith, Burke, Hume, de Tocqueville, etc — who first saw the existence of spontaneous orders, depicting their grasp of the individual *in* society. He contrasted this understanding with those theorists, such as Rousseau, for whom the individual was a blank isolated atom (“Individualism, True and False”, lecture of 17 December 1945). As we shall see (below, p. —), Hayek appears to have read and assimilated Ferguson by early 1940, since he refers in “Scientism” to social institutions that are not designed but are the results of human action. In the article on “Planning” (mentioned above), he uses Ferguson’s formulation (at the end of the following passage):

“...the division of labour, which forms the basis of modern civilisation, has been able to develop on a large scale only because man happened to stumble on the method which made this possible”⁵⁶.

Hayek developed certain key components of the analysis somewhat later: in his talk on “The Dilemma of Specialisation” (1956) and in portions of the chapter on “Reason, Freedom, Tradition” (first published in *Ethics*, 1958) in *The Constitution of Liberty* (finished early 1959). Thereafter he dealt specifically with the analysis of complex social structures, to a larger or smaller extent, in the following essays: “The Legal and Political Thought of David Hume” (1963); “Kinds of Rationalism” (1964); “Rules, Perception, Intelligibility” (1964); “Notes on the Evolution of Systems of Rules of Conduct” (1966);

“The Results of Human Action But Not of Human Design” (1967); “The Errors of Constructivism” (1970)⁵⁷.

As we saw above (chapter 4), Mises had seen (in *Socialism*) that the idea of evolution went *from* social analysis *to* biology; he was also extremely critical of the “monstrosity” of Social Darwinism. Hayek first pointed out, in the *Constitution of Liberty*, that the notion of evolution had been developed to explain linguistic and social development, and then adopted by Darwin. Hayek expanded on this in later works, adding critical remarks on Social Darwinism⁵⁸. Hayek does not mention *Socialism*, but this is one more piece of evidence for the impact which he tells us it had on him. Hayek’s work is unified throughout by his concern to analyse the two types of social order — their origins, features, etc. With the essays on “Scientism”, he begins to work out systematically the various analytical characteristics of those social phenomena that are the unintended results of historical development. This will constitute the bulk of his writings from here on. — In “Scientism” and in “The Facts of the Social Sciences”, Hayek’s list of such phenomena derives from Menger and Mandeville: law, language, customs, markets, prices, money. — It has been suggested that law came later to his list, but in fact he *does* include it here⁵⁹. — Hayek’s analysis throughout “Scientism” is patently grounded in Menger’s *Investigations* and in Mises’ *Epistemological Problems*. Hayek also refers to Mises’ *Nationalökonomie* (published early 1940); he recommends Mises’ term, the ‘praxeological’ sciences for the “theoretical sciences of society”. With Mises, Hayek finds that “theory is logically prior to history”: complex historical facts are investigated through theories that have to be developed first, just because the facts are so complex. These theoretical constructs are the logical implications of the elements, “known beyond...dispute”, that form complex social phenomena. — The elements are, of course, people’s actions. Hayek again specifically tackles the Younger German Historical School: historical study is only possible because the subjective categories of action are universal — they *are* what defines humans. Otherwise, historical documents would be unintelligible. Thus social theory too is universal: the general category of price (for instance) expresses the relative scarcity of means at all times and places; a specific price for a particular good is an historical circumstance of a particular time and place⁶⁰.

Natural and Social Phenomena

Menger, Mises and Hayek all three distinguish between the natural and the social worlds. As Hayek puts it, humanity’s “position [is] midway between” the two: people are the effect of the first and the cause of the second. Therefore, the study of natural and of social phenomena each begin from opposite

standpoints: “The place where the human individual stands in the order of things brings it about that in the one direction...he perceives” natural phenomena that need to be broken down into their constituent parts, “while in the other direction”, he is given the “elements from which... more complex [social] phenomena are composed, that...cannot [be] observe[d] as wholes”⁶¹. That is, social phenomena have to be reconstructed from what is already known about their directly accessible components. In short:

“while at the world of nature we look from the outside, we look at the world of society from the inside”⁶².

And so, “in the natural sciences” the components of natural phenomena “can be at best only surmised” but “[i]n the social sciences the elements of... complex phenomena are known beyond the possibility of dispute”. That is because “the essential basic facts which we need for the explanation of social phenomena are part of our own experience, part of the stuff of our thinking”. These facts “give rise” to complex phenomena, so “the existence of these elements is...much more certain than any regularities” in these social structures. Thus it is the elements — people’s actions — that are “the truly empirical factor in the social sciences”. Starting “directly from known empirical elements” the social sciences use these elements “to find regularities in...complex phenomena which direct observations cannot establish”. Thus the social sciences “are, so to speak, empirically deductive sciences, proceeding from...known elements” to regular social structures “which cannot be directly established”⁶³.

People’s actions are guided by ideas; such actions are the components of social phenomena: “the various types of individual beliefs or attitudes are... the elements from which we build up the structure of possible relationships between individuals”. There are further *analytical* problems “only in so far as the conscious action of many men produce undesigned results [regularities] which are not the result of anybody’s design”. Thus there exists “an object for theoretical sciences of society”. If all orderly social phenomena were deliberately designed then we would move from the Pure Logic of Choice to psychology, not social theory⁶⁴.

All Minds Have the Same Logical Structure

The subjectivity of these data derives from the fact that all human minds have the same logical *structure*⁶⁵ [N.B. this is *not* ‘specific content’!!!]. This fact is as real as any natural event. Students of society

“deal with phenomena which can be understood only because the object of our study has a mind of a structure similar to our own. That

this is so is no less an empirical fact than our knowledge of the external world”⁶⁶.

That human minds have a similar general structure is an important fact, the basis for the study of their actions:

“the fact that different men do perceive different things in a similar manner [not found] in the external world, must be regarded as a significant datum of experience, which must be the starting point in any discussion of human behaviour”⁶⁷.

These subjective categories into which things and actions are classified are the social data studied. Such categories are not objective things; they are subjectively recognisable in people’s actions, because we, the observers, have a similar mental structure:

“beliefs...as such are our data...which, moreover, we cannot directly observe in the minds of...people but which we can recognise from what they do and say merely because we have ourselves a mind similar to theirs”⁶⁸.

This common mental structure means that people have a “common principle on which they classify external events”⁶⁹. It also means that people have a common set of abstract subjective meanings which they impute to things and actions that have no common physical properties. Such imputations too are significant facts: “that different objects mean the same thing to different people, or that different people mean the same thing by different acts, remain important facts...”⁷⁰. This “common structure makes communication possible” but the actual contents of people’s minds are, of course, enormously varied:

“the knowledge and beliefs of different people...will yet be different and often conflicting in many respects”.

Only minds with structures similar to ours can be recognised as minds; it is “meaningless to speak of [,] a mind different from our own”⁷¹.

If human actions have no meaning, they are physical facts; if actions do have meaning, they are subjective facts, *not* physical ones:

“Either we cannot...recognise the meaning of the individual actions, they are nothing but physical facts to us, the handing over of certain material things, etc, or we must place them in the mental categories familiar to us but not definable in physical terms”⁷².

Social Data Are Subjective

This imputing and recognition of meaning, to and in people’s actions, “works in the overwhelming number of cases”, although there are always

instances where we are uncertain. Such imputation and recognition is “certainly the only basis of all our historical knowledge since this is all derived from the understanding of signs or documents”⁷³. Because human minds are similar in their logical structure, historical and other documents are not mere physical objects — they are materials produced by human beings and as such, intelligible [N.B., once their language, palaeography, etc are mastered]. Where there are no minds, there natural facts begin⁷⁴. — This last is, of course, Mises’ point as well.

To explain people’s actions with respect to things is to identify the meanings people attach to these objects:

“wherever we have to explain human behaviour towards things...these things must...be defined...in terms of what the acting person thinks about them. A medicine or a cosmetic...for the purposes of social study, are not what cures an ailment or improves a person’s looks, but what people think will have that effect”.

In short:

“So far as human actions are concerned the things *are* what the acting people think they are”⁷⁵.

“Economic” data are also subsumed into this subjective category: these “data” too are subjective meanings that people impute to objects, exactly as physical movements become actions of various kinds, through imputed meanings:

“that the objects of economic activity cannot be defined in objective terms but only with reference to a human purpose goes without saying. Neither a “commodity” or an “economic good”, nor “food” or “money” can be defined in physical terms but only in terms of views people hold about things. [Economic theory] has nothing to say about iron or steel, timber or oil, or wheat or eggs as such. The history of any particular commodity indeed shows that as human knowledge changes the same material thing may represent quite different economic categories. Nor could we distinguish in physical terms whether two men barter or exchange or whether they are playing some game or performing some religious ritual”⁷⁶.

The congruence with Mises is obvious.

The student of people’s actions thus has to grasp the meaning which *acting persons* have in mind, from *their* specific knowledge and beliefs:

“the logical character of the concepts we have to use to interpret people’s actions is the same whether our beliefs coincide with theirs or not. Whether a medicine is a medicine, for the purposes

of understanding a person's actions, depends solely on whether that person believes it to be one, irrespective of whether we, the observers, agree or not".

In short:

"no superior knowledge the observer may possess about the object, but which is not possessed by the acting person, can help us in understanding the motives of their actions"⁷⁷.

Only if "we...understand what acting people mean by their actions" can we successfully explain them, i.e. "subsume them under rules which connect similar situations with similar actions". People's actions can be comprehended only in terms of the general meaning acting persons attribute to things, happenings, events, etc:

"in interpreting human actions, we...have to use the classification in which these facts actually appear in the minds of acting people"⁷⁸.

Connotation and Denotation

These general classifications are, as it were, the general connotations, present in all minds, while the things to be classified are their respective denotations. As circumstances change, an indefinite number and variety of items can present themselves for classification; it is the connotation, the meaning, which sorts and arranges these. Eg, it is the general meaning which enables us to see that both a revolver and a blowpipe are weapons, and both banknotes and cowries are money — to their respective users. Thus "in principle" an "*exhaustive* classification of all the possible forms of intelligible behaviour" is achievable, "‘apriori’ [in] deductive...fashion". For instance, if "we define as economic actions all acts of choice which are made necessary by the scarcity of means...", then all possible situations can be subdivided, "step by step", into alternatives with "no third possibility"⁷⁹. This is patently identical with Mises' analysis.

Historical Facts — What They Are

Thus the 'data' of the 'social sciences' are subjective meanings: *a.* of actions *b.* of the intentions of acting persons *c* that objects hold for acting persons. Historical facts — people's actions — are therefore apprehended subjectively, through "mental reconstructions". It is thus impossible "to go and see what [historical facts] are like"⁸⁰, as one might look at stones or animals. Natural phenomena have definite physical boundaries; not so historical ones:

"no physical criterion can tell us what are the parts of the [historical] fact and how they hang together".

From what we know about a particular historical context, we pick out certain happenings as interrelated; this means we use a theory [N.B, implicit though it may be]:

“We...use a theory when we select from the knowledge we have about a period — certain parts as intelligibly connected and forming part of the same historical fact”.

Since historical facts are not physical units, they cannot be observed as such self-defining entities. We have to utilise a theory to put these facts together; this is true even of the simplest such facts:

“We never observe states or governments, battles or commercial activities, or a people as a whole. When we use any of these terms, we always refer to a scheme which connects individual activities by intelligible relations; that is, we use a theory which tells us what is and what is not a part of our subject”.

Our use of theories is implicit and unwitting. That this is so only becomes clear when we reflect on what we are doing. Historical facts are interrelationships amongst particulars, apprehended via a theoretical lens: “terms like ‘state’ or ‘town’...cannot be defined in physical terms”; they “refer to a complex of relationships which, made explicit, constitute a ‘theory’ of the subject”⁸¹.

Thus historians “cannot avoid using social theories in this sense”. Now “for most purposes”, the linkages implied are so obvious that very simple ‘theories’ are quite adequate. For such simple phenomena, no “elaborate apparatus” is needed; the theorising is done “spontaneously”, with the historian’s “instinct” proving a correct guide. These conclusions are not disputed, therefore. Thus historians are little aware they have “used theoretical reasoning at all”⁸². — Hayek clearly reiterates here both of Mises’ points: *i*. Historians, like M. Jourdain, are astonished to hear they use theory. *ii*. Even the simplest historical relationships, however obvious and transparent they may be, still rest on implicit theories.

Hayek goes on: Even apparently simple phenomena — “government” or “trade” — are composed of *a*. “observed elements” — i.e people’s actions *b*. “between some of [which]” there persists “a system of relationships” which is not directly observable; it “can be merely inferred”⁸³. It follows that this is even more true of “more complex phenomena, such as those of language, law and economics”⁸⁴.

Complex Social Formations: Their Features

Such formations are even less visible than simpler structures and are therefore apprehended only through appropriate conceptual lenses. Any general

picture has to begin from the elements of the phenomenon — i.e the actions of individuals and show how they produce the phenomenon. This general explanation has to deal with the characteristics of these more complex structures. Their first and most important feature is that they are *undesigned* orders, they were *not* produced intentionally.

Thus the crucial characteristic of these formations is that they are not deliberately organised; they are undesigned and unintended developments: “languages, economic systems, bodies of law”, “money or morals”, Hayek underlines,

“are not...products of deliberate creation. Not only have they not been designed by any mind, ...they are also preserved by, and depend for their functioning on, the actions of people who are not guided by the desire to keep them in existence”⁸⁵.

Hayek identifies a general category of undesigned social phenomena: “human institutions [are] in a sense man-made, i.e entirely the result of human actions, [but] they may yet not be designed, not be the intended product of these actions”. — It seems clear that Hayek had read and absorbed Ferguson by about this time (around early 1940). Hayek emphasises that the term ‘institution’ is misleading — social structures are not instituted by anyone; they are therefore better termed ‘formations’⁸⁶.

To indicate the analytical issues involved, we may here bring out two further features of these social formations. Firstly, Hayek identifies a key difference between people’s actions and the formations that are one outcome of their interactions. The knowledge of circumstances that individuals act upon is, in the case of each individual, a small fragment of that whole which is available with *all* individuals taken together. But this whole does *not* exist as a separate and distinct entity. This too is a fundamental fact in social life:

“The concrete knowledge which guides the action of any group of people never exists as a consistent and coherent body. It only exists in the dispersed, incomplete and inconsistent form in which it appears in many individual minds and this dispersion and imperfection of all knowledge is one of the basic facts from which the social sciences have to start”⁸⁷.

Social formations, however, precipitate, as it were, the knowledge of innumerable individuals over generations. Such formations

“are greater than any individual precisely because they result from the combination of knowledge more extensive than a single mind can master”.

Because people have available to them, and use, a range of social formations, they are able to benefit from more knowledge than they could possibly obtain: “our civilisation is the result of a cumulation of individual knowledge” which is embodied in “habits and institutions, tools and concepts”. Thus “man in society is constantly able to benefit from a body of knowledge neither he nor any man completely possesses”⁸⁸. — It is quite clear that Hayek is here building on Mandeville’s insights.

Social formations are also eminently useful. These “persistent social structures which we have come to take for granted” are “devices” on which people “tumbled”, devices that gave them “powers which [they] used”. Such “spontaneously grown institutions were ‘useful’ because they were the conditions on which the further development of man was based”⁸⁹. Neither money nor the pricing system “were... designed for [the] purpose”, but they “enable man to achieve things which he desires”; they “made possible” the “growth of civilisation”.

In short, unintended social orders enable people to envisage and then obtain their aims:

“the social wholes which are thus maintained [unintentionally] are the condition for the achievement of many of the things at which we as individuals aim, the environment which makes it possible even to conceive of most of our individual desires and which gives us the power to achieve them”⁹⁰.

Compositive social theory alone explains how such inter-individual structures develop and thus allow people jointly to obtain more than they could think of:

“only...the individualist or compositive method [enables us] to understand how structures of interpersonal relationships emerge, which make it possible for the joint efforts of individuals to achieve desirable results which no individual could have planned or foreseen”⁹¹.

No one aims to produce these social formations, so their orderliness is not the outcome of anyone’s deliberate intent. It is this which makes a general explanation necessary:

“The problems...arise only in so far as the conscious action of many men produce undesigned results, in so far as regularities are observed which are not the result of anyone’s design...It is only in so far as some sort of order arises as a result of individual action but without being designed by any individual that a problem is raised which demands a theoretical explanation”⁹².

An abstract schema is essential to historical investigation of situations involving orderly and unintended — i.e. otherwise unsuspected — consequences:

“any explanation of a historical process involves assumptions about the kinds of circumstances that can produce certain kinds of effects — assumptions which, where we...deal with results which were not directly willed by somebody, can only be studied in the form of a generic schema...a theory”⁹³.

Constitutive Ideas and Popular ‘Explanations’

As these social formations are not, and cannot be, produced intentionally, how do they come about? Hayek points to the crucial role of ideas — “opinions and beliefs” — in guiding people’s actions:

“the ‘facts’ of the social sciences are...[the] opinions of those whose actions produce the object of the social scientist”⁹⁴.

Certain views and ideas cause people to act in a regular and orderly fashion: these “beliefs and opinions...lead a number of people regularly to repeat certain acts e.g to produce, sell or buy...”. It is through actions based on these crucial ideas and views, that people manifest and maintain social formations in the course of their day-to-day activities:

“Such beliefs and opinions are a condition of the existence of the ‘wholes’ which would not exist without them, they are...‘constitutive’, essential for the existence of the phenomenon [referred] to as ‘society’ or the ‘economic system’”.

While people *act* on their “motivating or constitutive opinions”, they also form “speculative or explanatory views...about the wholes...”. Hayek underlines the sharp difference between the two:

“The real contrast is between ideas which by being held by the people become the causes of a social phenomenon and the ideas which people form about that phenomenon”.

For example: as people change their “opinions...about a particular commodity” they “cause...a change in the price of that commodity”. But these constitutive ideas are “clearly in a different class from the ideas which the same people may have...about the causes of the change in price or the ‘nature of value’...”. Hayek emphasises the necessity of clearly separating the two kinds of concepts: “It is very important that we should carefully distinguish between” constitutive ideas that prompt particular kinds of actions, and people’s untutored “ideas about the undesigned results of their actions”. Hayek goes on: “confusion between the two is a constant source of danger”⁹⁵.

That is because these popular views cannot capture the nature and structure of undesigned social formations. People are untrained in these matters, so they have “vague concepts of wholes which [are] merely intuitively comprehended”⁹⁶. This is, in effect, animism; such a “vaguely apprehended whole is treated as something akin to the individual mind” — which is “an illegitimate use of anthropomorphic concepts”⁹⁷. Hayek is especially emphatic that “the social scientist...must not mistake for facts” those “pseudo-entities” that popular thinking creates. The following, he underlines, are *not* real phenomena: **a.** “those collectives which are no more than popular generalisations”⁹⁸ **b.** “vague popular theories” **c.** “provisional theories...constructed by the popular mind to explain the connection between some of the individual phenomena we observe”⁹⁹ **d.** “popular abstractions”, “the ideas which the popular mind has formed about...collective entities”¹⁰⁰.

Social Animism

Hayek points out that methodological collectivism cannot explain complex phenomena; its approach is animistic:

“The collectivist [...] who claims to be able directly to comprehend social wholes as such, is never able to define the precise character of these wholes or their mode of operation, and is regularly driven to conceive of these wholes on the model of an individual mind”¹⁰¹.

The collectivist standpoint thus sees a super-being termed ‘society’, quite separate from all people and the embodiment of the social views of those who speak for it: “society”...assumes a dual personality: it is firstly a thinking, collective entity with aspirations of its own...different from those of the individuals” who compose it; “and secondly,...it becomes the personification of the views held on...social aspirations by certain individuals who claim to be endowed with a more profound insight or...a stronger sense of moral values”¹⁰². — Again the parallel with Mises is obvious.

Analysing Complex Formations

As opposed to both the popular and the collectivist viewpoints, Hayek points out that social facts “exist [irrespective] of the concepts which...people have formed about these wholes”. So only correct theory can enable us even to see these complex phenomena.

Initially, historians and theorists share the public’s untutored ideas about undesigned social formations. Professional study is undertaken expressly “to revise and improve”¹⁰³ these “vague and indistinct suggestions about the way in which certain phenomena are connected”. These unexamined views are

replaced with “precise”¹⁰⁴ meanings for terms and descriptions of phenomena. Such correct theory accurately links components together: “the wholes about which we speak exist only if, and to the extent to which, they theory is correct which we have formed about the connection of the parts which [these wholes] imply”¹⁰⁵. Correct theory is especially necessary with complicated structures “such...as languages, economic systems and bodies of law”. These phenomena are so complex they require “the help of an elaborate technique” for their reconstruction. If historians “[disdain] to use” what theorists have worked out, historians are “almost certain to come to grief”: they are “led into contradiction” or assert a sequence of causation which does not follow¹⁰⁶. (Cf. Mises!)

Even more than other types, such complex phenomena do not demarcate themselves: “These...social structures are never given to us as natural units, are not definite objects given to observation”. Social formations are not “given facts, objective data”. Hayek emphasises that people’s actions — i.e the subjective meanings common to all minds — are the components of social structures. In his words: *a*. “we try to understand human beings” *b*. “this understanding is made possible by the fact that we have a mind like theirs” *c*. “from the mental categories we have in common with them we can reconstruct the social complexes which are our concern”¹⁰⁷.

These formations, then, spring from the common structure of all people’s minds, the common principles on which they classify things and happenings, so the analysis of social structures has to be in the same terms. The mental structure that everyone has in common “provide[s] us with the knowledge of the recurrent elements of which different social structures are built up and in terms of which we can alone describe and explain them”. Thus the task of theoretical reasoning is “to *constitute* these [wholes]...form the familiar elements” — these last are “familiar to us from everyday experience”. Starting with the directly-known, we systematically follow up “the interactions of individual efforts”, working through the implications of particular combinations of actions, reconstructing the interconnections amongst them. And so, “by a deliberate effort of directed thought...we come to see the necessary effects of the combinations of...actions by many people”¹⁰⁸.

In short, since ideas lead to action, “the facts of our mind must remain... data on which the explanation of human action guided by these mental phenomena must be based”¹⁰⁹. Hayek stresses “[it] is important” to see that “the various types of individual beliefs or attitudes are...the elements from which we build up the structure of possible relationships between individuals”. To the extent “individual thought” is analysed, “the purpose is...to distinguish the possible types of elements with which we shall have to reckon in the construction of different patterns of social relationships”. Hayek emphasises that “[for]

the social sciences, the types of conscious action are data”; “[it] is a mistake to believe” that these are to be *explained*. Thus from individuals’ actions — which are directly known, we proceed to the unknown — the complex resulting formations, and so we find otherwise unseen interconnections: Individuals “attitudes... are the familiar elements”¹¹⁰; by combining these

“we try to reproduce the complex phenomena, the results of individual action, which are much less known — a procedure which often leads to the *discovery* of principles of structural coherence of the complex phenomena which had not (and perhaps could not) be established by direct observation...”¹¹¹.

Hayek points to language as an undisputed instance of such a social phenomenon. In sum “[t]he social complexes, the social wholes which the historian discusses” — “are without exception constructions of our mind”. We can see these social structures only by mentally working through all the implications of individual actions, to discover all the links:

“These wholes...do not exist...apart from the theory by which we constitute them, apart from the mental technique by which we can reconstruct the connections between the observed elements and follow up the implications of this particular combination”¹¹².

Permanent Interrelationships and Changing Components

Hayek gives some instances of how complex historical facts are built up: they are persisting processes or interrelationships that become visible only as they are reconstituted mentally, using the directly-known components, people’s actions:

“if our historical fact is such a complex as a language or a market, a social system or a method of...cultivation, what we call a fact is a recurrent process or a complex pattern of persistent relationships which is not ‘given’ to our observation, but which we can only laboriously reconstruct — and which we can reconstruct only because the parts (the relations from which we build up the structure) are familiar and intelligible to us”¹¹³.

Economic phenomena too are *not* ‘given’ — their interconnections and interrelationships also have to be reconstructed by working out the further logical consequences of individuals’ actions. These logical implications are of course unknown to the lay mind:

“when...we speak of the behaviour of, e.g. the ‘price system’ as a whole and discuss the complex of connected changes which will correspond...to a fall in the rate of interest, we are not concerned with a whole which obtrudes itself on popular notice or that is ever definitely

given; we can only reconstruct it by following up the reactions of many individuals to the initial change and its immediate effects”¹¹⁴.

Thus the social formations found in history are general patterns of interrelationships amongst changing components: “All unique objects of history...are in fact either constant patterns of relations or repeatable patterns in which the elements are of a generic character”. Such patterns are “a persistent system of relationships between the ever-changing elements”. The process of forming these social structures is similar whether this formative process extends over a long period, as with language or money, or whether it is “constantly repeated anew” as with such “recurring phenomena”¹¹⁵ as price formation or production. In other words, economic phenomena are formed exactly as are other social — inter-individual — phenomena. — Hayek echoes Menger here; and when Hayek sees that complex social structures are reconstructed from individual actions, the *content* is exactly that of Mises, when Mises says that all social entities are manifested in individuals’ actions towards each other.

Theory Precedes History

And so, with Mises, Hayek too sees the “task” of social theory as that of assisting the historian, i.e theory has

“to provide schemes of structural relationships which the historian can use when he has to attempt to fit together into a meaningful whole the elements which he actually finds”¹¹⁶.

These theoretical schemes are thus essential for historical investigation, since they render visible historical developments that would otherwise remain unknown. Theory thus has to precede history:

“the place of theory in historical knowledge is thus in forming or constituting those wholes to which history refers; it is *prior* to these wholes which do not become visible except by following up the system of relations which connects the parts”¹¹⁷ [*italics added*].

As Hayek sums up: “Social theory...is, then, *logically prior* to history”¹¹⁸ [*italics added*].

Hayek is well aware of the problems of historical investigation: “in any concrete situation [a] large number of other changes...will always occur simultaneously”. The problem is to pick out those that “form a more closely inter-related complex”, the one “we are interested [in]”. This interrelationship derives from “certain relevant aspects in the attitudes of men toward the things”¹¹⁹, the analysis too is derived there from. The historian is thus enabled to “group together as instances of the same” formation or whole, “different complexes of individual events”. These are “by themselves perhaps

quite dissimilar”, but they are linked together as “certain elements of a complex picture on the basis of a theory about their coherence”¹²⁰. Thus because we have a prior knowledge of the components, we can isolate a social structure in the plethora of facts found in reality:

“it is only because we already know the ties that hold them together that we can select a few elements from the immensely complicated world around us as parts of a connected whole”¹²¹.

A social whole, then, is a selection of facts made on the basis of a conceptual schema; a social complex is “a mental scheme that shows the connection between some of the many facts which we can observe”. Thus we look, amongst these varied happenings, for a “pattern or order... which is not... spatial or temporal”; it “can be defined only in terms of relations which are intelligible human attitudes”. Neither the “order or pattern” nor “these relations themselves” are “perceptible as... physical [facts]”¹²².

As we have seen (at some length) the components of social formations are directly known, since these components are people’s actions; theory is needed to help reconstruct the resulting complex phenomena, which are *not* known otherwise than through such a reconstruction. These theories then “are not *about* the social wholes as wholes”. Rather, social theory is a system of reasoning to help discover additional features of the known elements, individuals’ actions. Social theory

“attempts... to provide a technique of reasoning which assists us in connecting individual facts, but which, like logic or mathematics, is not about the facts. All that we can and must verify is the presence of our assumptions in the particular case”¹²³. [Shades of Mises!]

This is especially problematic and raises ‘a genuine ‘question of fact’ [which] it will often not be possible to answer with the same certainty as... in the natural sciences’. Social theory, however, is a type of analytical thinking [N.B. about people’s actions]:

“...the theory itself, the mental scheme for... interpretation, can never be ‘verified’ but only tested for its consistency. It may be irrelevant, because the conditions to which it refers never occur; or it may prove inadequate because it does not take account of a sufficient number of conditions. But it can no more be disproved by facts than can logic or mathematics”¹²⁴.

There can be no plainer statement of Mises’ ‘praxeological’ analysis. It may again be noted that these points are all found earlier in the first two essays in Mises’ *Epistemological Problems*. It should also be pointed out that Hayek developed the analysis in his essays on ‘Scientism’ *after* his justly-famous

'Economics and Knowledge', in a footnote to which he prefigured the developed subjectivism of his later essays.

Hayek points to some implications of this analysis. In reflecting on people's actions, we "constantly" discover that "we...use processes of thought which we have not yet analysed or made explicit"¹²⁵. — But the logical categories are common to all minds. — Similarly, historical research may require that the components of a theoretical construction be reorganised to help analyse historical developments. But the historian still uses a theory about how these — known — components are linked together in a structure:

"...historical study frequently forces the theorist to revise the constructions or to provide new ones [to] arrange the information he finds. But in so far as the historian talks, not...about the individual actions of particular people but about what...we can call social phenomena, his facts can be explained as facts of a certain kind only in terms of a theory about how its elements hang together"¹²⁶.

Hayek further recognises that these theoretical constructions are only analytical tools for studying complex historical phenomena: "The models of 'wholes', of structural connections, which theory provides ready-made for the historian to use [are] the results of theoretical activity". Therefore these theoretical constructions "are not identical with the 'wholes' which the historian considers". Such theoretical 'models' "consist necessarily of elements of one kind...selected because their connection can be explained by a coherent body of principles"¹²⁷. Theories cannot therefore answer "a particular question about concrete phenomena". For this, historians "regularly have to use" — various different theoretical generalisations. Historical work is thus "an application of generic concepts to the explanation of particular phenomena"¹²⁸.

Historical study is of such specific happenings: "with social phenomena the explanation of the particular and unique situation is as important and often of much greater interest than any generalisation". History studies the unique make-up and complexities of particular historical developments, "the particular circumstances of an individual process"; it concentrates on what "is important in the unique historical instance", with its "particular attributes". Theory does not deal with this. It considers only "those steps essential to produce a particular result..."¹²⁹. Theory concentrates on "those [attributes] which under conditions which may be repeated can be produced again in the same combination". In short, theory brings out "a process which, at least in principle, may be repeated elsewhere at different times". So a theoretical explanation of the interdependence of "the parts of the social whole" will often be "a genetic account", a sort of "schematic" or "conjectural history". But this is *not* history, of course, it is "compositive social theory". Here Hayek points

to Menger's recognition that "the genetic element is inseparable" from social theory¹³⁰.

To Study History is the End Goal

With Mises, Hayek too finds that historical study and social theory are closely linked:

"theoretical and historical work are...logically distinct but complementary activities...though they have distinct tasks, neither is of much use without the other"¹³¹.

But Hayek is also emphatic that social theory's only role is to aid historical research. Theory by itself has little value; it is history which is really needed:

"I should like even to emphasise that the whole purpose of theory is to help our understanding of historical phenomena and that the most perfect knowledge of theory will be of very little use indeed without a most extensive knowledge of a historical character"¹³².

Comment: It is evident that Hayek has followed Mises very closely. His analysis expands upon or is complementary to, the various points Mises made in the first five essays in *Epistemological Problems*.

In his essays on 'Scientism', Hayek had already begun to break new ground in one direction. Earlier Mises had distinguished between the 'simple' facts established in laboratory experiments and the complex facts of history. And Hayek had earlier analysed prices as transmitters of information about the ever-changing particular circumstances of time and place. Building on these footings, Hayek first enunciated a category of 'complex' phenomena: so many concrete influences contributed to the formation of these phenomena that it was possible to state only the principle on which they were formed; the specific facts could never be recaptured. Then, in "The Theory of Complex Phenomena", Hayek pulled all these strands together to systematise the analysis for the first time. Hayek identifies "complex" phenomena as combining: *i.* a persistent abstract pattern, *ii.* an ever-changing array of particular facts. Thus, it is possible only to state the principle(s) on which these phenomena develop; the concrete facts entering into the formation can never be given. Physical phenomena by this criterion are 'simple'; social structures are 'complex' because of all the particular facts that join to form them. Hayek expanded some points further in his Nobel lecture on "The Pretence of Knowledge" (December 1974)¹³³.

Acting on Rules

Hayek also continued to address the issue of how individuals' actions produce complex results: i.e how the elements — people's actions — produce the social whole ¹³⁴. In answering this question, Hayek builds extensively on Mandeville's analysis of custom and habit being wiser than their practitioners; Menger's insight that customs are unintended social phenomena; and Ferguson's observations on how children and peasants could observe complicated linguistic rules in practice. Hayek now, for the first time, combines and generalises all these analytical points: *a.* people manifest social and legal rules in their actions, *b.* these rules can be extremely complex, *c.* they develop over time, *d.* people have absolutely *no* idea of the complexities manifested in their actions. Thus, people acted on rules before they could articulate them.

Hayek first recognised, with Menger, that legal (and moral) rules were instrumental — they enabled people to pursue a wide variety of ends, in conjunction with an equally wide range of rankings of these ends. But Hayek's first specific analysis was of moral rules. They are “genuine social growths, the results of a process of evolution and selection, the distilled essence of experiences of which we ourselves have no knowledge”. Rules prevent conflict amongst people [i.e they make for peace]. Hayek points out that “groups in which [these rules] held sway have proved to be more effective than other groups”. — Hayek enlarged on this observation much later, to note that such groups expanded as more people joined them or imitated their rules. — Mises had earlier noted that groups who could not integrate themselves into the peaceful division of labour eventually died out. — With respect to legal rules, Hayek emphasises that people follow “a whole system of rules” in which one modifies the consequences of the other. A single rule cannot be seen in isolation. He again underlines the effects of historical growth: “In a slow process of evolution...much more knowledge and experience has been precipitated in [such rules] than any one person can know” ¹³⁵.

Where people follow the same abstract rules, their actions form an abstract overall order, whose specific details “depend on the particular circumstances known only to its individual members”. Hayek had already seen (before 1939) that the movement from a tribal to a more open society was a movement from concrete to abstract rules. He later elaborates on this: As people follow “rules of conduct [that are] independent of the particular purposes of those concerned”, they follow practices that serve reciprocal but not common purposes. Such rules inherently can be extended to ever more people, making possible a peaceful order covering all humanity ¹³⁶.

Finally, Hayek recognises three types of ‘social’ rules that are manifested in people’s actions.

a. innate or genetic rules or instincts, developed through the immense period in which humanity lived in small hunting bands, pursuing common goals.

b. learnt or “cultural” rules, that led to the gradual dissolution of the hunting band and the growth of ever-wider groups extending far beyond those people met daily. Such groups, held together solely by the common rules, or *types* of rules that their members followed, eventually covered the globe, and enabled a vast increase in population.

c. A small thin top layer of rules deliberately thought out and adopted, in more recent times.

People’s understanding has not yet assimilated the momentous change from a closed group where everyone follows the same set of ends, to an open, world-wide socio-economic order (says Hayek). The social and ‘economic’ features and consequences of the latter are therefore apprehended *as if* they were those of a small closed, face-to-face group in which everyone organised themselves to pursue the same hierarchy of concrete values. The notion of “social justice” expresses exactly this small-group vision. Hayek had seen before 1939 that in legal and moral terms, socialism meant a regression from open to closed, tribal rules. — But open-ended, universal rules apply to all-comers alike, and do *not* distinguish between ‘insiders’ and ‘outsiders’. These rules embody an entirely different idea of ‘justice’ — the equal application of equal rules, irrespective of the outcome in particular cases. Because people *acted* on these rules, they now live in a global order which alone can produce the resources essential to the survival of the world’s immensely larger population¹³⁷.

It will be noticed that Hayek’s observations here complement Mises’ earlier insights in *Socialism*. Mises too feels that people’s perceptions have lagged far behind the development of the division of labour. Consequently, people have placed “the romantic Utopia of common ownership [in] remote antiquity”. The Romans had “the legend of the Golden Age of Saturn, described in glowing terms [and] praised” by prominent Roman writers: “These were the carefree, happy days when none had private property and all prospered in the bounty of a generous Nature”. Socialist views have not advanced further than this:

“Modern Socialism...imagines itself beyond such simplicity and childishness, but its dreams differ little from those of the Imperial Romans”.

Mises sees ideologies — sets of ideas — as guiding people's actions such that they extend or curtail the growth of the division of labour. But people can participate in an extended division of labour while still holding to an ideology of violence which must run counter to, and undermine, peaceful cooperation. Many who joined this extended order by moving into urban areas remained strangers to the ideas which made wider specialisation and exchange possible:

“One cannot make a social philosophy one's own as easily as a new costume. It must be earned — earned with the effort of thought”¹³⁷.

Hence, in history there appear periods in which the division of labour is extended and others in which it regresses: “More menacing than barbarians storming the walls from without are the seeming citizens within — those who are citizens in gesture, but not in thought”¹³⁸. — Hayek too excoriates those “non-domesticated barbarians in our midst” who “refuse to accept” the “acquired discipline” of a world-wide division of labour while “they still claim all its benefits”¹³⁹.

Cosmos and Taxis

Hayek continues the analysis of complex orders; he systematises and extends the insights he built up earlier into two kinds of social order¹⁴⁰. — Menger and Mises of course laid the foundations here. — In a number of articles, a pamphlet and a book chapter, Hayek combines all these perceptions with the recognition of rule-following in action, to arrive at an analytical classification linking type of rule to kind of resulting order. The ‘ends-independent’ or open order, undesigned and grown, is a *cosmos*. The ends-independent, general and instrumental rules producing it are *nomoi*. A closed, hierarchical order or an organisation is a *taxis*. The ‘ends-oriented’ rules forming it are *theses*¹⁴¹.

This classification is more subtle and penetrating than might appear. Thus, a tribal or a caste society is closed and hierarchical, and appears *not* by design but because people *act* on the appropriate sort of concrete, ends-oriented *theses*. On the other hand, a company or a club is an ends-oriented order, deliberately produced, and its rules are likewise directed to serving particular ends. But it is not closed or hierarchical in the sense in which a tribe or caste is.

Rules are transmitted through imitation and learning. ‘Closed’ rules can be gradually opened up by increasing their abstractness — and vice versa. The Great Society covering the globe developed through an extremely long historical process, as more and more people gradually began following ends-independent social and legal rules in their actions. The process was set in motion millennia ago, when some tribesmen began acting on somewhat more open rules

than their fellows — when the first tribesman placed salt on his tribe’s boundaries, hoping for an exchange. Those groups who moved towards greater openness in their rules prospered, attracting new members and imitators. But no-one, of course, could realise *why* all this was so. — It will be seen that Hayek here extends and builds on Mises’ analysis.

Organisations — *taxeis* — are all, of course, parts of the larger spontaneous order — the *cosmos*. Many smaller “particular” or “partial” societies will emerge in the *cosmos*, under various “special circumstances which produce closer relationships amongst the members”. Such particular societies,

“will often overlap and every individual may, in addition to being a member of the Great Society, be a member of numerous other spontaneous sub-orders or partial societies of this sort as well as of various organisations existing within the comprehensive Great Society”.

Mises had, of course, underlined the same point earlier (as we saw above, chapter 4). — Hayek emphasises the value and the significance of such voluntary associations that the *cosmos* facilitates; he stresses especially their world-wide ties:

“It is the great merit of the spontaneous order concerned only with means that it makes possible the existence of a large number of distinct and voluntary...communities serving such values as science, the arts, sports and the like. And it is a highly desirable development that in the modern world these groups tend to extend beyond national boundaries and that, e.g. a mountain climber in Switzerland may have more in common with a mountain climber in Japan than with the football fan in his own country, and that he may even belong to a common association with the former...”¹⁴².

The Catallaxy

Two examples of *cosmoi* are the market order, or catallaxy, and the common law. We have seen that Hayek saw the pricing system as a coordinator of people’s actions and as an information-transmitter. He also saw competition as a continuous discovery of particular data: costs, suppliers, customers, products, prices, etc. As we saw above, he already viewed the economic system as an analytical unit:

“The conception of the economic system as divisible into distinct markets for separate commodities is, after all, very largely the product of the imagination of the economist...”.

And he pointed out that in adapting to a change in the supply of or demand for, even a single commodity, the effects spread throughout the system: “the

whole acts as one market...". Hayek now extended the competitive process to mean the adaptation of *all* economic activities to continually changing circumstances. This involved the dropping/ curtailment of some activities — the disappointment of some expectations. But this meant greater supplies of means for everyone's ends.

In terming the market order a "catallaxy", Hayek adapted a Greek word meaning "to receive into the community" and "to turn from enemy into friend", and also "to exchange". Hayek took the analysis from Menger and the description from Mises, who said of the division of labour: "It makes friends out of enemies, peace out of war, society out of individuals". And again: "human society [is] a friendly division of labour". A catallaxy is an open-ended, spontaneous, instrumental order. Via prices, it peacefully links together people across the globe. Thus, they adapt to circumstances far beyond their immediate neighbourhood. Conversely, they obtain goods and services from a world-wide production process. Because the catallaxy is only an instrument, all the various ends it serves have their place *only* on the value-scales of the individuals involved; there is no single hierarchy of ends as in an organisation. This means that changes in prices and so in incomes are purely functional — they have absolutely *no* connection with the personal merits of the individuals concerned. To maintain and enhance the flow of material means for everyone, requires continuous adaptation to changing circumstances. This involves price falls and drops in income for some; this is perhaps even more essential than price and income increases: resources must be released to be redirected as needed. As an open order, the catallaxy utilises and incorporates all the knowledge of relevant circumstances possessed by its members: everyone is led to mutually adjust ¹⁴³.

The competitive process is an aspect of the catallaxy. 'Competition' discovers and transmits ever-changing information on what 'should' be produced and, even more importantly, what should *not* be turned out ¹⁴⁴.

As just noted, the incomes received in a catallaxy are functional only: they reflect others' estimation of the value of the services performed; this estimation is based on how well the services provide the material means that others need. Thus incomes — all returns — can both rise and fall. Hayek draws out two necessary implications: *a*. Capitalists do not find life easy under an exchange order:

"[capitalism] is a system which imposes upon enterprise a discipline under which...managers chafe and which each endeavours to escape"¹⁴⁵.

b. Hayek emphasises repeatedly that material success is quite separate and distinct from someone's moral worth and the moral merit of his (or her) actions: "remuneration in accordance with the value of a man's services is inevitably very different from what we think of his moral merit" — ie, a person's merit does *not* correspond with his/her material returns. Hayek stresses that "to guard ourselves against becoming too materialistic" we have to recognise frankly "that there are other and often more important goals than material success". He underlines that the catallaxy is a general-purpose instrument for *all* ends: "a free enterprise society" *can* be "a pluralistic society [which] has many different principles on which esteem is based"; where worldly success is *not* "regarded as certain proof of individual merit"¹⁴⁶.

As we just saw, the catallaxy is ends-independent and rule-based; it could develop only because of this. Hayek therefore deplores the identification of income and merit:

"I rather wish to emphasise [,] that in our society personal esteem and material success are much too closely bound together. We ought to be much more aware that if we regard a man as entitled to a high material reward that in itself does not necessarily entitle him to high esteem"

¹⁴⁷.

The Common Law

Hayek is considered to have come only rather late to an appreciation of the common law and its real significance. The late Bruno Leoni is usually regarded as playing a key role in this.

We saw above that Hayek tells us he retained chiefly the Roman law and legal history from his law degree. So the idea of law as an historical growth would not have been unfamiliar to him. He had certainly read Menger's *Investigations* at university. In the text of that work, law is consistently included amongst the instances of unintended, historically-grown social phenomena, while in Appendix VIII, Menger analyses the common law in exactly these terms. So again, Hayek would have at least come across the idea. The key point, however, is that Hayek, from his very first mention of the subject, saw "the ordinary rules of civil and criminal law" exactly as Menger and Mises did: as instruments to help individuals "achieve their various...ends". Thus, these rules are compatible with a wide variety of rankings of a range of different ends¹⁴⁸.

The historical context in which Hayek first wrote is important. This context was the extensive discussion of the administrative requirements of a centrally-organised society and economy. Economic centralisation requires that

the central directorate have the utmost possible administrative latitude and discretion. Legislation is *its* tool, intended to help it suppress the market economy, thus achieving the socialist ideal. Hayek didn't just oppose this, he outlined the opposite type of legislation which supported the actions of ordinary people. Such legislation is: *i.* permanent or lasts for long periods, *ii.* general in nature, as opposed to specific orders, *iii.* impartial — it is not known in advance who benefits/loses and which ends are served. Therefore, it is *iv.* instrumental, enabling unknown people to achieve their ends and hence *vi.* limited in scope. These features, in short, are limits set on the exercise of power. Hayek mentions several times that with this type of legislation, it is impossible to know beforehand who will be affected, in what way¹⁴⁹. These features are of course those of the grown common law.

Hayek emphasises, more than once, that the general principle of private property is quite distinct from the historically-developed rules of property and contract; it is a mistake to mechanically identify the two. Ideas about the social order influence the development of both common law and legislation, and the *content* of property rights definitely affects the degree of actual competition in operation. Hayek cites the examples of cartels, monopolies and restraint of trade. A clear idea of the rationale of property is, therefore, essential: *a.* as conditions change and property rights develop in new fields *b.* for such new problems as urban land use *c.* to assess the impact of e.g. trademarks, patents and copyright. In these areas, case-law and legislation have mechanically extended existing property rights, without considering the principles on which the market economy functions. So too has legislation on corporations. The result in all these areas is to limit competition seriously below its achievable degree, — the treatment of trademarks is a very clear example. Hayek is also quite emphatic that corporations, in particular, should never have been treated as natural persons¹⁵⁰.

Hayek specifically notes the legal doctrines of Sir Edward Coke, and of Hume, in the first of his lectures on *The Political Ideal of the Rule of Law* (delivered 1954). In *The Constitution of Liberty*, he refers for the first time to the analysis of the common law as a grown historical phenomenon, citing not only Menger's analysis (in Appendix VIII to the *Investigations*), but also that of Coke, Sir Matthew Hale, Hume and Burke. He also adds Sir William Jones and Wilhelm von Humboldt as lawyers who laid the foundations of linguistics. Hayek generalises the analysis of the common law to the development of general social rules; he mentions legal rules only incidentally. — But in that work, he is clearly more concerned with legislation. In his article on Hume's legal and political philosophy, Hayek stresses Hume's realisation that law is a *system* of rules, and that rules have to be adhered to, throughout the range of cases

decided. It is only in his paper on “The Principles of a Liberal Social Order” [1966] that Hayek systematically analyses the common law as a social growth. This analysis is extended even further in his pamphlet on “The Confusion of Language in Political Thought” (delivered 1967), and then developed more extensively in *Law, Legislation and Liberty* (1973-79).

Hayek’s analysis is squarely on Mengerian lines: the “rules of just conduct” emerge over time as the unintended results of human action. These rules always manifest first in people’s *actions*, as customs and practices followed without any conscious adoption. Cases reach the stage of decision in court only when other means have failed. All cases are, of course, specific practical disputes involving specific, practical problems — i.e a particular set of concrete circumstances. Thus all case-law develops through the application of general principles to concrete cases, regardless of the particular outcome. The judge tries to articulate the rules involved and thus a body of rules is articulated that ultimately emerge from people’s actions:

“If we are today so familiar with the conception of law in the sense of abstract rules...this is the effect of the efforts of countless generations of judges to express in words what people had learnt to observe in action. In their efforts they had to create the very language in which such rules could be expressed”¹⁵¹.

The series of decisions, *following* people’s actions, results in an increasing consistency and generality in the rules. Thus common-law rules are the outcome of attempts to make rules ever more instrumental and abstract — i.e following an idea of justice which sees it in the equal application of equal rules to all-comers. Equity develops as the articulation of *unarticulated* rules in the entire *system* of rules. Judicial expertise then consists in identifying the key rule or rules that apply to the concrete case at hand, and recognising too the very real difficulty of articulating the rules that people do act upon:

“It seems that the constant necessity of articulating rules in order to distinguish between the relevant and the accidental in the precedents which guide him, produces in the common law judge a capacity for discovering general principles....The common law judge is bound to be very much aware that words are always but an imperfect expression of what his predecessors struggled to articulate”¹⁵².

Hayek also recognises what Hale, Burke and Mises had seen earlier: that the *katallaxy* and the common law developed together. Changing economic activities produce new practical problems for lawyers to solve. Thus legal practice changes. And when cases go to court, judges have to face new types of facts and articulate new types of rules. Conversely, an open legal order facilitates an open-ended economic order. Legislation, which Hayek now terms

more dangerous than gunpowder, runs counter to the common law, because legislation is an instrument for government officials to issue orders to subordinates, ie. government subjects. It is, therefore, ends-oriented, and cannot serve as a general instrument for all-comers, as the common law does ¹⁵³.

How to Study Society

Lastly, we come to the question: What is the field of study for which all these analytical tools have been prepared? For Hayek, as for Mises and Menger, this field is the study of the social order. It requires several disciplines, as well as a profound knowledge of particular facts (says Hayek). It is now broken up amongst various specialisms, but it had once been “a common field of inquiry”. This splitting-up has had especially “baneful effects” in economics and in law. Both deal with particular aspects of the *same* social formation but neither specialist is aware of this:

“the rules of just conduct which the lawyer studies serve a kind of order...of which the lawyer is largely ignorant...this order is studied chiefly by the economist who, in turn, is similarly ignorant of...the rules of conduct on which the order...rests”.

After thirty years’ teaching experience, Hayek questions the separation of the two disciplines. He regrets that economists learn neither law nor legal history, and remains grateful that he had to study both legal and economic disciplines. Hayek suggests further that economics “can only gain” from looking sometimes at “the problems of theoretical linguistics”. He points out elsewhere, “[i]n the field of social phenomena, only economics and linguistics seem to have succeeded in building up a coherent body of theory” ¹⁵⁴.

Hayek says that to study society requires firstly “a rich and varied experience”, which gives “knowledge of men and the world”; and then a knowledge of “the inherited cultural treasures of our civilisation”, through which we gain access to “the accumulated wisdom of the past”. This cultural inheritance not only provides knowledge, it is also what we try to investigate objectively ¹⁵⁵.

Investigation of the social reality is an extremely difficult art: there are no “simple, ...mechanical criteria” to identify “a certain type of theoretical situation”. Instead, the professional student of social affairs needs “a sense for the physiognomy of events”. Only “those to whom...theoretical schemes have become second nature” will be able to acquire these practical skills. To recognise the real world counterpart of theoretical categories is extremely difficult: there is an immense distance between theory and application. The latter requires a substantial knowledge of “several disciplines” as also of “particular facts”; Hayek stresses that “the need for understanding history arises in every

application of our knowledge". He emphasises that the social sciences are theoretical and highly abstract, perhaps more so than the natural sciences, but the concrete social phenomena and events that are the focus of study are complex and historical in nature. To deal with any "concrete problem", one needs a greater knowledge of "political science and jurisprudence, anthropology and psychology, and, of course, history" than anyone can really have. Thus, to use "technical knowledge" successfully requires a broad education, and "some knowledge of the whole field of the social sciences as well as...history and philosophy"¹⁵⁶.

Hayek stresses yet again that "the study of society" is *both* theoretical *and* historical; it is "erroneous" to identify such study with history alone. In short, he again denies the position of the Younger German Historical School but now without specifically naming them. The nature of this subject matter is such that "practitioner" and "theoretician" cannot be separated, as with engineering and physics. In this study, application cannot be delegated, "we...must be our own practitioners,..." and obtain the necessary "factual knowledge, the familiarity with particular circumstances"¹⁵⁷. — In other words, Hayek says social theoreticians *must* have a deep and thorough knowledge of the historical reality — since it is for the study of this reality that social theories are developed.

Two Sorts of 'Economics'?

We may now pull together the features of both the social subject-matter which Hayek refers to, and the discipline of 'economics' which he has in mind. This 'economics' studies the social formations resulting from the legal rules that the lawyer studies. Like linguistics, 'economics' too studies social phenomena. In addition to a knowledge of 'economics': historical knowledge, a knowledge of literature, worldly experience, and mastery of a range of disciplines — all are necessary to tackling the study of this social reality. Hayek explicitly sees 'economics' as only a starting-point for moving out into the far wider range of concrete studies involved in the investigation of society. 'Economics' is, for Hayek, only one part of the training needed for such investigation. This last requires many more and different skills and techniques and a particular outlook. It is "perfectly true", therefore, that "exclusive knowledge of a single sector of the social sciences is of little use" when dealing with their concrete problems¹⁵⁸.

Now, none of these features are found in the neoclassical economics of the late twentieth century, so clearly this is *not* the 'economics' which Hayek is thinking of. Moreover, the social world which Hayek describes is clearly not the natural world, so this social world is unknown to natural scientists. And since neoclassical economics is a science, the social world is also unknown to

it. But, besides the ‘economics’ whose features are not those of neoclassical economics, Hayek refers to another ‘economics’ which he describes very differently. This type consists in “writing articles for other economists to read”. Hayek “sometimes feels” this ‘economics’ has become so “refined [it] can no longer apply...to the real world”. Its “increasing technicality carries...the danger of a narrow specialism which is peculiarly harmful in this field”. — Since at least 1944, Hayek has said repeatedly that to “know only economics and nothing else” is to be a “bane to mankind”. Twelve years later he said,

“I am even tempted to add that the economist who is only an economist is likely to become a nuisance if not a positive danger”.

Natural scientists, to be useful members of society, require no more than their respective specialisms (he says). But, with the social scientist, a specialism alone is damaging: “in the study of society exclusive concentration on a speciality has a peculiarly baneful effect”. — Now, neoclassical economists will feel, of course, that what is said of natural scientists applies to them as well, because neoclassical economics is a science. Be that as it may, it seems quite clear that the ‘economics’ Hayek finds so detrimental is not the ‘economics’ which he says is “indispensable” for studying “the far-reaching problems of social organisation”¹⁵⁹.

Statistics, Aggregates, Quantities

Hayek sharply contrasts statistics and aggregates with the ‘complex’ economic phenomena — prices, quantities, wage-rates, etc — that result from individuals’ actions on the basis of their knowledge of specific circumstances. This last is the reason for his well-known and consistent argument that averages, aggregates and other like constructs can never be part of economic reasoning — ie explanation or analysis. Only human beings, interacting with one another, can give rise to such economic phenomena as prices and quantities of goods, production methods, etc. That is why economic analysis has to be of individuals’ actions and their inter-relationships. All these economic phenomena are the complex outcome of the particular knowledge of particular circumstances known severally to the millions of individuals involved¹⁶⁰. As against this, statistics simply cannot handle complex social formations:

“in the statistical study of social phenomena the structures with which the theoretical social sciences are concerned actually disappear”.

To rely on statistics and index numbers in economic reasoning is to lose *achievable* insights into the interrelationships amongst people’s actions¹⁶¹.

In his Nobel lecture, Hayek refers — just as Mises does — to the “vain search for quantitative or numerical constants”. Statistics are historical data:

“Most...economic statistics” that are ordinarily collected, “such as trade statistics, figures about price changes, and most ‘timeseries’, or...‘national income’ [statistics]” can provide at best only “information about the conditions existing at a particular moment”. Statistics are “an instance of...historical information about a particular situation...”. Statistical information cannot give us more:

“There is no reason to expect...these measurements will ever reveal anything... beyond the particular place and time at which they [were] made”.

So we cannot expect constancy: “...statistical magnitudes inform us only about the past and provide no justification for the assumption...they will remain constant...”¹⁶².

Hayek is particularly sceptical about the use of macroeconomic estimates rather than the analysis of individual action. He finds it a “superstition that only measurable magnitudes can be important”. Thus, the myriads of prices and wage-rates that produce a sustainable distribution of employment in different lines of production are the result of the “particular information” possessed by the millions of individuals concerned. It is, therefore, impossible to obtain these prices and wage-rates via statistical tests. Statistics are *not* the facts to which economic theories refer, and what is statistically measurable “may well [be] theoretically wholly uninteresting”¹⁶³.

Hayek is quite scathing about economists’ preoccupation with “quantitatively measurable surface phenomena” derived from “a superficial similarity of procedure with the physical sciences”. He emphasises that there are “specific conditions...in the natural sciences” that give “quantitative measurements [a] basic importance”; but these conditions “are not present” in the social field. Hence, there are no grounds on which to copy the natural sciences and so “the blind transfer of the striving” for such measurement “is the result of an entirely unfounded prejudice”. Hayek indicts this last in the strongest possible language: it “is probably responsible for the worst aberrations and absurdities produced by scientism in the social sciences”. This scientism

“not only leads frequently to the selection for study of the most irrelevant aspects of the phenomena because they happen to be measurable, but also to ‘measurements’ and assignments of numerical values which are absolutely meaningless”¹⁶⁴.

Hayek adds (much later):

“I do not see...that our habitual use of index numbers of prices...had any way assisted our understanding...or to draw relevant conclusions, except perhaps about the behaviour of index numbers”.

Hayek finally doubts even the value of depicting the complex pattern of general equilibrium:

“I am afraid I have become...more and more sceptical of the instructive value of...that beautiful system of equations...”.

— even though he was once “greatly fascinated” by this “construction”. He now has reservations because “we often forget these data are purely fictitious, are not available to any single mind, and therefore do not really [explain] the process we observe”¹⁶⁵.

Once again, two types of ‘economics’ are clearly implied in these observations, though this is never spelt out. Neoclassical economists of the late twentieth century would certainly reject Hayek’s position, which however is entirely consistent with his exposition of an ‘economics’ which is only one of the disciplines needed to study the complex, historical, social world.

Falsifiability

So far we have worked through Hayek’s analysis of complex social phenomena: i.e formations that are *not* visible but have to be carefully rebuilt from the known components, people’s actions. As people manifest different types of rules in their actions, two kinds of orders appear. Thus fundamental aspects of specific historical phenomena — such as tribes, manors, castes, clubs, firms, as well as languages, the common law and the world-wide exchange order — can be recognised; these aspects would otherwise remain invisible. Especially in the case of the grown, undesigned social formations, it is now possible to pull together as part of the same historical development a vast range of individual facts that otherwise appear to be self-contained and distinct.

In addition to this, Hayek also tries deliberately to meet Popper’s criterion of falsifiability for the case of complex phenomena. We may note this criterion is, of course, crucial for the natural sciences, but it is entirely separate from the analysis of historical facts — i.e the facts of the social sciences, the actions of human beings.

The Applied Natural Sciences

Hayek begins with those sciences where complex phenomena are the rule: specifically, the applied natural sciences, such as astrophysics and the various branches of geophysics — geography, geology, oceanography, meteorology, seismology, etc. These disciplines study natural phenomena that are produced by a complex of separate influences, so investigation in these fields

uses a combination of theorems already developed and “accredited”¹⁶⁶. Hayek points out that in these and other disciplines, and even in physics itself,

“the activity of thinking through all [the] implications [of hypotheses] is...important and valuable in its own right; and it may sometimes be...of great complexity and difficulty, requiring the highest forms of intelligence”.

What “the range of application or the capacity of a theory” is, how far “it can account for a certain group of observed phenomena”, etc, is “often as interesting a problem” as testing “the particular conclusion derived from the theory”. Drawing out all the implications of what we know can never be finished;

“it will often be...exceedingly difficult...to decide how much of what we observe can [or could] be explained by laws already known...”¹⁶⁷.

In geophysics and other applied sciences, hypotheses are selected “from what we know already about some of the elements of the phenomena”. This explanatory pattern is assumed to be true, so it is *not* asked whether the selected hypotheses are true; the question rather is: does the pattern fit the observed situation? Have we chosen the right combination of theorems to explain these given phenomena? Are “the factors...singled out...in fact present in the particular phenomena we want to explain?” Are these factors “relevant and significant to explain what we observe?”¹⁶⁸.

Where a vast number of relevant influences operate simultaneously, there “neither the assumption that factors of the kind assumed are present” nor the deductions made therefrom, “need be regarded as disproved if [our] conclusions are not borne out by observation”. All that “observation of such complex situations” can do is “help...to decide whether to accept” the conditional theorems “as an explanation of the facts...we observe”. What is “tested” is “the assertion that this or that pattern fits this observable situation”¹⁶⁹; and if this explanation is in fact correct, then it is possible to predict “combinations of events which will not occur”. So too the “tentative explanation can be proved false if the phenomena observed show characteristics which the postulated mechanism could not produce”¹⁷⁰.

Pattern Prediction

Explanations of this type provide a “schema or framework” which organises the “observational knowledge” we already have and supplies “*niches* for new observations likely to occur”. With such complex phenomena — including those of biology and the social sciences — only “explanations of the principle” are possible. This means that predictions can only limit the possible *range* of events that might occur¹⁷¹. It is impossible to predict “what particular

occurrence will take place at a particular spot or moment". There are "absolute obstacles to the prediction of specific events" because they "depend on [too] many concrete circumstances" to ascertain all of them. 'Pattern prediction' cannot give the specific arrangement which will appear, only the general *type* ¹⁷². Hayek is quite explicit that such predictions can be made only for "a given situation", a "given complex of events", or in "given" or "defined circumstances" ¹⁷³.

Natural Evolution

Hayek is emphatic that the theory of natural evolution is exactly an example of established theories applied to a particular set of natural events ¹⁷⁴. Therefore, those "[d]isputes which have arisen in the course" of the theory's growth

"have...significantly turned not so much on facts but on such questions as whether the postulated mechanism can account for the evolution having taken place in the time...available".

These disputes have been solved through deduction:

"...the answer has frequently come, not from the discovery of new facts, but from purely deductive arguments such as the mathematical theory of genetics..." ¹⁷⁵.

Hayek points out that the theory *can* explain — but it can predict only very little, if at all, because there are too many facts involved. Thus the theory gives an "understanding of the growth and formation of organisms" but

"only in the rarest of instances [can it] be turned into specific predictions of what will happen in a particular case because we can hardly ever ascertain all the facts [contributing to] the outcome" ¹⁷⁶.

Equally it is only the application of the theory to particular instances which can be refuted ¹⁷⁷.

'Economics' and Pattern Prediction

Hayek emphasises that the "prediction that a pattern of a certain kind will appear in defined circumstances is a falsifiable (and therefore an empirical) statement" ¹⁷⁸. Only this type of prediction is possible with economic phenomena because of their complexity — prices, for example, are formed from the knowledge of circumstances dispersed amongst thousands, perhaps millions, of people ¹⁷⁹. Nevertheless, pattern prediction makes it possible to provide falsifiable — empirical — statements in economics. This puts it on the right side of the divide between science and non-science ¹⁸⁰: all is *not* grist to the economist's mill, exactly as with natural scientists.

Empiricism in Economics

Hayek draws a sharp distinction between Popper's hypothetico-deductive standpoint and the "naïve empiricism" or "certain more extreme forms of empiricism" which he first met in America. He finds a gulf between this "uncritical empiricism [found] in a more naïve form among American social scientists" and Popper's approach. Hayek regrets not having publicly spoken about Friedman's *Essays in Positive Economics* which, he says, "in a way is quite as dangerous a book [as Keynes' *General Theory*]". Hayek does not mince his words when referring to more recent developments in the social sciences. These developments are based

"only too often...on the false belief that the scientific method consists...in imitating the form rather than the substance of scientific procedure, as if one needed only to follow some cooking recipes to solve all social problems. It sometimes almost seems as if the technique of science were more easily learnt than the thinking which shows us what the problems are and how to approach them"¹⁸¹.

Hayek feels that Mises is in fact closer to Popper; the real gap is between both and the empiricists. Mises "would presumably not deny that the applicability of a theory to particular circumstances depends on the presence or absence of facts which can be ascertained only by experience"¹⁸². [N.B, this is *exactly* Mises' position].

Comments

It will be noted that Hayek never questions that the demarcation problem is equally fundamental to the study of both the natural and the social world. But history is not science. Obviously it is absolutely essential to scientists that their investigations should be clearly demarcated from the doctrines of e.g Freudianism and Marxism. All is grist to the Freudian and the Marxian mill but this cannot be so for science — since this is exactly what separates it from non-science; — and scientific research is predicated on this demarcation. Hayek has shown that a number of applied natural sciences e.g astrophysics and geophysics, *do* meet the demarcation criterion, even though they study varying combinations of complex circumstances. This limits them to testing only the *applicability* of deductions from "accredited" theories to particular situations; so these disciplines can make, at best, only pattern predictions about the range/type of events forbidden in such situations. Hayek is clearly anxious that the social sciences be shown to also fall on the scientific side of this demarcation. This last point is clearly addressed to scientists and to philosophers.

At this point we may bring in (again) what Hayek saw earlier about the social world: people's actions — the elements of complex social phenomena — are “the truly empirical factor” in the social sciences, “known beyond...dispute”. He describes the social sciences as “empirically deductive” — since we obtain the general patterns of social phenomena by drawing out all the implications of people's actions in the abstract. He points to the fact that: *a.* everyone has the same mental structure and therefore sees things in terms of the same general classifications *b.* everyone's knowledge of circumstances is a fragment, often inconsistent, as compared with the whole, available to all people taken together. Both are the starting point for the development of social theory. On the basis of these undisputed facts, theory builds up pictures of social structures — structures that are also historical in their development, i.e. they are empirical facts. Theory (says Hayek) deals with only those aspects of these social formations that are in principle repeatable; history studies the unique, the particular, the non-repeatable side. Thus both the organising framework and the historical material organised, come from exactly the same source: people's actions.

We may take a concrete example of what Hayek is referring to in general terms: The category of ‘money’ is clearly a *type* of human action; and the various historical monies — e.g. cowries, coins, credit cards — can be classified as such only because people have in fact used these things as media of exchange. But the category cannot predict what will present itself to be classified. Obviously classification is not (always) instantaneous; it may require many tries before the ‘right’ category is found for some historical happening. Clearly the historical conclusion, ‘cowries were used by people in fifteenth-century West Africa as a medium of exchange’ was arrived at *after* historians had puzzled over the significance of cowries in that particular context: did people use these shells for decoration? Playing games? Gambling? Ceremonies and/or religious rituals? Exchange? Etc. And this problem arose, of course, only in the context of extensive research into various aspects of West African history in various periods.

Now, falsifiability is totally central to the natural sciences, but it cannot even begin to touch on the issues and the content of historical research — i.e. the study of the facts of the ‘social sciences’. If philosophers and scientists, and therefore neoclassical economists, should ever feel there was something in historical study, and so want to take an interest in it, they would have to go there direct. I do not say, of course, that a knowledge of history can assist scientists and philosophers in their study of the natural world and of the problems and issues involved. But of course, the converse does not hold: as Mises insists,

historians must have some knowledge of at least the conclusions of the natural sciences.

Hayek clearly thinks he is describing *one* horse — piebald rather than of a single colour. In fact there would appear to be *two* horses — both galloping off madly in opposite directions.

Sayles, Hayek, Mises

Finally, we may note that G.O. Sayles, the eminent historian, also links the study of history with that of the applied sciences, since they are concerned with non-repeatable occurrences, unlike the experimental disciplines:

“...the ‘experimental sciences’, like chemistry and physics, ...deal with events that can be constantly repeated, with processes that recur or can be artificially produced and subsist in an external present. Our interest is with the ‘observational sciences’ or the ‘descriptive sciences,’ ...like astronomy and geology, palaeontology and palaeobotany, meteorology and biology, or such hybrids as geography, which deal with phenomena that have occurred once and for all in the course of nature and cannot be repeated....The astronomer must take the stars as he finds them and the geologist the earth; the palaeontologist and palaeobotanist must accept the fossils of ancient fauna and flora for what they are. They can conduct no experiments to bring about like results. Now, the historian is also concerned with unique events and it is with the observational sciences that history is closely associated.”

With Mises and Hayek, Sayles too recognises that quantitative materials are historical data:

“The observational scientist and the historian are each dealing with concrete events fixed in time and space, and without the accumulation and coordination of quantitative data there can be for them no science and no history.”

But all historical materials require organisation and arrangement:

“Rarely...do the facts come to the historian...conveniently arranged...statistical material may need a good deal of interpretation....Most of the facts with which the historian has to deal are presented to him without classification and, in great part, they are not susceptible of statistical treatment at all”.

Sayles emphasises that the historical data have a “living reality”; historians have to understand this and “make the dry bones live by explaining how once they were animated. Every charter, every writ, however dull in appearance, was procured by a living man for some purpose of importance to him...”. Sayles points out that because history is about people, it is both

significant and intelligible: “This is something more than watching as it were an ant-heap or a beehive. We are in communion with the men of the past as in one great sodality”. With Mises, Sayles too feels that the detached historian is the ideal historian:

“man does not easily contemplate his kind without the intrusion of an emotion which obscures vision and clouds judgement...the findings of the historian, like those of a doctor, will be the more certain when observations and inferences are cold and objective...”.

Mises too compared historical investigation with “the tasks to be accomplished by a diagnosing physician”¹⁸³.

A Digression on Government

As we saw earlier, the *cosmos* or Great Society contains numerous organisations. Government is “biggest” of these, but the *cosmos* is always the greater and far more complex entity, precisely because it is a spontaneous order. Government, on the other hand, “as [an] organisation must still be dedicated to a circumscribed and determined set of specific purposes”. Hayek, therefore, rejects very strongly “[t]he supreme superstition that the social order is created by government”; this is “a flagrant manifestation of the constructivistic error”¹⁸⁴. As opposed to the latter, “it is conceivable that the spontaneous order [called] society may exist without government, if the minimum of rules required for the formation of such an order is observed without an organised apparatus for their enforcement...”. But “in most circumstances the organisation [called] government [is] indispensable” to ensure these “rules are obeyed”. Nevertheless, society can carry on without government: “[t]hese spontaneously ordered activities of the members of society certainly could and would go on even if all the activities peculiar to government temporarily ceased”. Governments have assumed monopolies of “many essential services, especially in...transport and communications”, but this is *not* because “these...can be provided only by government” [*italics omitted*]¹⁸⁵.

Legislation is an instrument of governance, and so it is in the rulers’ interest to assimilate their orders to the grown rules of the common law: “a ruler would find it to his advantage to claim for the organisational rules the same dignity...conceded to universal rules of just conduct”. Government regulations “are called ‘laws’ as a result of an attempt to claim for them the same dignity and respect which is attached to the universal rules of just conduct”. A constitution is “a superstructure erected to secure the maintenance of *the law*”, i.e it is “erected over a pre-existing system of law to organise” the latter’s enforcement¹⁸⁶. In short, law consists of spontaneously-generated rules,

manifested in people's actions, and articulated by common law judges when needed. Legislation, on the other hand, is deliberately organised for achieving specific purposes.

We may note that in the common-law countries, the volume of legislation began growing in the late nineteenth century; this growth accelerated beyond measure in the twentieth. Thus the volume of commands from Authority to its subjects has been rising drastically, relative to the continuing development of general-purpose rules of just conduct. Hayek agrees that "[l]egislation... has been justly described as among all inventions...the one fraught with the gravest consequences, more far-reaching in its effects even than fire and gun-powder". When people manifest — appropriate types of — general rules in their actions, these will form "part of a system of interdependent actions, determined by information and guided by purposes known only to the several acting persons...". Because "each element" balances all the influences acting on it, all these "various actions" are adjusted "to each other". In opposition to this, the knowledge and the ends of a "directing authority" are *its* own, *not* those of the people whose actions are mutually adjusted through the spontaneous order. So these authorities have to obtain their "particular results" through the issue of "specific orders". Thus the results they aim at "will always be inconsistent with [the] overall order", and their "isolated commands" must cause people to undertake certain actions that cannot be integrated with the interdependent actions of this order, thus effectively disrupting it and at least beginning to destroy its "balance"¹⁸⁷. Interference or intervention, aimed at particular results, "is therefore by definition an isolated act of coercion". As no general rule is contemplated, "[i]t is...always an unjust act in which somebody is coerced (usually in the interests of a third [party])...where another would not be coerced", all for someone else's purpose¹⁸⁸.

On this basis Hayek points out, "...we have not yet learned...the taming of organisations". It still remains to curb the largest one, government, by bringing it under the same general rules that apply to everyone: "...the problem of taming organisations, including the biggest one, government...through subjecting them to those abstract rules of conduct...the rule of justice, is still the main problem ahead". Because of government's actual role, Hayek says "I've a theory that all economists who serve in government are corrupted as a result...". From his own observation, "practical experience with government service... corrupts the attitude of the economist. He becomes a statesman [politician] instead of an economist". Where government enforces general rules, this activity "is somewhat like that of a maintenance squad of a factory" which keeps the production machinery "in working order". But it is "those who buy its products" who ultimately determine how "this machinery is...used". Hayek is

emphatic that the spontaneous social order is the primary entity, governments are an adjunct:

“Whatever the changing structure of government, the basic structure of society resting on the rules of conduct persists. Government therefore owes its authority and has a claim to the allegiance of the citizens only if it maintains the foundations of that spontaneous order on which the working of society’s everyday life rests”¹⁸⁹.

Two legal historians, foremost in their field, also find that the legal principles embodied in legislation are regressive. Professor S.F.C. Milsom sees a reversion to the feudal principle:

“At different speeds, much of the Western world is moving back to dependent structures of which the feudal unit was a simple model. In such a structure the obligations of society are not between man and equal man: they are, as it were, in the vertical dimension, between manager and managed, between those with the power to allocate and those with some entitlement to allocation”¹⁹⁰.

Professor J.H. Baker is somewhat harsher:

“Once the Crown had been painfully brought under the law, it was parliament which began its own democratic...despotism. Countless statutory bodies have been created over the last 150 years, many of them with sweeping powers to restrict freedom and redistribute private property and money....In 1978 it was discovered that administrative tribunals dealt with six times as many cases as the High Court and county courts together....Many of the new administrative powers were conferred on non-judicial bodies for the very reason that government departments wished to control...those bodies and the policy...they administered in a way which would not be allowed in the case of a court”¹⁹¹.

In three important areas of contract, Baker finds that legislation has been regressive: leasehold tenants, employees, and ‘consumers’ of goods and services are

“deemed incapable for economic reasons of protecting themselves through the bargaining process....The result is that many important transactions entered into by non-commercial men are governed not by the individual bargain but by the statutory law....There has in that respect been a partial movement from contract to status”¹⁹².

In the *Constitution of Liberty* Hayek discusses an extensive and fairly specific set of suitable policies that *supplement* the spontaneous market order and its common law rules. For the historian what is significant are Hayek’s penetrating, shrewd and prescient comments on the policies actually followed in the late 1950s and the further implications that he sees in them.

Hayek's appropriate policies follow from the existence and functioning of a spontaneous socio-economic order. Such policies can at best only supplement this existing order. As Hayek observes, actual policies are designed to obtain specific ends and as such oppose and disrupt the general rules of the overall order. So suitable policies would embody two principles: *a.* Government officials are to use coercion *only* to enforce general rules. Officials themselves are to follow/implement such rules, which are to cover taxation too — Hayek recommends a proportional income-tax in the *Constitution of Liberty*. *b.* Government is to be treated exactly like any other large organisation: No government monopolies of any kind (except of legitimate coercion). Government officials may not treat ordinary citizens and their resources as means for government purposes.

Legislatively: the crucial difference between an historically-grown, general-purpose common law, and ends-oriented legislation, is the fundamental reason for the way in which Hayek divides legislative and administrative functions between two chambers of very different compositions. One chamber, the lower, is to supervise government and levy taxes on principles laid down by the second, higher, chamber. The function of the second chamber is to lay down general rules, intended to last indefinitely, and to express general opinions about the principles that judges should take into account in determining cases ¹⁹³. — Hayek brings together two strands here. As he pointed out with respect to trademarks and corporations, case-law developed mechanically, with no clear understanding of how the market order functioned and the fundamental rationale of private property. And as he also emphasises, legal developments are guided by general ideas about the principles of social order: “the principles and preconceptions which guide the development of law inevitably come in part from outside the law...the decisive factors which will determine [legal] evolution will always be highly abstract and often unconsciously hold ideas about what is right and proper” as well as about the Great Society ¹⁹⁴.

Hayek's vision of the second chamber's composition is consistent with its functions. Its members are to consist of mature individuals who have already proved themselves in life, — i.e. people with *practical* experience of the market order and the common law. Election, for a fairly long period, is by a constituency of those in the same age-group; — this because contemporaries are best fitted to assess any individual. On retirement members take up honorary positions, as lay judges and the like. Hayek even draws out one possible implication of the mode of election — the formation of age-clubs, whose female members may be a little younger than the men ¹⁹⁵.

Commentators have generally missed completely the serious issue which Hayek tackled. One such, admittedly a journalist, thought Hayek wanted to

set up lonely-hearts clubs for the middle-aged. Others have asked why — after all the strictures against constructivism — now design an institution? Jeremy Shearmur doubts whether a second chamber of this type will forget particular interests and concentrate on general rules, since the latter have a differential impact on different social groups ¹⁹⁶. This last amounts to saying there are *no* general-purpose rules: that contract law, for example, *must* favour some particular contracts over others. — Clearly such comments fail to grasp the problem and therefore treat what is one proposed solution as if it were a self-contained political invention put forward in a total vacuum. The central issue is to articulate general opinion and principles as needed for those occasions when it seems case-law requires it, and to ensure that judges have available clearly articulated opinions for consultation, again as needed, to bring changes in case-law closer to changes in general opinion. — It may be noted once more that for political theorists and philosophers, the workings of the common law are part of a completely separate, sealed box. Historians, however, must recognise that Hayek's political proposals *are* supplementary to a common law which has already developed and continues developing.

In short, Hayek is writing in the historical context of an existing and functioning world-wide exchange order which now supports billions of people. The other side of this coin consists of an existing array of ends-independent social and legal rules. It is impossible to wipe this slate clean and start with a perfectly blank sheet. So government officials *can in fact* only follow one of two principles: on the one hand, they can, through the kinds of taxes they impose; the orders, directives and decrees they issue; and the kinds of spending they undertake — oppose and undermine the general rules of the common law and the market order. This means that legislation opposes and undermines that very worldwide exchange order which enables billions to survive. In relation to the evolved rules that produce this order, such legislation is the equivalent of dripping acid on various parts of a living entity. Even a little is not necessarily a good thing.

Neither is there any necessary connection between the actual reality and the ideas that justify such legislation. These various acts of governance are said to 'correct market failures', 'redistribute incomes', 'redress the balance for the disadvantaged', etc, etc. These ideas picture a malevolent black box, a harsh organisation, which deliberately assigns incomes in accordance with its own materialistic, money-oriented hierarchy of ends — more for the rich, less for the poor. But such ideas *about* the actual, historical, influences at work are *factually wrong*. Consider how such a simple item as a pencil is produced, in the late twentieth century: it needs various inputs — graphite, specially-grown timber, paints, finishes, etc; appropriate machinery and skills; a suitable factory;

an organised company, legal advice, insurance, etc. The graphite has to be mined — this needs mining machinery and appropriate skills; then processed — more equipment and skills; then transported — lorries and ships, plus relevant skills, legal input, marine insurance etc. The timber is grown on plantations; it is then cut down, goes through sawmills and workshops, and becomes suitably-prepared wood. Previous to this are the various machines, factories, labour, steel, etc, that turn out all this machinery and equipment, and the steel mills, rolling mills, etc, that provide the various types of steel products needed; and before that, there are the iron and coal mines using mining machinery, etc.

In short, a pencil is produced through various worldwide sequences of intricate, interlinked, continuing, investment chains, that also turn out a vast range of other consumption outputs. This *is the actual historical reality*. This reality *cannot* be grasped by taking the opposite tack, and supposing that mass consumption goods are produced by a benevolent black box, a helpful organisation which places mass requirements at the top of its list of ends to pursue. Rather the depiction above is of something entirely different: (the skeleton of) an unintended grown order, manifesting itself — all unwittingly — in people's actions. All such instrumental orders — language, common law, catallaxy, capital structure — are instruments or means — for the participants to achieve their several goals. The catallaxy/capital structure, as shown, enables people to produce a vast range of *mass* consumption goods; luxury goods are always only a fraction of the range and variety of final goods produced. And contract law, for example, enables people to write a range and variety of specific contracts; the other side of the catallaxy. So Hayek addresses himself to the question: how to *supplement* all these real, grown, ends-independent rules and further improve their functioning?

As opposed to this, legislation is a political and administrative instrument for particular purposes only: that conglomerate of ends which eventually emerge from the political and administrative bargaining and conflict amongst organised groups both in politics and in administration, — the politics here are 'democratic' politics, of course. No single such group will find that all its preferred purposes are successful, of course, but all organised groups are united in preferring that this principle be followed rather than the enforcing and implementation of general rules. The 'justice' here is 'distributive' or 'social justice' — that of an organisation or hierarchy.

As Hayek points out, "Abstract rules are not likely to be invented by somebody concerned with obtaining particular results". Rulers aim at "organising the activities of [their] subjects for the achievement of definite foreseeable results". Thus rulers are "used to issuing specific commands and to being guided...by the needs of the moment". The enforcement of equal abstract

rules “require[s] a degree of self-denial” and restraint “not to be expected” from such types¹⁹⁷. To re-work Hayek’s insight: the effect of inserting ends-oriented legislation into a developed and developing set of common-law rules is analogous to the effect of acid rain on a growing forest. The forest may grow sufficiently to offset the acid, but this does not make acid rain beneficial.

FOOTNOTES CHAPTER 5

1. Information collated from: F.A. Hayek, “Introduction”, Roy McCloughry (ed), *Money, Capital, Fluctuations: Early Essays by F.A. Hayek* (Routledge 1984), p. 1; Stephen Kresge and Leif Wenar (eds) *Hayek on Hayek* (Routledge 1994) pp. 44, 48, 51, 53, 62, 63. Quotations from pp. 48, 62.
2. Collated from *Hayek on Hayek*, pp. 47, 48, 54, 57. Quotations from pp. 47, 48, 57. “Mises says...”: F.A. Hayek, “Introduction to L.v. Mises, *Socialism*, *Liberty Classics* ed, 1981” in Peter Klein (ed) *The Fortunes of Liberalism* (Routledge 1992) p. 138.
3. *Hayek*..., pp. 55, 62; F.A. Hayek, “The economics of the 1920s as seen from Vienna”; Klein (ed) *Fortunes*, pp. 22, 23. “any professional...”: p. 23.
4. *Hayek*..., pp. 62-63; “by original training...”: F.A. Hayek, *The Political Ideal of the Rule of Law* (Cairo: National Bank of Egypt 1955), Lecture 1, note 2. “...during the three years...”: F.A. Hayek, “Ernst Mach and the social sciences in Vienna”, Klein (ed) *Fortunes*, p. 173.
5. *Hayek*..., pp. 48, 51, 52, (“half a dozen...”), 57 (“outstanding member”). Wieser and higher doctorate: *Money*..., p. 1.
6. First meeting with Mises: Mises, *Notes*, p. 76; *Hayek*, pp. 67-68; F.A. Hayek, “Review of L.v. Mises, *Notes and Recollections*”, Klein (ed) *Fortunes*, p. 154; *idem*, *Knowledge, Evolution, Society* (London: Adam Smith Club, 1983), p. 17. Mises’ efforts for Hayek: *Hayek*, p. 69; Margit von Mises, *My Years with Ludwig von Mises* (2nd ed, Cedar Falls, Iowa: Centre for Futures Education, Inc., 1984). Hayek and Mises: *Hayek*, p. 76; *Money*, pp. 1-2. Private seminar: “Review of *Notes*...”, Klein (ed), *Fortunes*, pp. 154, 155 (also — saw Mises almost daily); *Hayek*, p. 69.
7. Margit von Mises, *My Years*..., p. 133.
8. “Review of *Notes*...”, Klein (ed) *Fortunes*, p. 153; F.A. Hayek, “Review of *Nationalökonomie*” *ibid*, p. 152, (“one of the most...”) p. 153 (“must be...”; “was... never...”; “he would not...”; “Mises’ work...”: F.A. Hayek, “The transmission of the ideals of economic freedom”, *Studies in Philosophy, Politics and Economics* (Routledge and Kegan Paul 1967) p. 197; *Knowledge*, p. 46 (“my great master”) p. 18 (“I am to this day...”), p. 17 (“There is...”; “a long...”; *Money*, p. 1 (“became the...”); F.A. Hayek, “In honour of Professor Mises”, Klein (ed) *Fortunes*, p. 129 (“pupil”); “Transmission...”: p. 198 (“close disciple”); *Hayek*, p. 68 (“I have...”; “In honour...”, p. 133 (effect of *Socialism*, also see pp. 134, 136, 139, 140, 159), pp. 134-35 (future effect of *Human Action*).
9. “Review of *Notes*...”, Klein (ed) *Fortunes*, p. 158 (“a priori”); F.A. Hayek, “The Austrian School of Economics”, *ibid*, p. 55; p. 158 (“was driven”); p. 55 (“teaching”); *Hayek*, p. 72 (“Economics and Knowledge”); Klein (ed) *Fortunes*, p. 55 (ditto); p. 56 (“the crucial processes”); p. 55 (“then largely”); *Hayek* p. 72 (“even approved”); Klein (ed) *Fortunes*, p. 55 (“but no longer”).

10. Footnote to "Scientism...": F.A. Hayek, *The Counter-revolution of Science* (Glencoe, Ill: The Free Press 1955) p. 219, fn. 95; *idem*, "The use of knowledge in society", *Individualism and Economic Order* (Routledge and Kegan Paul 1948) p. 88 ("a coordinated...").
11. "The Austrian School" Klein (ed) *Fortunes*, p. 55 ("basic subjectivism"; "Austrian..."); *knowledge*, p. 18 ("a child..."); *Hayek*, p. 73 ("mere habit"); p. 72 (a rationalist utilitarian); *Law, Legislation, Liberty*, Vol 3 (Routledge 1979), p. 205, fn. 51.
12. Edmund Burke, "Tracts Relating to the Popery Laws", in *The Writings and Speeches of Edmund Burke*, Vol. IX, ed. R.B. McDowell (Oxford: Clarendon Press 1991) p. 456.
13. "Introduction to *Socialism*, 1981 ed", Klein (ed) *Fortunes*, p. 142 (all quotes).
14. Menger, *Principles*, pp.
15. Mises, *Human Action*, pp. ; "Inconvertible capital", *Epistemological Problems*.
16. On several occasions, Hayek explicitly acknowledges that his work builds on Mises: *i*. *Monetary Theory*, pp. 47-48, 116-119, 128, 133-34. *ii* *Prices and Production*, 2nd ed 1935, pp. xiii, 25. In his Introduction to *Money, Capital*, Hayek says: "[Mises'] *Theory of Money* and his work on socialism...determined the chief direction of my work during these years [1921-31]..." (pp. 1-2). Hayek also points out that his first sketch of how the trade cycle was a disruption of the capital structure, appeared in a footnote to his 1925 article on American monetary policy (pp. 2-3); this sketch was "[his] version of Mises' theory" (p. 3). — For the chronology of Hayek's writings on the capital structure, see fn. 18.
17. Hayek occasional references to an average period of production or investment all occur in the course of analysing a production process or chain running through many firms: *i*. "The paradox of saving" (1929; trans. 1931) repr. *Profits, Interest, Investment*, 1939, p. 243. *ii*. "Addendum: the Early Hayek-Keynes Correspondence", Bruce Caldwell (ed) *Contra Keynes and Cambridge: The Collected Works of F.A. Hayek, Vol. 9* (University of Chicago Press 1995), pp. 165, 166, 168, 169, 171 (December 1931-January 1932). *iii*. "Reflections on the Pure Theory of Money of Mr J.M. Keynes (continued)", February 1932, *ibid*, p. 195. *iv*. "Money and Capital: A Reply", June 1932, *ibid*, p. 212. *v*. "Capital Consumption", 1932, *Money, Capital*, pp. 140, 142. *vi*. "Saving", 1933, repr. *Profits, Interest*, p. 165. *vii*. "Price expectations, monetary disturbances and malinvestments", December 1933, repr. *Profits, Interest*, p. 154. *viii*. "Capital and industrial fluctuations", April 1934, repr. *Prices and Production*, 2nd ed 1935, pp. 139, 149 fn. *ix*. "The maintenance of capital", August 1935, repr. *Profits, Interest*, pp. 122, 127. *x*. The reference in *Prices and Production* is listed in the text.
18. I give below a list of Hayek's works that explicitly analyse various aspects of the capital structure: *i*. "some remarks on the problem of imputation, 1926, repr. *Money, Capital*. *ii*. "Intertemporal price equilibrium and movements in the value of money", 1928, *ibid*. *iii*. *Monetary Theory and the Trade Cycle*, 1929, (trans. 1933), pp. 212-230. *iv*. "The paradox of saving", 1929, repr. *Profits, Interest*. *v*. *Prices and Production*, 1st ed 1931, 2nd ed 1935. *vi*. "Addendum: the early Haye-Keynes correspondence", Caldwell (ed) *Contra Keynes*, pp. 168-69, 170-71, January 1932. *vii*. "Capital consumption", 1932, repr. *Money, Capital*. *viii*. "Money and capital: a reply", June 1932, Caldwell (ed) *Contra Keynes*. *ix*. "The present state and immediate prospects of the study of industrial fluctuations", 1933, *Profits, Interest*. *x*. "Price expectations, monetary disturbances and malinvestments", December 1933, *ibid*. *xi*. "On the relationship between investment and output", E.J. 44, 1934. *xii*. "The maintenance of capital", 1935, *Profits, Interest*. *xiii*. "The mythology of capital", *Q.J.E.*, February

1936, repr. William Fellner and Bernard Haley (eds) *AEA Readings in the Theory of Income Distribution* (London: Allen and Unwin 1950). *xiv*. "Technical progress and excess capacity", April 1936, repr. *Money, Capital*. *xv*. "Investment that raises the demand for capital", 1937, *Profits, Interest*. *xvi*. "Profits, interest and investment", 1939, *Profits, Interest*. *xvii*. *The Price Theory of Capital* (London: Routledge 1941). *xviii*. "Maintaining capital intact: a reply", *Economica*, August 1941. *xix*. "A comment" pp. 383-85, "Postscript" p. 385, *Economica*, November 1942. *xx*. "The geometrical representation of complementarity". *Rev. Econ. Stud.* 1943.

The following works rest on capital structure analysis and so add some further insights: *xxi*. "The monetary policy of the United States...after 1920", 1925, repr. *Money, Capital*. *xxii*. "On the problem of the theory of interest", 1927, *ibid*. *xxiii*. *Monetary Theory and the Trade Cycle*, 1929 (trans. 1933). *xxiv*. "Reflections on the Price Theory of Money of Mr J.M. Keynes", August 1931; "Reflections...(continued)", February 1932, Caldwell (ed) *Contra Keynes*. *xxv*. "Saving", 1933, *Profits, Interest*.

19. *Hayek*, p. 141.

20. Quotes from *Hayek*, pp. 77 ("beautiful simplification"), 90 ("crude"), 141 ("so oversimplified"); also see pp. 79, 142. For Hayek's clear and emphatic rejection of the notion of an average period of production, see the following: *i*. "On the relationship between investment and output", *E.J.* 1934 — This article was already footnoted in the second edition of *Prices and Production* (p. ix). *ii*. "The mythology of capital", *QJE* 1936, repr. Fellner and Haley, eds, *Readings in the Theory of Income Distribution*. *iii*. "Investment that raises the demand for capital", 1937, *Profits, Interest*. *iv*. "Profits, interest and investment", 1939, *Profits, Interest*, p. 50 fn. 1. *v*. *The Pure Theory of Capital*, 1941, pp. vi, 69-70, 76-78, 140-45, 190, 199-200, 277, 279.

21. See references in fn. 16.

22. The attempt at a further lengthening of the capital structure is set off by an increase in the rate of flow of bank credit, which means interest rates are held *below the level they would have reached otherwise*. — For example, if interest rates are rising, they now rise at a somewhat slower pace. — In production stages further from final consumption, we saw that goods-in-progress take longer to reach final consumption; so *returns* here are widened more than otherwise: interest costs are cumulatively more significant the further removed goods are from final consumption. (A washing machine in a retail shop will reach the final consumption stage in a matter of days or perhaps a few weeks; iron ore now being mined to be eventually made into mining machinery will take months or perhaps years to contribute eventually to the final services of a washing-machine or some other consumer good. *Mutatis mutandis* for all the capital investments — both "circulating" and "fixed" — in all the intervening stages). Thus the lengthening process goes somewhat further than in line with consumer-savers' time preferences: rather more circulating capital and similar versatile resources are drawn into stages further from final consumption, than would be the case otherwise. This means that somewhat fewer of these resources than otherwise are utilised in production stages nearer consumption. Thus the interim slowing in the flows of final outputs is somewhat more than in accordance with consumer-savers' time preferences. As consumer-savers' money incomes rise more than otherwise, they continue buying final goods according to these same time-preferences, ie their desired extent of lengthening of the capital structure (reflecting how far into the future they wish to make provision for, out of the available real resources). These actions of consumer-savers raise returns in stages nearer consumption. Some versatile resources are now drawn back from stages further removed and the rates of flow of final outputs once more correspond with people's time-preferences. Some of the additional investments in stages further removed are left high and dry: the versatile resources needed to cooperate with these investments are now used in stages closer to final consumption.

23. Quotes and other material from Piero Sraffa, "Dr. Hayek on money and capital", *E. J.* 42 (June 1932) repr. Caldwell (ed) *Contra Keynes*, p. 201 ("preliminaries" whose "description..."); pp. 198-99 (Hayek's auxiliary assumptions); pp. 203-204, 223, (class robbery); p. 201 ("steam-hammer").
24. The inter-change between Sraffa and Hayek came on the heels of Hayek's interchange with Keynes (in *Economica*) over the latter's *Treatise on Money*. The two sets of exchanges should be read in conjunction, since Sraffa is clearly continuing the same dispute — see particularly the last two paragraphs of Sraffa's review and Keynes' astonishing editorial footnote attached to the end of Hayek's reply.
25. Quotes from Ludwig von Mises, *Socialism* (London: Cape 1953) p. 122 ("stationary state", "theoretical assumption"); *Epistemological Problems*, p. 108 (*ceteris paribus*). Also see *Human Action*, pp.
26. Quotes from *Money, Capital*, p. 66 ("an imagined..."); p. 65, also see p. 75 ("an indispensable..."; "artificially..."); p. 99 ("hypothetical"), also see p. 103; p. 84 ("such changes"); p. 85 ("no deviation"); p. 76 ("wants..."); p. 86 ("this will..."); p. 86 (everyone achieves; "this will..."); p. 95 ("a foil"; "the actual..."); *Monetary Theory*, p. 42n ("modern...").
27. *Monetary Theory*, pp. 87ff, 91-97, 196 [very good], pp. 107ff. (equilibrium contains no money). *Money, Capital*, p. 11 ("alien", "bank credit"); *Monetary Theory*, p. 29 ("show[s]"); pp. 55, 65, 68-69, 70-72 (price changes; index).
28. *Money, Capital*, p. 75 (regularity); p. 30 ("the logic"); p. 75 (all economic); *Monetary Theory*, p. 96 ("far-reaching"); *Money, Capital*, p. 64 ("the task"); "The Present State...", *Profits, Interest*, p. 171; *Monetary Theory*, pp. 184-87, "Price Expectations...", *Profits, Interest*, p. 138 (actual cycles); *Money, Capital* p. 20 (demarcations); *Monetary Theory*, pp. 200-203, 207 (real world interest rates).
29. *Pure Theory*, pp. 16, 18, 21, 22, 26, 27, 28, 32, etc; p. 18fn 1 (quote).
30. *Pure Theory*, pp. 32, 36 ("intellectual tool"); p. 36 ("analyse..."); p. 17 ("historical..."); p. 87 ("a series"); p. 265 (different goods); p. 297 ("a process").
31. *Fortunes*, p. 196.
32. Hayek's analysis should be definitely compared with that of Mises in *Socialism*, pp. 295-97; and see esp. F.A. Hayek, "The Trend of Economic Thinking" in W.W. Bartley III and Stephen Kresge (eds) *The Trend of Economic Thinking* (Routledge 1991) pp. 19, 27. Quotes etc: "Trend", pp. 19, 32 (the lay mind); p. 27 ("probably"; "society"; "spontaneous institutions"; "spontaneous interplay"); pp. 27-28 (economic system); pp. 26, 19 (no-one realises; coordinates); p. 19 ("intense") — also see p. 18; p. 21 ("unsurpassed"); pp. 18, 26, 31 ("interdependence"; "coherence").
33. "Trend", pp. 24, 31 (man-in-the-street); "Socialist calculation I" p. 125 (regularities); "Trend", p. 31 (succession); "Socialist calculation I", pp. 125-27 (natural sciences); p. 126 ("known") — this is taken directly from Menger, see fn; p. 127 ("empirically"); p. 128 ("permanent"); Menger, *Problems*, p. 142 fn; Mises, *Epistemological*, pp. 28, 99, 105, 123. — Hayek's account of the natural vs the social sciences ("Soc. Calc. I" pp. 125-27) should be compared directly with Mises, *Epistemological*, pp. 9-10.
34. Ludwig von Mises, *Socialism* (2nd German ed, 1932; London: Cape, new English ed., 1951) p. 163.
35. "Socialist Calculation I-III", *Individualism and Economic Order* (Chicago: University of Chicago Press 1948), p. 188 ("hypothetical", "rapid"); p. 191 ("stationary"); pp. 188-89 (competition).
36. "Socialist Calculation II", pp. 154-56 (*practical*); p. 193 ("special"); p. 156 ("beyond"); p. 153 ("amount").

37. "Socialist Calculation I-III", pp. 168, 173 (incessant); p. 160 (weather); p. 193 (scarcities); p. 157 ("frequent"); p. 193 ("economic"); p. 157 ("hundreds"); p. 193 ("find").
38. "Socialist Calculation I-III", pp. 154-56.
39. "Socialist Calculation I-III", p. 168 ("stationary"); pp. 167, 196 (precise); p. 196 ("sometimes", outsider); p. 198 (how hard); p. 167 (key prices); pp. 168-69 (relevant "cost"); pp. 188-89 (many capital).
40. "Socialist Calculation I-III", p. 175 (cumulative); p. 173 (organisation); pp. 159-60 ("the difference").
41. "Socialist Calculation I-III", pp. 172-76, 198-99, 201; p. 173 ("there"); p. 161 (salaried).
42. "Socialist Calculation I-III", pp. 174-75 (problems); p. 199 (bonus); p. 174 (demoted).
43. "Socialist Calculation I-III", p. 176 ("results"), p. 159 ("complete").
44. Mises, *Socialism*, p. 508 (both quotes).
45. F.A. Hayek, "the Intellectuals and Socialism", in *idem*, *Studies in Philosophy, Politics, Economics* (London: Routledge and Regan Paul 1967) p. 178.
46. "Socialist Calculation I-III", pp. 135, 161 ("permanent").
47. *Monetary Theory*, pp. 84-85 (participated); pp. 84-95 (esp. pp. 84-85); p. 94 (trade cycle); "Price Expectations...", *Profits, Interest*, pp. 138-141 ("Equilibrium", price constellations).
48. "Price Expectations"; "Economics and knowledge", *Individualism and Economic Order*, p. 34 ("before"); p. 37 ("take"); pp. 36-37 (successful); pp. 38-43 (plan compatibility).
49. "Economics and knowledge", p. 44 (real world); p. 45 ("under", "knowledge", "more correct"); pp. 50, 51 (entire range); p. 50 ("spontaneous"); p. 50-51 (combines); p. 50 ("central"); p. 54 ("all"); p. 50 fn 16 ("division").
50. "Economics and knowledge", p. 46 ("How") also see p. 33; pp. 47, 55 (equilibrium); p. 45 ("the whole") also see p. 51; p. 45 (social interactions); p. 33 fn 1 (Popper); p. 47 (supplementary); p. 52n. 18 (subjective); p. 47 ("ideal types"); p. 55 (nothing new).
51. "The Meaning of Competition", p. 102 ("entirely"); p. 101 ("long-term"); "Use of Knowledge", p. 91 (mathematical). — Both essays are reprinted in *Individualism and Economic Order*.
52. "Use" p. 88 ("language"); p. 87 ("is not"); pp. 88-89 (Because); "Meaning", pp. 95-96 (discovery); "Use", pp. 82, 83 (adaptation); pp. 78, 80, 81 (utilising); "meaning", pp. 101-102 ("historical"); p. 93 (social interactions); p. 96 (intermediaries), "Use", pp. 85-86 (wider); p. 85 ("condensed", "whole"); "meaning", pp. 93, 94 (information); p. 106 ("coherence"); "use", p. 86 ("the whole"); "Meaning" ("economists"); "use", p. 83 (humans); p. 82 (businessmen); "Meaning" p. 93 ("social"); "Use", p. 91 ("no more").
53. F.A. Hayek, "Preface, 1976", *The Road to Serfdom* (1944; Chicago: University of Chicago Press, 1976 paperback ed) p. xix ("annoyance"); *idem*, "Freedom and the Economic System", *Socialism and War, The Collected Works of F.A. Hayek*, Vol 10, ed. Bruce Caldwell (Chicago: University of Chicago Press 1997) pp. 186-87 ("Economic"); p. 181 ("similarity").
54. "Planning...", *Socialism and War*, Ch 10; *Road*, see fn 50.
55. The essays on "Scientism" and on "Comte and Hegel" are reprinted in *The Counter-revolution of Science* (Glencoe, Illinois: The Free Press 1955); "The Facts of the Social Sciences" — see *Individualism and Economic Order*.

56. "Individualism...", see *Individualism and Economic Order*; "Planning", p. 215 ("the division").
57. "Dilemma...": see *Studies in Philosophy, Politics, Economics* (London: Routledge and Kegan Paul 1967); *The Constitution of Liberty* (London: Routledge and Kegan Paul 1960); "The Legal ...", "Kinds of Rationalism", "Rules...", "Notes...", "The Results..." — all in *Studies in PPE*; "Errors: see *New Studies in Philosophy, Politics, Economics* (London: Routledge and Kegan Paul 1978).
58. *Constitution*, p. 59; also see: "Dr. Bernard Mandeville", *New Studies*, p. 265 and fn 59; "Results..." pp. 103-104 fn 21; "Errors..." p. 9 and fn 14; *Law, Legislation, Liberty*, Vol I (London: Routledge and Kegan Paul 1973) pp. 22-24 and 152-53 fn 33; "The Atavism of Social Justice", *New Studies*, pp. 67-68.
59. "Scientism", p. 55; "Facts", pp. 72, 75, 76.
60. "Scientism", p. 209 fn. ('praxeological'); "Facts" p. 72 ("theory is prior"); "Socialist Calculation I", p. 126 ("known"); "Scientism", pp. 70-79, esp. pp. 75, 76, 78 (Historical School).
61. "Socialist Calculation I", p. 126 (humanity's position); "Scientism", pp. 38-39 9all other quotes).
62. "Facts", p. 76.
63. "Socialist Calculation I", p. 126 all quotes except "are, so to" pp. 126-27.
64. "Scientism", p. 39 (all quotes).
65. "Facts", p. 57.
66. "Scientism", p. 28.
67. "Scientism", p. 22.
68. "Scientism", p. 28.
69. "Scientism", p. 34.
70. "Scientism", p. 46.
71. "Scientism", p. 29 ("common"; "the knowledge"); "Facts", p. 66 ("meaningless").
72. "Scientism", p. 46.
73. "Scientism", p. 77 ("works"); "Facts", p. 64 (uncertain), p. 77 ("certainly", also see p. 76).
74. "Facts", p. 66.
75. "Scientism", p. 30 ("wherever").
76. "Scientism", p. 31.
77. "Facts", p. 60 (both quotes).
78. "Scientism", p. 31 ("we...understand", "explain"); p. 49 ("in interpreting").
79. "Facts", pp. 65-66. Quotes p. 68.
80. "Scientism", p. 54; also see p. 55.
81. "Facts", p. 71 (all four quotes).
82. "Facts", p. 72 ("cannot"); "Scientism", p. 72 ("for"); "Facts" p. 71 ("elaborate"); p. 72 ("instinct"); p. 71 (not disputed); "Scientism", p. 72 ("used").
83. "Scientism", p. 71 (all quotes).
84. "Facts", p. 72.
85. "Facts", p. 72 ("languages"); "Scientism", p. 84 ("money", "are not...").
86. "Scientism", p. 83 (all quotes).
87. "Scientism", pp. 29-30.
88. "Scientism", p. 84 (all quotes).

89. "Scientism", p. 83 (all quotes).
90. "Scientism", p. 82 (all quotes).
91. "Scientism", p. 85.
92. "Scientism", p. 39.
93. "Scientism", p. 41.
94. "Scientism", p. 28.
95. "Scientism", p. 37 (all quotes).
96. "Scientism", p. 83.
97. "Scientism", p. 57.
98. "Scientism", p. 38 (all quotes; also see p. 34 — "mistake for facts").
99. "Scientism", p. 54 (points **b** and **c**).
100. "Scientism", p. 38 ("popular"), p. 37 ("the ideas").
101. "Scientism", p. 85.
102. "What is 'Social'? What Does It Mean?", *Studies in PPE*, p. 243.
103. "Scientism", p. 37 ("exist", "to revise").
104. "Scientism", p. 56 ("vague", "precise").
105. "Scientism", p. 55.
106. "Facts", pp. 72-73. Quotes: p. 72 ("such", "the help"); p. 73 ("[disdain]", "almost"), p. 72 ("led").
107. "Scientism", p. 71 ("These..."); "Facts", p. 74 ("given"); "Scientism", pp. 50-51 (points **a-c**).
108. "Scientism", p. 34 ("provide"); p. 56 ("to *constitute*" — also "Facts", p. 72); p. 41 ("familiar to us"); p. 85 ("the interactions"); p. 41 ("by a deliberate").
109. "Scientism", p. 24.
110. "Scientism", p. 39 (all quotes).
111. "Scientism", p. 38.
112. "Scientism", pp. 39-40 (language); "Facts", p. 72 ("the social"); "Scientism", p. 54 ("are without"); p. 71 ("These wholes").
113. "Facts", p. 71.
114. "Scientism", pp. 56-57.
115. "Scientism", p. 72 ("All unique"); p. 71 (all other quotes).
116. "Facts", p. 72.
117. "Scientism", p. 71.
118. "Facts", p. 72.
119. "Scientism", p. 57 (all quotes).
120. "Scientism", p. 55 (all quotes).
121. "Scientism", p. 58.
122. "Scientism", p. 55 (all quotes; also see p. 34).
123. "Facts", p. 72 ("are not"); p. 73 ("attempts").
124. "Facts", p. 73 (all quotes).
125. "Facts", p. 68 (all quotes).
126. "Facts", p. 72.
127. "Scientism", p. 71 (all quotes).
128. "Scientism", pp. 71-72 ("a particular"), p. 72 (all other quotes).

129. "Scientism", p. 67 ("with social"); p. 85 ("the particular", "is important"); "Notes", p. 75 ("particular attributes"); "Scientism", p. 85 ("those steps").
130. "Notes", p. 75 ("those", "a process"); "Scientism", p. 85 ("the parts", "a genetic", "schematic"); "Notes" p. 75 ("conjectural"); "Scientism", p. 85 ("compositive"); "Notes", pp. 75-76 ("the genetic element").
131. "Scientism", p. 73.
132. "Facts", p. 70 fn 3.
133. F.A. Hayek "The Theory of Complex Phenomena", *Studies*, fn 57; *idem*, "The Pre-
tence of Knowledge", *New Studies in Philosophy Politics Economics* (London: Rout-
ledge 1978).
134. "What is 'Social'? What Does It Mean?" [1957]; "Rules, Perception, Intelligibility"
[1962]; "The Legal and Political Ideas of David Hume" [1963]; "Kinds of Rational-
ism" [1964]; "Dr Bernard Mandeville" [1965]; "Notes on the Evolution... Rules of
Conduct" [1966]; "The Principles of a Liberal Social Order" [1966] "The Confu-
sion of Language in Political Thought" [1967 — German original]; — all in *Studies
in PPE*; "A Self-Generating Order for Society", in J.U. Nef (ed) *Towards World Com-
munity* (The Hague 1968); "Errors of Constructivism" [1970]; "The Atavism of
Social Justice" [1976]; "Socialism and Science" [1976]; — all in *New Studies*; *Law,
Legislation, Liberty*, Vol I, chs 1, 2; "Three Sources of Human Values", Epilogue,
LLL, Vol III; "The Origins and Effects of Our Morals" [1983], in C. Nishiyama and
K.R. Leube (eds) *The Essence of Hayek* (Stanford, Calif.: Hoover Institution 1984).
Mises: *Human Action*, p. 650.
135. "Freedom and the Economic System (1939)" in Bruce Caldwell (ed) *Socialism and
War* (Chicago: University of Chicago Press 1997) p. 195 (rules are instrumental);
"What Is 'Social'?" p. 243 ("genuine", "groups"); "Legal...Hume" (legal rules);
"Kinds of Rationalism", p. 91 ("a whole"); p. 92 ("In a").
136. "Kinds of Rationalism", p. 92 ("depend"); "Freedom (1939)" p. 203 (movement);
"Principles", p. 168 ("rules").
137. "Three Sources..."; "Freedom (1939)", p. 203 (regression).
138. "Socialism", p. 49 (all quotes).
139. "Atavism of Social Justice", p. 67 (all quotes).
140. Hayek's first reference to complex orders is, of course, in "Trend". He further analy-
ses complex orders in: "Legal...Hume"; "Rules, Perception"; "Notes on...Rules of
Conduct"; "The Results"; all in *Studies in PPE*; and in "Errors of Constructivism",
in *New Studies*. Hayek deals with the two kinds of social orders in "Trend", and then
in: "Kinds of Order in Society" [German original 1963], *New Individualist Review* 3
(1964); "Principles"; "Confusion"; "Self-Generating"; *Law Legislation Liberty* I,
ch. 2.
141. F.A. Hayek, *Law Legislation, Liberty* (London: Routledge 1973) Vol I, Chs 2, 5,
6; "The Confusion of Language in Political Thought", "The Errors of Construc-
tivism", *New Studies*; *Studies in PPE*, Chs. 3, 4, 5. Also for discussion in following
paragraphs.
142. *Law, Legislation, Liberty I*, p. 47 ("particular", "special", "will often"); *LLLII*, pp.
151-152 ("It is"). Also see Mises, *Theory and History*, p. 257.
143. "The Principles of a Liberal Social Order", *Studies in PPE*; "Confusion..."; "Com-
petition As A Discovery Procedure", *New Studies*. Quotes on "The conception...",
"Meaning", p. 98; "The whole...", "Use", p. 86. Mises on division of labour: *Social-
ism*, pp. 297, 302. Also see Hayek, *Law, Legislation, Liberty* II, ch. 10. Menger:
Problems, p. 93 and Appendix on National Economy.
144. "Competition As A Discovery Procedure".

145. *Law, Legislation, Liberty*, I, p. 62.
146. "The Moral Element in Free Enterprise" [1961], *Studies in PPE*, p. 233 ("remuneration", "to guard", "that there"); pp. 234-35 ("a free", "a pluralistic", "regarded").
147. "The Moral", p. 234.
148. "Freedom and the Economic System [1939]", *Socialism and War*, p. 195 ("ordinary rules", "achieve").
149. Legislation: "Freedom [1939]" p. 195; *Road to Serfdom* ch VI and p. 101.
150. "Socialist Calculation I" p. 135; "Freedom [1939]", p. 195 (historically developed); "Individualism, True and False", *Individualism*, p. 20; "Free Enterprise and Competitive Order", *Individualism*; "The Corporation in a Democratic Society", *New Studies*.
151. *Law, Legislation, Liberty*, Vol I, p. 97.
152. *Law, Legislation, Liberty*, Vol I, p. 87.
153. *Law Legislation Liberty*, Vol I, pp. 4-5; chs. 4, 5, 6; "Confusion...", *New Studies*.
154. *Law Legislation Liberty*, Vol I, p. 5 ("common", "baneful"); pp. 4-5 ("rules"); "Economy, Science and Politics", *Studies in PPE*, pp. 251-52 (thirty years); pp. 267-68 ("can", "problems"); "Theory", pp. 34-35 ("in the field").
155. "The Dilemma of Specialisation", *Studies in PPE*, p. 128 (all quotes).
156. "Dilemma", p. 129 ("simple", "a sense"); p. 124 (immense; "several"; "the need"; more abstract); "Economy Science", p. 267 ("concrete", "political"); "On Being an Economist", *The Trend of Economic Thinking*, p. 42.
157. "Dilemma", p. 124 ("study"); p. 129 ("practitioner", "factual").
158. "Dilemma", p. 127 (starting point); "On being", p. 42 ("perfectly", "exclusive"); also see "Economy, Science", p. 267.
159. "On Being", p. 42 ("writing"); "Economy Science", p. 259 ("sometimes", "refined"); "Schumpeter on the history of economics", *Studies in PPE*, p. 341 ("increasing"); "On Being", p. 42 ("know"); "Dilemma" p. 123 ("I am"; "in the study"); "Addendum: Tribute to Roepke", *The Fortunes of Liberalism*, p. 196 ("indispensable", "far-reaching").
160. *Prices and Production*, pp. 4-5 (averages); "Economy, Science", pp. 262-63 (Complex outcome); also see "The Pretence of Knowledge", *New Studies* p. 27.
161. "Scientism", pp. 61-62 (quote); "Theory", pp. 29-31 (statistics cannot handle complex phenomena); "Economy, Science", p. 262 (achievable insights) — For general discussions, see "Scientism", pp. 50-52, 61-63; "Pretence", pp. 24-30; *Knowledge*, pp. 23-26, 36.
162. "Pretence", p. 28 ("vain search"); "Scientism", pp. 62-63 ("Most"); p. 63 ("an instance", "There is"); "Economy, Science", p. 262 ("statistical").
163. "Economy, Science", p. 262 (particularly sceptical); "Pretence" p. 28 ("superstition", also see p. 24); p. 27 ("particular information"); "The Economics of the 1930s as seen from London", *Contra Keynes and Cambridge, Collected Works of F.A. Hayek, Vol 9*, ed. Bruce Caldwell (Chicago: University of Chicago Press 1995) p. 61 (statistics; quote).
164. "Pretence", p. 29 ("quantitatively"); p. 31 ("superficial"); "Scientism", p. 51 (all other quotes).
165. *Knowledge*, p. 26 ("I do not"); p. 26 ("I am afraid", "we often").
166. "Degrees of Explanation", *Studies in PPE*, p. 6
167. "Degrees", p. 5 ("the activity"); pp. 5-6 ("the range"); p. 6 ("it can", "often as", "the particular"); p. 7 ("it will often").

168. "Degrees", p. 11 ("from what"); p. 7 (pattern is true); pp. 7, 11, 12 (not: are hypotheses true?); p. 7 (observed situation; right combination); p. 11 ("the factors", "relevant").
169. "Degrees", p. 10 (all quotes).
170. "Degrees", p. 11 (all quotes).
171. "Degrees", p. 11 ("schema", "observational", "niches"); p. 10 (biology, social sciences); pp. 11, 16 ("explanations").
172. "Comments on Simon Kuznets...", R. Lekachman (ed) *National Policy for Economic Welfare*... (New York: Russell and Russell 1961), p. 87 ("What particular?"); "Pretence", p. 32 ("absolute"), "Theory of Complex Phenomena", p. 34 ("depend on"); p. 24 ("pattern prediction").
173. "Pretence", p. 29 ("a given"); "Degrees", p. 11 ("given complex"), "Theory", pp. 27, 28 ("given", "defined").
174. "Degrees", pp. 11-14; "Theory", pp. 31-34; "Notes", pp. 74-75.
175. "Degrees", p. 13 (all quotes).
176. "Theory", p. 33.
177. "Theory", p. 32.
178. "Theory", p. 28; also see "Economy, Science and Politics", *Studies in PPE*, p. 261; "Pretence", p. 33. For a general discussion, see "Theory", pp. 34-36.
179. "Pretence", pp. 24, 27; "Economy", p. 263. For a general discussion, see "Pretence", *passim*.
180. "Pretence", p. 33 (pattern prediction); p. 31 (right side).
181. "Review of L.v. Mises, *Epistemological Problems of Economics* [1933], 1960 translation" [March 1964], *Fortunes*, p. 148 ("naïve"); "Economy", p. 268 ("certain"); "Review of *Epistemological*", p. 147 ("uncritical"); *Hayek*, p. 145 (Friedman, "in a way"); "Pretence" p. 30 ("only too often").
182. "Review of *Epistemological*", p. 148 ("would").
183. G.O. Sayles, "Clio's Web", in *idem, Scripta Diversa* (London: Hambledon Press 1982) p. 5 ("the experimental sciences"); p. 7 ("The observational"); p. 10 ("Rarely ...do the facts"; "living reality"; "make the dry bones"); p. 14 ("This is"); p. 11 ("man does not"); Mises: *Human Action*, p. 57 fn. 20.
184. *Law, Legislation, Liberty*, Vol I, pp. 47, 50. Quotes: p. 50 ("as [an] organisation"; "biggest"); Vol III, p. 204 fn 48 ("the supreme").
185. *LLL*, Vol I, p. 47 ("it is"; "in most"; "rules"); p. 131 ("these spontaneously"; "many essential"; "these...").
186. *LLL*, Vol I, p. 133 ("are called"); p. 134 ("a superstructure").
187. *LLL*, Vol I, p. 43 ("part of"); p. 51 ("each element" etc); Vol II, p. 128 ("particular results"; "specific orders"; "will always"); Vol I, p. 51 ("isolated commands"); Vol II, p. 129 (disrupting); Vol I, p. 51 ("balance").
188. *LLL*, Vol I, p. 129 (all quotes).
189. "A Self-Generating Order for Society", in J. U. Nef (ed) *Towards World Community* (The Hague 1968) p. 41 (taming organisations); *Hayek*, p. 94 ("I've a theory"; "practical"); *LLL*, Vol I, p. 47 ("is somewhat" etc); "Confusion", p. 78 ("whatever").
190. S.F.C. Milsom, "The Past and the Future of Judge-made Law" [1981], in *idem, Studies in the History of the Common Law* (London: Hambledon Press 1985) p. 221.
191. J.H. Baker, *An Introduction to English Legal History* (London: Butterworths, 3rd ed, 1990) p. 173.
192. Baker, *Introduction*, p. 405.

193. Second Chamber: “Confusion”; “The Constitution of a Liberal State”; “Economic Freedom and Representative Government”, in *New Studies, LLL*, Vol III, chs 13, 16.
194. “‘Free’ Enterprise and Competitive Order”, in *Individualism*; “The Corporation in a Democratic Society”, *Studies in PPE; LLL*, Vol I, p. 69 (“the principles”).
195. See refs in fn 193.
196. Jeremy Shearmur, *Hayek and after* (London: Routledge 1996) p. 102.
197. *LLL*, Vol I, pp. 87-88 (all quotes).

CHAPTER 6

Language, Law, Catallaxy, Capital Structure

I

Recapitulation: The Setting

We now examine the characteristics of the four social formations that students of these phenomena discerned in the actions of many millions of their fellow men. Our examination will show that all four phenomena belong to the same category — social formations that are the unintended results of historical development — so they all share certain very general features. We begin by recapitulating briefly just how each came to be recognised as a particular type of social order (Section I). Here it cannot be stressed enough that each formation first manifested itself in men's actions (in a specific historical context). Therefore the documents, artefacts and the like resulting from men's actions — the 'sources' for any historical period — also reflected the effect of the gradual emergence of these social formations. And then, as men's actions continued to manifest these formations, so that they continued to be discernible in the historical data, it came to be realised — subsequently, by observers and inquirers — that these historical formations each presented an *analytical* problem also. In short, in each case we begin with an historical phenomenon already present in concrete, specific human actions in a particular historical context, and hence also present in the historical residue *from* such actions. We realise gradually that there is an analytical problem and then ask, what *kind* of analytical novelty are we observing? This means reflecting on and then trying to articulate — categorise — the *kinds* of human actions involved in the formation of these historical phenomena.

1. We saw in chapter 1 that the (private) English common law was the first historical phenomenon to be recognised as a separate and distinct type of social order: an order which appeared only as the outcome of historical development — ie the cumulative actions of many generations of men. Although the common law manifested itself in people's actions, it could not be explained as a deliberate or self-evident design. Thus it was not easy to discern this order — it required much study and reflection. Among those who contributed to this realisation were Sir Edward Coke, Sir Mathew Hale, Edmund Burke, David Hume, Adam Ferguson, and Dugald Stewart. Again the *timing* of this realisation is significant: the common law had been developing, in and through people's actions, for some 450-odd years before its students realised its *general* nature needed to be apprehended.

2. This observation of the common law led to the recognition that language too was a complex order of the same *kind*. It too was a human practice which grew over many centuries — as Mandeville saw. Hale (and Hume) likened linguistic rules to the rules of the common law — both manifested themselves as a custom or practice. Adam Ferguson and Dugald Stewart saw that as the content of people's communications changed over time, so language changed gradually. The systematic analysis of how different languages appeared and developed was first attempted by Sir William Jones. He was followed by a number of students of linguistics including Wilhelm von Humboldt. Here, too, men have used languages for tens of millennia before students of linguistics appeared and language was recognised as a distinct type of social order.

3. Mandeville was the first to recognise explicitly that social phenomena generally, including economic phenomena, were also the outcome of complex rules manifested in people's actions. He saw that occupational skills; the various processes involved in the production of various goods; the division of labour; specialisation and exchange — all developed over time, in small steps, as the different participants gradually modified their practices and, in turn, were copied by others. Adam Ferguson, Adam Smith and David Hume extended this insight to include — among other things — the growth of an inter-regional and an international economy and society, and — at another level — the coordination process summarised in the balance of payments. All such phenomena had appeared in men's actions and evolved over long periods of time before they came to be studied, and their distinctive nature was recognised.

4. Starting from these insights, the older Austrians penetrated far deeper in discerning the orderliness of those social phenomena that are the unintended results of individual action and historical development. And beyond this, they perceived, for the first time, the existence of two more such social formations: one explicitly, and the other implicitly.

Menger, Mises and Hayek distinguish explicitly between the two types of social order manifested in people's actions and hence found in historical phenomena.

a. One type of order is explicable in terms of the pursuit of some hierarchy of ends and values or of a common set of purposes. The social and economic forms classified here either grow around a particular such hierarchy of values or ends — examples include a clan, tribe, manor, household. Or else such purpose-oriented units are organised deliberately around a particular set of ends — e.g. a firm or a club. Obviously, these purposes may change over time, but such units are founded and maintained to pursue *some* concrete end or ends. When all or most of their members no longer share such common values or hold common ends — or, for firms, their purposes are no longer sustainable — these units disappear or are deliberately dissolved. Governments are also classified here: legislation and administrative orders are used to organise both civil servants and subjects to pursue specific purposes. Again, these purposes change over time, but the various government departments and bodies are each always pursuing *some* particular ends.

b. The second kind of order is open-ended, abstract and general-purpose in nature. Also, it grows unintentionally over time, and is manifested in the changing content of the actions of numberless individuals. But although it is indispensable to the achievement of human purposes, it is *not* specific to one or more definite ends (as is a club or firm). And it *cannot* appear in men's actions by their deliberate effort to establish it there. This type of order manifests itself as a sort of inseparable medium found in human actions, through which numbers of people severally achieve their several ends. This category includes the common law, morals, language, the division of labour, prices, money, the location of economic activity, and many other economic phenomena. The historical development of all such phenomena proceeds from similar social — inter-individual — processes.

In examining the common law, both Hale and Burke had seen that changes in economic activity led to changes in its legal rules. Mises saw further that settled legal rules were the *sine qua non* for the development and extension of production over time, and for long-term investment in particular. Hayek brought out more clearly how the settlement of *practical* conflicts shaped and modified common law rules.

5. In analysing economic phenomena, Menger recognised that firms, other production units, and households, were all economies proper — i.e., they were all social units that aimed at a hierarchy of specific ends. But he went further, into new territory, when he saw that the overall economic order resulting from

their interactions could *not* have been formed on the same basis — ie, this overall order was *not* an economy established deliberately for the achievement of particular purposes. To regard this overall order as an economy was to create a fiction. The difficult theoretical task was to show *how* individual actions gave rise to such an order — ie. to obtain a more accurate picture of its character and formation.

Here, Mises realised the fundamental role of the division of labour: its greater productivity made it *the* social tie. Thus the division of labour meant social cooperation, mutuality, inter-dependence; and so Mises (following Adam Smith) characterised it as ‘friendly’. Hence Hayek coined the term ‘catallaxy’ for that economic order in which households, firms, and other economies are the constituent elements. The catallaxy is created by their interactions — ie, by their mutual interdependence which is the division of labour. Thus the actions of millions of people are coordinated and brought into mutuality by the ‘economic’ ties of the catallaxy.

All three (Menger, Mises, Hayek) recognised that it took millennia to extend the division of labour sufficiently to develop an exchange order. Hayek, in particular, saw that the development of exchange and its extension to more and more people took perhaps hundreds of generations to evolve.

6. Menger also broke new ground when he analysed the process of production. He began with the output of consumer goods, which he termed goods of the ‘first order’. He saw that other — non-consumption — goods stood in a certain orderly relationship to products of the first order. Some items helped directly in the production of consumer goods; such items belonged to the ‘second order’. Goods that produced second-order items belonged to the ‘third order’; and so on.

Goods in higher orders can be and are regarded as valuable only insofar as they contribute to the production of goods that people find directly valuable (useful). To produce a particular array of consumer goods, all the appropriate higher-order goods have to be present and in the ‘right’ proportions. If one or more of these goods are absent or available in only the ‘wrong’ amounts, or are of the ‘wrong’ type, then the other higher-order goods are either rendered useless or less productive than they might be. Thus the production of consumer goods is the outcome of producing the ‘right’ *mix* of higher-order goods: they must all *complement* one another in just the right way.

Although Menger does not say so explicitly, it follows that the prices of, and returns on, these “higher-order” goods derive from: firstly, the relative prices of the final goods and services they (can) help to produce; and secondly,

the availability of complementary higher-order goods in the right mix of types and proportions, necessary to produce these final outputs.

Mises saw that all investments reflect, in their technology and location, the information available at the time and place they were made — that is, all investments are specific and hence are historical in nature. Thus in any historical context, some capital goods are on the way to being discarded, at a faster or slower pace. Other capital goods are still found to be useable, though circumstances have changed since they were made. Still other investments embody the latest information available. Thus all new investments are adapted to such pre-existing capital goods as continue to be used: the process of investment is itself an historical process.

Hayek introduced the term ‘capital structure’ into this field, to emphasise the fact that capital goods were heterogenous. Because of this, it was their integration into a balanced and coherent structure which enabled them to produce a particular ‘mix’ of final consumer goods.

As people generally prefer a ‘mix’ of final goods and services, this *entire range* is the analytical unit, from which analysis has to begin. *Because* people prefer a — particular such — ‘mix’, the capital structure encompasses production in *all* the sectors and industries that contribute to producing that particular final ‘mix’ of goods and services. That is, *all* the specific capital goods involved form the overall capital structure.

Hayek thus emphasised the *time-structure* of production: ie, the fact that, to produce any range of final goods and services, the specific intermediate goods concerned pass through a series of production stages between the final consumption stage and that stage which is furthest removed. A smaller or a larger number of such production stages may intervene thus; and accordingly, the capital structure may be ‘shorter’ or ‘longer’. At each production stage, labour and other inputs are combined with the intermediate goods coming in from the previous stage, and the changed goods are passed on, for further transformation, to the next stage nearer consumption.

So far as any one firm is concerned, its outputs may ‘fit into’ different points in a number of production stages; or these outputs may be complementary to other investments in only one or two stages. — These other investments are those made by other firms, of course. — The capital structure, in short, encompasses all the specific investments made by all the firms whose outputs contribute to producing that ‘mix’ of final goods with which we started.

The ‘length’ of a capital structure determines the quantity, range and quality of final output: as this ‘length’ increases or decreases, so does the volume of final goods; their quality improves or deteriorates accordingly; their range

expands or contracts, and it changes in content. Finally, Hayek brought out very clearly that the capital structure could not be permanent — precisely because it was composed of a heterogeneity of particular goods, commodities and services. As these investments were used up or run down, new investment had to be made. But these new capital goods could gradually form a capital structure which could be of *any* length — depending on the time-preference of saver-consumers. Corresponding changes would occur in the level and content of the output of final consumer goods.

Lachmann analysed how the investments made by individual firms were continuously brought into coordination so as to produce an integrated capital structure, as these and other circumstances changed. As such changes occur over time, firms experience changes in returns on the particular capital goods that make up their individual capital combinations. As firms experience operating profits and losses, capital gains and losses, they alter their collections of capital investments — repeatedly searching out those new combinations that are viable under the new circumstances. And so over time they discard certain capital goods, modify the use they make of others, and add new investments. Thus the capital investments of each firm (or production unit) are brought into complementarity with those made by other firms, and so the entire production structure is continually adjusted to produce that changing final mix of goods and services preferred by people.

7. Neither Hayek nor Lachmann say explicitly that the capital structure constitutes an unintended, historically-development social formation, on the same lines as the common law, language and the catallaxy. But that this is the case is abundantly clear. I shall argue (below) that all four have certain common characteristics, on this account. Here, however, one point must be emphasised as strongly as possible: in studying the common law and language, we are investigating social phenomena that manifest themselves in the actions of millions of men through the centuries. This much is now accepted. But the catallaxy and the capital structure *also* manifest themselves in *exactly the same way* — in individuals' actions. That is why all four may be placed in the same analytical category. And with all four, this analysis is of an already-developed phenomenon — already found in people's actions (and therefore in the historical data)

II

Common Characteristics

Language; private case-law; the catallaxy; and the capital structure: all share certain characteristics. I shall consider these common features first (Section II) and then look at each of these social orders individually (Section III).

Now, these social formations are historical phenomena: they first appeared in people's actions, i.e. in a particular historical context, and therefore in the records of these actions, studied by historians. Thus they need particular historical explanations of their appearance and particular course of development. But *in addition* they have a *general* aspect, which requires analytical lenses for its comprehension. Knowledge of this aspect tells the historian something — which he could not get otherwise — about the historical developments of which these formations are a part.

And so, in discussing their common characteristics, I am trying to answer the question, what *type* of human action are these social formations? What *kind* of actions on the part of numberless individuals led to the emergence and further development of these social orders? In other words, I am trying to articulate the analytical features of one category of human action — that is, to develop an analytical tool to help historians. — This is quite distinct from examining the particular developments found in some historical context and then trying to identify the various general influences at work.

Individuals' Actions

i. Language; private case-law; the catallaxy; the capital structure — all four are found only in the actions of individuals. That is, these orders subsist only in men's actions and nowhere else. *But it is **not** in the ends-pursuing aspect of men's actions that we find these phenomena and their effects.* In identifying and studying such formations (in the historical record), we are bringing to light and examining certain highly complex *regularities* in people's actions, regularities that have *already* developed there. They have developed, moreover, through interaction amongst numbers of people over long periods of time — these formations *can* only develop thus.

This is most obvious with language. But the common law is also a certain *kind* of custom and practice — this becomes clear from the settlement of cases in court. Obviously each party thought he was acting correctly: nevertheless, there was conflict. In settling cases, judges pronounce with reference to rules *already being acted on* — in all those myriad instances in which there

was no conflict, or where a legal consultation settled the issue and so no case was brought to court.

That the catallaxy and the capital structure are also regularities present in the actions of individuals, is by no means immediately obvious. We may use an analogy with language here. Language appears only in the form of the untold numbers of communications made by people to one another. Only in studying what people say and write does it become clear that a language exists — the vehicle carrying the specific communication, as it were. What we have here are not two separate and distinct sets of actions, but *two aspects of the same actions*. One aspect — the specific communications made — is obvious. The second aspect — those intricate regularities called ‘language’ — needs systematic and professional study before its existence and nature can be brought out. Just so, individual households, firms, and other social units act to achieve particular ends — this aspect of their actions can be seen immediately. That in their actions (in the late twentieth century) they are also participating in a global division of labour and a global capital structure is even more obscure than the intricacies of the languages they use or the common law rules they incorporate into their actions. That the catallaxy and the capital structure are *also* aspects of individual actions — that these two regularities are *also* found in what people do — can be seen only through a mental reconstruction: the method of ‘compositive individualism’. This means tracing through the order-forming implications of particular *kinds* of actions already being undertaken by people.

In short: We cannot mentally reconstruct these social formations by looking at the pursuit of ends by men. Rather — *in these same actions* — we look for the *continuing* manifestation of a certain type of regularity. That is: while all men seek to achieve their several ends, it is only when — in pursuit of those ends — they *also* manifest certain *kinds* of regularities in their actions that we, as historians, discover the existence and development of these social formations. (This discovery comes eventually, — from their appearance and persistence in the records).

Acting on Rules

ii. Now we (all of us) not only act to obtain particular ends, but in those very same actions we also manifest a certain *kind* of regularity — we manifest (different types of) *rules* in what we do. We are not even aware that we are doing this — as shown by our use of a language. We make specific and concrete communications to one another, but in so doing we *also* demonstrate in our actions a practical mastery over a most complex grammatical and linguistic apparatus. In using a language, we act on intricate and complicated rules with

no awareness that we are doing so; and we cannot even begin to state these rules explicitly. Nor are we, any of us, aware that as we use our particular language over time, we modify it gradually, such that the cumulative change is immense.

Thus through our interactions with one another we unwittingly develop some particular language. This social formation is in the nature of a general-purpose social tool. Only through a language can we communicate with each other, but it is not something specifically designed to obtain one or a few specific communications. Rather it enables us all to make all our several communications, whatever their type, content or aim. Thus a language is ‘ends-independent’ in character. And since any number of people may (in principle) learn and use a language — ie the interactions involved can (in principle) bring in any number of individuals — a language is also an open-ended social order.

The rules of private case-law, too, are a certain *type* of practice and custom, developed and adapted over the centuries and distilled into the legal rules that frame our exchange and other activities. It is the changing content of these activities that led to the various changes and adaptations in these rules; and this is a continuing process.

The division of labour, specialisation and exchange developed and expanded because the rules of exchange manifested in people’s actions were (and are) such as to *enlarge* the circle of exchange — the numbers of people traded with (directly and indirectly). As exchange proceeded, legal disputes arose and were settled, case by case — and so the legal rules being practised and developed were also shaped (unintentionally) to facilitate exchange.

Ends-independent/Means-oriented

Private case-law, the catallaxy and the capital structure are — like language — instrumental in nature. Individuals achieve their several purposes only by using these formations, but they are not designed to obtain any one end or ends in particular. Thus individual contracts can be written only by using some existing body of contract law, but its rules are instrumental only — they may be used by any and all individuals for whatever specific contracts they wish to conclude. Similarly, the division of labour, specialisation and exchange, facilitate immensely the production of whatever material means are required by the participants in this social process for the achievement of their various and several ends. It is these (changing) ends that determine the content, quantity, quality and type of particular means produced (including leisure). Thus the common law, the catallaxy and the capital structure are, like language, ‘ends-independent’ social formations: they too are general-purpose social tools.

And, again, like language, all three are open-ended social formations: any number of people can participate in the division of labour, specialisation and exchange. So too any number can learn, by practice, the ends-independent rules of the common law.

Adam Smith, Adam Ferguson and Mises all recognised that language was coeval with the emergence of Man as a distinct being, separate from the animals. But the common law, the catallaxy, and the capital structure all appeared gradually and because men began to manifest ends-independent rules in their actions (in a particular historical context). As men increasingly acted on (more complex) such rules, these three formations grew and developed over the centuries. How did men come to act thus? The process, as we shall see, was historical in nature — contingent and *not* inevitable.

Now in pursuing their ends, people necessarily interact with one another: the division of labour being the second distinctive human attribute, marking men off from animals (as Adam Smith and then Mises realised). At first, exchange interactions were limited and confined within a closed group. That is, men initially acted overwhelmingly on ‘ends-oriented’ customs and values — their practices and attitudes were such as to establish and maintain various hierarchical, closed groups — closed both socially and in terms of exchange. According to the concrete content and nature of the rules men acted on — the *kind* of hierarchy of values and ends manifested in their actions — various such social orders grew over time, such as clan, tribe, manor, caste, etc. At first their rules of exchange are (and have to be) autarkic, restricting the division of labour and exchange to family or household and also to tribe, clan, manor, village, etc. Legal rules and customs and attitudes generally, distinguish sharply between ‘insiders’ and ‘outsiders’ — *ie* the status held by, or assigned to, individuals. This status determines the type, content and degree of exchange undertaken, and social interaction too. For ‘insiders’, their position in the hierarchy — their status — determines their interaction, both social and ‘economic’, with the others forming the same group. Thus every individual has a status — as a member of some closed socioeconomic group. We need to know this status — the group to which any individual belongs and his rank in its hierarchy — so we can know *which* set of social customs and customs of exchange to apply. Thus an ends-oriented social formation of this type is a specific social tool: it can assist *only* its members, and the very existence of (eg) a clan or manor depends on excluding all ‘outsiders’. It also limits the division of labour, specialisation and exchange.

From Closed to Open Rules

To *extend* the division of labour, specialisation and exchange means acting on rules of a different *kind* — rules that are more open and that create and maintain regular exchange relationships with people *outside* the group. Such action means supplying (some) material means to suit the requirements of these outsiders and relying on them to supply suitable material means in return. When people try this practice and then persist with it, more goods and/or better-quality goods and/or a wider range, are obtained — for *both* parties involved. Those individuals and households who follow this new custom — trading intermittently and then regularly with ‘outsiders’ — find their supply of material means is improved. So they continue to extend this practice to more ‘outsiders’. Gradually others follow and the new rules of exchange spread, slowly or more rapidly as the case may be. Adopting this practice requires the degree of autarky be reduced — ie greater specialisation in production. *Interdependence* thus grows — increasingly with ‘outsiders’.

As exchange of this type continues, disputes occur inevitably. In settling these disputes, the judge-arbitrator has to pronounce with reference to the *new* sorts of customs already being acted upon. These customs are — have to be — more open: the individuals and households involved no longer belong to the same hierarchy in the same closed group. So the new legal rules that are articulated, the new private case-law which develops *pari passu* with such exchange, is likewise open, abstract and ends-independent.

These new practices of exchange and new legal rules have the potential to be extended to ever-larger numbers of individuals, whether acting singly or jointly as households. To the extent people practise this new type of exchange — treating all comers alike — to that extent their actions also reduce their autarkic exchanges *within* their closed group: *ie* with those families and individuals who belong to this group. To the extent that people *increasingly* exchange with ‘outsiders’, to that extent the new type of ends-independent legal customs gain in significance. Correspondingly, the hierarchical legal customs that create and maintain a closed group become less and less important and sustainable in practice. So the ends-oriented practices and legal rules confining exchange and social interaction to the tribe, clan, manor ... are gradually followed less and less. As and if men *continue* acting thus, their actions — in due course — alter profoundly the character and content of such ends-oriented social formations.

Some, like the manor, disappear altogether: men no longer practise — for whatever reason — the legal, economic and social rules that held them together in this (relatively) closed group. Agricultural land is now leased or sold to, and

bought or rented from, anyone with whom agreement can be reached. Similarly, people work wherever they can. Other social formations, such as the clan or tribe, can be adapted. Where this happens, they are transformed into purely cultural and social groupings, upheld by those individuals wishing to do so.

Thus, in India in the late nineteenth century, opportunities arose and were seized, to expand inter-regional and international exchange. (These opportunities grew out of the expansion of the international catallaxy which developed then). Extending the division of labour required that more people, from various regions, moved and lived in urban areas in India. Urban areas thus came to include not only a much greater mixture of castes but families and individuals from a number of different regions throughout the sub-continent. So in these people's actions the rules of caste were increasingly modified and adapted: firstly, to permit the growth of a new type of economic interaction among individuals and groups, an interaction independent of the kind of hierarchical, autarkic caste relationships found till then in both rural and urban areas. Secondly, some restricted, unavoidable social interaction also emerged; this too was of a new type. Since then, economic interaction has expanded vastly; social interaction has grown enormously. But in the late twentieth century caste rules still determine all other areas of life (right down to name, dress, food, etc.) although in many respects these rules are far looser.

In sum: as and when households specialise increasingly in what they produce, they participate thereby in ever-widening exchange relationships with *other* households (or individuals) who also act on the same principles. Thus, they gradually dissolve or drop that visible and limited network of hierarchical economic, social and legal relationships with known households and individuals. Such a visible and closed network constitutes such closed social formations as tribe, clan, manor, etc. As and if specialisation in production continues, this visible network is replaced gradually by an invisible and open-ended network, created by an ever-widening circle of exchange with an ever-increasing number of *unknown* and *unknowable* people. *Increasing* specialisation and interdependence are possible only as and if people act on — common or compatible — open, abstract rules of exchange and ends-independent legal rules. Eventually, as and if the division of labour and specialisation proceed, production gradually moves out of the household to specialised production units such as workshops and then factories. Individuals then provide for their family members by participating in production outside the household. Obviously, for most people, maintenance of family relationships and ties is an end in itself.

Historically, men acted first on ends-oriented rules, forming various closed, hierarchical socioeconomic orders. Thereafter, to interact with outsiders, men gradually began to manifest more open, abstract, general rules of exchange

and legal customs in their actions. They departed more and more from some closed set of interactions to develop a new and wider type of interaction. *Only* as such interactions grow with those *outside* the closed group, did the common law, the catallaxy and the capital structure begin to develop in people's actions. As interactions with outsiders grew in number and complexity and changed in context, the ends-independent rules forming these three social orders likewise became more complex, and developed further.

In this process, some of the ends-oriented social formations tribe, clan, manor that were there at the outset disappeared; others were modified to a greater or lesser degree. In any historical context, how far such a shift develops — from the ends-oriented to the ends-independent — and how far it goes, has to be ascertained from that context itself.

To further clarify the nature of this shift, we may look at those ends-oriented units that are established deliberately — e.g. a firm, club, or voluntary society. The rules of such organisations are also deliberately instituted, so as to achieve their particular ends. Over time, in many cases, people change the purposes served by these organisations, and so also the relevant organisational rules. In addition, in many firms, clubs and other similar bodies, a specific *ethos* grows over time. Such an organisational culture further helps to achieve that body's purposes (whether these change or no).

But in their actions men changed *all unawares* from the older ends-oriented rules of tribe, clan, manor, etc, to the more open rules that eventually developed into the common law and the catallaxy. This shift was historical: ie. it was slow, irregular, and contingent on specific circumstances. Only because men *continued to act* on these more open rules did the latter develop over the centuries into the complex general-purpose tools of the common law, the catallaxy and the capital structure.

Complexity

iii. As Hayek has pointed out, ends-independent orders are 'complex' phenomena. They utilise in their formation the information about specific circumstances *only* available severally with their participants (however many there are). These formations combine this changing information about ever-changing circumstances with an abstract structure — which itself changes over time. These orders represent a continuing 'distillation,' as it were, of the particular knowledge of particular circumstances of all the participants in their formation.

History

iv. All four of these social formations are also historical in nature — that is, they take shape as the unintended long-term outcome of gradual historical development. All languages are definite historical phenomena — the result of specific circumstances of time and place, of *particular* historical occurrences. So too, the English common law is a definite historical entity, part of a particular historical development. Other systems of private case-law — Roman private law, Japanese merchants' law — are likewise specific to their particular historical context. The catallaxy and the capital structure are social orders whose existence was first discerned in a specific historical context — the *international* economic order which developed (further) in the late nineteenth century and continued into the twentieth. The general characteristics considered here are the general features displayed by particular historical entities. Thus the objects being studied are produced by historical influences, but they need *both* historical study *and* theoretical comprehension, if they are to be apprehended adequately. A language needs both historical *and* theoretical analysis — but the latter is of an entity which can *only* appear historically: as a specific effect of a particular historical context, produced by specific historical influences, in a particular time and place.

Impossible to Design

v. These four social orders (language, the common law, the catallaxy, the capital structure) not only were never designed, they *cannot* be created by deliberate intent, even if people so wished. This follows from the features outlined above. A general-purpose social tool is formed in people's actions only as they manifest ends-independent rules in what they do. Such rules are produced only through a certain *type* of interaction amongst people. We cannot *aim* at such an outcome; only *after* it occurs can we see that this is what happened. In their actions people incorporate their several knowledge of the various circumstances they face severally. The resulting 'complexity' of the rules manifested in their actions cannot be duplicated by design, since no single mind can grasp all this concrete information. These social formations are historical in nature: the interactions that produce a 'complex' formation can only occur over long periods of time, encapsulating in this formation the (relevant) changes that occurred in people's ideas and circumstances. People obtain incalculable benefits from using these social orders — but these benefits only unfold gradually over time, as these formations develop through people's actions. Only *after* the event can we realise what these orders have helped us achieve.

All this is clearest with language (even Volapuk and Esperanto are combinations of features taken from existing ‘grown’ languages). But the common law, the catallaxy and the capital structure are also undesigned orders (how this is, we shall see below).

III

Language

A. i. Language obviously has evolved and developed, is adapted and modified, as the result of human action, by its very use by human beings. People make specific communications in specific circumstances: all languages exist only in this form. But these communications are made using a structure consisting of a concrete vocabulary and complex rules of usage and grammar. These regularities need to be studied separately, from the particular concrete ends for which they were used (the literature etc. found in that language).

Even as people communicate with one another (in whatever language), in this very process they gradually and unavoidably change that language (in due course, both its vocabulary and structure). Even Esperanto and Volapuk, if they should ever become used in daily communications, would go through this process of cumulative change. This process continues so long as any language is used by people.

A. ii. Language has distinct rules of usage and of grammar, and a specific vocabulary. These are learned — assimilated — only by usage. Very young children, in beginning to use language, manifest in their actions a mastery of an enormously complex apparatus — i.e. they act according to rules only a few highly-trained specialists are capable of articulating. Even very young children can distinguish mistakes in grammar and vocabulary and provide the correct forms: man acted on rules before he could articulate them, and on rules he couldn’t even begin to realise were to be found in his actions.

A language serves as a tool of communication because those who use it all follow the same linguistic rules (though this does not of course guarantee that any particular communication does, or will, occur). Linguistic rules and vocabulary are abstract and general — no *concrete* purpose can be adduced to explain their emergence. Thus language is an ends-independent social formation — it is a general-purpose linguistic tool, available for whatever communications people wish to make. It may be used to produce the most sublime literature or the grossest pornography (and anything in between).

A. iii. A language is a “complex” phenomenon. It represents the composite outcome of the actions of countless individuals, all using this general tool in

the pursuit of their several ends. Thus we have a complex structure of abstract rules and concrete vocabulary, emerging from the countless specific communications made in an unknowable variety of specific circumstances. Some new coinages, new usages survive; others don't. Thus rules and vocabulary are gradually altered over time — we can explain the *principle* involved but can never recover the full concrete details. Language is thus an adaptation to far more concrete data than any one mind can grasp.

A. iv. A language is a concrete historical development. All languages are the specific outcome of the particular historical developments they went through; the vocabulary, grammar and usage of any language are the result of *its* particular history. Thus each specific language represents a series of adaptations, over a longer or shorter period of time, to a particular series of concrete historical circumstances. Thus the English language of the twentieth century is the unintended outcome of a long historical process dating back to Anglo-Saxon times, in a particular (widening) geographical situation.

A. v. A language cannot be designed: since it is the complex outcome of the communications made by countless people over time (even invented languages, as mentioned, are simply different combinations of existing features found in various languages).

The Common Law

B. i. The common law is the systematic articulation of a particular *kind* of custom. In inter-acting with one another, people manifest customs relating to people and to things. When a formal agreement is made or a dispute arises, these various customs are articulated as the different rules of personal and property law. As the process of production and exchange continues, and as families and other social groupings grow and dissolve, lawyers are consulted, agreements drawn up, disputes finally taken to court. Thus the rules of this type of customary law are manifested in the actions of individuals aiming at particular purposes. As their countless transactions are concluded, the rules of the common law emerge. Lawyers (and judges) are consulted because *practical* problems need solving. Their solutions contribute to the further development of the common law.

B. ii. The rules of the common law began as part of an ends-oriented system. In late eleventh-century England, the king established courts for settling disputes among his chief tenants; they, in turn, had courts for their sub-tenants (vassals). (Since land was held in return for military and other services, there were often further sub-tenants, as land was subinfeudated). Both kinds of court were for “freemen” — those whose lord was the king. Landholding meant

lordship over the men who actually worked that land. Such men belonged to a manor — i.e. to its lord; they went to their manorial courts, presided over by their lord's steward (or bailiff). On most manors, there were also some "free" tenants, directly on the land.

In pursuit of their land and other disputes, freemen (including free tenants), began seeking remedies in the central courts at Westminster. They took their cases there directly, or by removing such cases from their lords court or a country court. Gradually, these other courts contracted; honour courts actually disappeared relatively early. As land disputes came into Westminster from all parts of the King's realm, common rules began to be articulated for landholders, rules that, in due course, effectively liquidated feudal tenure. In other cases, too, common rules gradually emerged.

Manorial customs were those of a restricted, hierarchical socioeconomic order. The "villeins" on a manor were part of the ownership unit. This meant that only those who belonged to a manor had access to its land; outsiders had to be admitted specifically. Compared to free tenants, villeins were subject to various disabilities: they paid higher and variable money rents; had higher, uncertain labour services, and paid heavier heriots and entry fines. Villeins paid *merchet* when their women were married off; they paid *chevage* for permission to live off the manor, and had to leave all "their" chattels behind — as villeins belonged to their lord, so did any moveable property in their possession — plus, of course, "their" land. Villeins also paid various uncertain imposts (tallages).

Free tenants suffered none of these personal disabilities: they left freely, paid lower and fixed money rents, lower heriots (if any) and "relief"; their labour services were lighter and clearly defined, or they had none. They could hold land on more than one manor.

Land on a manor was also divided: it was held "in villeinage" or it was "freehold". Villeinage land paid the lord for all transfers; freehold land did not. Lords naturally tried to prevent or severely restrict their villeins from holding freehold land (even by lease or purchase); lords also prevented or restricted freemen from taking up villeinage holdings. And finally, lords levied a fine for the sale of beasts or grain off the manor.

Nevertheless, as the division of labour gradually widened, so did inter-manorial and especially inter-sectoral contacts. With the Black Death, villeinage (serfdom) naturally became unviable. Tenants increasingly took land on "free" terms only, rejecting also the personal disabilities of villeinage — ie they *acted* as freemen. As royal justices too found extended grounds for declaring freedom in disputed cases, villeinage disappeared in practice by the fifteenth

century; so too did manorialism and the manor court. The vastly increased numbers now resorting to the central courts gave a striking impetus to the further development of legal rules “common to all the realm”.

The rules of the common law are ends-independent, abstract, and general in character. Thus a body of contract law is a general-purpose tool — it is used in writing a wide variety of individual contracts, each of which is written for a specific purpose. Over the centuries, as contracts are concluded and disputed, and as lawyers solve their clients’ problems, a body of *general* rules gradually emerges. These rules are again gradually altered and re-shaped by the same process. Thus as the general tool is used for specific purposes, it is itself slowly modified. In all branches of the common law, we saw a similar emergence and adaptation of general rules, used for an ever-changing range of particular purposes.

All these various rules do not stand in isolation, of course — they form the ends-independent order of the common law. This order is in the nature of a general facility impartially available to all. As mentioned, contract law (for example) is a general-purpose tool, used to write a range of specific contracts. It develops and is modified as a by-product of its use. But it forms a definite body of *rules*, distinct from the specific contracts written using it. We do not arrive at these rules by examining the concrete terms and specific contents of all the actual contracts written under these rules. (A language is distinct from the literature *in* that language, although the language is embodied in its literature).

General rules, of course, cannot determine a specific outcome — that depends on particular circumstances. Thus the judge when settling a dispute is not concerned with the outcome for either party to the case. He seeks rather to find the general rule under which its particulars may be subsumed. His judgement is concerned not with the relative merits of the ends pursued by the parties involved, but with stating this general rule more clearly. This statement (which may be its first articulation) is intended to provide a guide to action in the future.

Thus in settling particular cases, the judge actually contributes to the gradual extension, revision and adaptation of the whole body of rules. His judgement relates the rule stated to the *context* of this general body — i.e. he seeks to derive a rule which is consistent with this wider body: he discovers, he does not invent, the law. Since legal rules are rules of action, the consistency sought is consistency in the *actions* undertaken by individuals in the future. Thus rules which led to frequent disputes would be inconsistent. As judges continue to aim at reducing disputes by clarifying rules, the entire body is made more and more ends-independent.

In the settlement of every dispute, there is a winner and a loser: someone's expectations must be disappointed. But the judgement here is *not* that the loser aimed at the "wrong" end, but that he was mistaken in the rule on which he tried to rely — i.e. he used the wrong tool. This means he should try to find another rule — one which will *not* bring him into conflict again. Disappointment of some expectations is thus essential to the process which makes rules more ends-independent.

As an ends-independent order, the common law is open-ended: any number of people may learn to act according to its rules.

B. iii. The common law is thus a 'complex' phenomenon: it represents an orderly adaptation by countless people to a far wider range of circumstances than anyone could encompass mentally. In passing judgement on countless cases, judges are faced with settling particular *practical* problems. Thus in their judgements they in effect incorporate into their statements of the rules the *general* lesson to be learnt from each *practical* difficulty. So too when lawyers seek to solve their clients' immediate difficulty, they contribute to a modification of the general rule. Thus the rules represent a sort of distillation of experience, as they are gradually articulated, revised and adapted, both by judges and by lawyers.

B. iv. Any legal system arises and develops in specific historical circumstances. The content of rules, their particular development, are all the outcome of their specific history. Thus the common law is the unintended outcome of historical development.

It arose first in twelfth-century England; by 1914 it had spread to the English-speaking countries in both the developed and the underdeveloped world. The growth of the common law was intertwined with that of the catallaxy — as the division of labour was extended, so the need for legal agreements increased, and so, too, did disputes. The growth of regional and then interregional and international exchange led to the accelerated development of legal tools in response to clients' demands and thus to the continued modification of legal rules to make them more and more ends-independent. Conversely, the development of common rules throughout England and then internationally, facilitated the widening of exchange. Thus the common law is a complex *historical* order.

B. v. The common law could not have been designed because its rules distil the changing practical experience of many generations (as we saw above).

The Catallaxy

C. i. The catallaxy begins to develop as and if men act so as to extend the division of labour beyond a closed group. This manifests itself in the *changing content* of men's productive activities.

Let us begin with early Anglo-Saxon England. Each agricultural household (the bulk of the population) was highly autarkic, producing most of its foodstuffs and textiles. The latter were woven from the yarn made from the wool of the household sheep flock. Spindle and loom came from a carpenter, who obtained his wood from a woodcutter and his tools from a blacksmith; the latter was supplied by an iron worker and charcoal-burner. These craftsmen were part-time agriculturalists also, producing much of their food. Other foodstuffs, some textiles, cash, etc., came from the barter or sale of their craft output. Here in the actions of men aiming at ends, we find a high degree of autarky, and a relatively low level of exchange. The division of labour has hardly proceeded very far: people produce (overwhelmingly) for the known needs of known people.

Extending the division of labour means acting on different, more open rules of exchange. As and when the division of labour is continuously extended and intensified, the various processes that produce final outputs are ever more finely subdivided and interlinked, so that any one production unit contributes a smaller and smaller part of these final outputs: each production unit now produces far beyond anything seen previously. Take, for example, a plant producing ball bearings in the late twentieth century. It produces only one tiny part out of the multifarious parts that make up the various machines in which such bearings are used. A host of other factories provide all these other parts. These different machines, in turn, use a variety of inputs to produce a variety of outputs, both intermediate and final goods. Consider, for one, a harvester which cuts wheat (say) amongst other crops. This wheat, in turn, passes through a number of different production units and processes as it becomes bread in a retail bakery. Consider now *all* the other final goods (and services) to whose production ball-bearings have also contributed (and consider too all the inputs needed to make the ball-bearings). In short, the ball-bearing plant is a minute element in an immense production network, consisting of a huge variety of units each producing some specific item or range of items. All these are produced because they contribute, at whatever remove, to the output of a (particular) range of final goods and services (including leisure). The existence and continuation of the units in this network derive from the (changing) *content* of this range, and hence the *kind* of intermediate and other production goods required.

Via their participation in one of the units forming this production network, people contribute severally to the output of that huge array of final goods and services made up of what they severally wish to obtain. *Thus increasing specialisation means ever-greater interdependence.* The numbers of people who now participate severally in the production of the final outputs they severally want, is now immense (and the range, quality, quantity, and content of these final outputs would be wholly unimaginable at lower levels of the division of labour). *All* these people are held together — participate in the same social formation — by their interdependence in production and exchange, made possible because they follow common or compatible rules of exchange and legal rules.

Thus in the content of people's productive activity we see a certain regularity: the *extent* of the division of labour. The individual production units — the elements of the catallaxy — aim at specific ends (particular outputs). But while so doing, people now participate — in the late twentieth century — in a global network of production and exchange.

C. ii. A social formation as extensive as the catallaxy can develop only as and if people follow ends-independent rules in their actions. Exchange across the boundaries of closed groups means acting on wider, ends-independent rules. Disputes now require reference to such a body of general-purpose rules, already being acted on. As the exchange network widens, as more and more people are drawn in, as new products and techniques are developed, so the *content* of agreements changes (and hence that of disputes taken to court). Thus ends-independent legal rules develop *pari passu* with the growth of the exchange network.

The catallaxy is a general-purpose social tool: an ends-independent order. Via the division of labour, specialisation and exchange, people obtain that range of material means they need (including leisure) to pursue whatever ends they aim at. The catallaxy is instrumental only. By participating in exchange, we contribute to producing that entire range of final goods and services — the various material means required for the several ends of the several participants in the catallaxy. Because the division of labour is open-ended — any number may join — we contribute, through the catallaxy, to providing the material means (unknown to us) sought by unknowable people: just as people completely unknown to us contribute (unknown to them) to produce the final goods and services that we buy. Thus the catallaxy, in its spread across the globe, peacefully incorporates its immense range of cultural groups — from fishermen in the West of Ireland to Zulu factory workers, Japanese executives, and more.

C. iii. A catallaxy is a 'complex' phenomenon: it is formed from the ever-changing information about concrete circumstances available with all its

participants. Given the global extent of the catallaxy (in the late twentieth century), participation in exchange means that we individually adjust our actions to far more data than we are ourselves directly aware of, or could ever become acquainted with. When South African coal is transported via Japanese ships to Japanese steel mills whose output is converted into cars and transported (in Japanese ships) for sale in the US and in Western Europe — it is clear that merely local circumstances cannot explain the fortunes of South African coal mines. And the same is true for all the productive activities composing the catallaxy.

Participants in the catallaxy change the ends they pursue (for a variety of reasons). So their material requirements also change. People discover (or realise) new ways of meeting these requirements, or of providing new means altogether. Also, the greater productivity of roundabout methods — further extending the division of labour — requires that equipment, labour and other inputs be more specialised, often in new ways.

Information about all these possibilities is dispersed severally — as varying information available with different people about various alternative uses for the resources they know about. Often people simply know how to find such information. Alertness to change also differs.

As particular individuals discover (or realise) new opportunities, and others perceive that old opportunities are closed off, all those involved revise their plans and actions. Thus they alter the data perceived by other participants, who now have to adjust what they do — in the light of the various circumstances known to each individually. All these revisions and adjustments occur as changes in the range of goods and services and in the terms of exchange offered. Thus *prices too are complex phenomena*: they incorporate the relevant information about specific circumstances, available with the numerous participants in this process.

This adjustment process means that some people's plans and expectations must be disappointed. Other individuals (firms, households) find their plans succeed well beyond expectations. Thus the process of price formation leads to changes in relative incomes and asset values — raising some, lowering others. *Both* are essential to the discovery procedure of the market process. Operating and capital gains *and* losses are necessary to “maximise” the information conveyed by price changes and to coordinate productive activities.

C. iv. The catallaxy is an historical phenomenon. The twentieth-century catallaxy began (partly) in twelfth-century England. In the intervening 800 years, it spread through England; the sixteenth century saw the beginnings of its global spread, as production in Western Europe and in England linked

up and as Asian trade began. In the nineteenth century, Britain and Western Europe became only the British and Western European sectors in a global production process which incorporated practically all the regions of the world.

Thus the catallaxy was discerned in the concrete activities of specific people in a particular historical context. In analysing their actions, the existence and operation of this social formation was realised — as particular *kinds* of interconnections amongst these actions came to be comprehended.

C. v. The catallaxy is an undesigned order. No one intends or even realises that when a wider range of material means are supplied to final buyers, these material means are now the outcome of such an extensive and ever-growing series of exchanges. No one has an overall view of the entire network of production (and exchange) nor is such a comprehensive survey possible. Everyone is concerned only with what they buy and sell. But a social formation — a catallaxy — has now developed; and information now passes through the production network via price changes and other changes in the terms of transactions.

The Capital Structure

D. The growth of the capital structure is also the orderly outcome of the extension of the division of labour beyond a closed group i.e., the capital structure develops *pari passu* with the catallaxy. Thus the capital structure shares the general features of the catallaxy.

Here, we have to start with the particular array of final goods and services (including leisure), being produced in whichever historical context we are considering. This particular array forms the *analytical* unit whose production we investigate. We take this *collection* as our object because men aim to obtain, not just one single final good or service, but a specific such “mix” (which includes leisure.) Thus no single final output is ever produced in total isolation by itself: people always produce, and exchange, an *array* of such final outputs.

This collection of final goods and services may be narrower or wider, of course. Clearly, the range of final outputs which men *can* produce is limited by the range and type of capital instruments they have. This constraint may be narrower or wider, according to the development of the capital structure (as we shall see.) *Within* such limits, men aim severally at different and divergent hierarchies of specific ends. So, whatever its range, the “mix” of final outputs reflects what people *severally* rank higher and what lower, on their several value-scales. These rankings and the *contents* of what men aim at, obviously change over time, often drastically. So there are corresponding changes in the specific, concrete make-up of the array of final outputs (including leisure.) But,

in any historical context, people are *able* to produce whatever material means they *do* produce (to achieve their several ends), because of the range and type of capital instruments available to them.

These capital instruments are specific, concrete capital goods. That is, they are not homogenous — they are not all perfect substitutes for one another. Rather, capital goods are heterogenous: they are *complementary* to one another in producing final goods and services (as we shall see). Since capital goods are instrumental — they are not final goods — it is the particular “mix” of final outputs that people wish to obtain (with these capital goods), which determines the *specific* form and content that these capital instruments take. Obviously, a wider range of capital instruments will enable people to produce a wider range of final outputs (including leisure). But capital goods remain *instrumental*, whatever their range and type: it is still the specific content of the final outputs produced, which determines the specific content and form of such capital goods as are available. So in any historical context, to analyse the production of the range of final goods found there, *is* to analyse the array of productive instruments also found there: since it is these instruments that enable people to produce these final outputs. The two sets of goods and services thus constitute one analytical unit — an historical unity.

Short and Long Structures in History

A practical comparison is possibly the clearest way of demonstrating the development of this social formation — the capital structure — in people’s actions. Let us begin with the array of final goods and services in an autarkic agricultural household in early Anglo-Saxon England. This collection would include: coarse food grains; some fruits, vegetables, dairy products, meat, ale; some simple footwear and clothing; some pottery; a few brooches. Virtually all these items would be produced within the household (except for some footwear; some pottery; the brooches).

Looking now at the household production of simple clothing: This final good requires as inputs (from the previous production stage) — cloth; bone needles; woollen or linen thread; a knife (for cutting); and of course (female) labour. Except for the knife, these capital goods are again produced in the household. In the preceding stage of production, cloth is woven at home; before this, the yarn is spun from the fleece of the household sheep. Moving back one stage — spindles and looms are produced by the carpenter (as mentioned), the metal-smith supplies the knife. The carpenter uses tools made by the smith and wood from the woodcutter. In this preceding stage: the smith, in turn, uses inputs provided by the ironworker and charcoal-burner — who

use tools and implements supplied by the smith; the ironworker also uses charcoal. (The carpenter produces spindles and looms — closer to the final consumption stage; ironworker and charcoal burner use their tools to produce iron ore and charcoal — further from the consumption stage — the smith must first use these in producing carpenter's tools and implements). Thus the smith produces capital outputs used in more than one stage of production; so too the charcoal-burner. (Succession of investments in stages from final consumption — weaving of clothing — to stage further removed — eg mining of iron ore).

Household production of agricultural items would require agricultural tools from the smith (plus labour and land, of course). The brooches (bought or bartered for) would come from the metalworker (who would use various metals, plus charcoal and tools).

Here, in the actions of men aiming at ends, we find a very low degree of specialisation and exchange, and the production of small quantities of a narrow range of final outputs, generally coarse in quality. The production structure for these final goods is relatively short — there are only a few short investment processes, belonging to only a few investment stages, between final consumption and the stage furthest removed. Likewise, the capital goods involved are simple and not very specialised. They enable people to produce only a very limited range of final goods and services. — But even here, final goods are produced by a “chain” of specific investments, forming a production structure with definite stages. *All* the complementary investments in each successive stage are needed to produce the final output.

A Lengthy Structure

Turning now to the late twentieth century catallaxy: Out of the enormous array of final goods and services produced in the “developed” areas, let us take a washing-machine as *a* final good from which to start. The installed machine provides a flow of final services, so in the preceding investment stage transport and technical services are invested in shifting the machine from the retail shop and installing it in the house. The retailer receives his stock (via transport) from the wholesaler whose stocks come (via transport) from the factory. At this latter stage of production, the washing-machines are turned out using installed machinery, skilled labour, and other inputs (steel, various rubber and metal parts, electrical motors, etc). The steel is transported from a steel mill, which again uses heavy installed plant and equipment, other types of skilled labour, iron ore, coal, etc. The iron ore and coal are transported to the mill from mines using both skilled labour and mining machinery. Where the latter is installed, it is in turn transported from factories that use steel, skilled labour, other inputs.

In all stages of production, legal, marketing, and insurance services are used. In short, a very large number of investment processes all contribute to the output of this one final good — a washing machine; the processes and inputs we have barely sketched here are only the most obvious. In turn, the washing-machine is only one amongst tens of millions of final goods and services produced in this late-twentieth-century catallaxy, in the “developed” areas. The investment processes so briefly outlined here contribute variously to producing many — most — of these as well. Thus, all final outputs are produced through a series of such investment “chains” or stages of investment.

We may now re-examine some of the main *general* characteristics of the capital structure.

a. All capital goods are heterogenous: any substitutability is extremely limited and applies only at the same point in the capital structure. But some investment goods are versatile in the sense they contribute to the production of a wider range of final outputs (goods and services). Other capital goods are more specific: they can help to produce only one or a few final outputs. In all cases, however, the cooperation of a myriad other investments is also needed.

Thus steel goes directly into the manufacture of cars, fridges, other electrical goods. But, steel is also used in the manufacture of a wide variety of different kinds of machinery, which in turn is used to produce both intermediate and final goods. For example, woodworking machinery is used (with other inputs) to produce furniture; and different such machinery is installed in the sawmill from which timber is sent out to help produce a wide range of outputs: from furniture to packing-cases (for fruit and vegetables, among other things). Thus each of the investment goods here mentioned (steel, timber) is used in the production of a number of final goods (e.g. cars, fridges, etc; furniture, the supply of fruits and vegetables, etc).

But, in each case, the investment good contributes to only one or some of the successive production stages involved. Other complementary investments are needed, in all stages down to that of final consumption, for the final goods concerned to supply final services. Consider, for example, only *some* of the successive, complementary investments needed to convert trees into furniture in the house: a managed forest, logging equipment, sawmills, woodworking machinery, wood polish, wholesale and retail investments, together with different kinds of labour, transport, insurance, legal and managerial services at all stages...

In short, no investment can, by itself, produce final goods: complementary investments are always required, even in the autarkic conditions of early Anglo-Saxon England (as we saw above) In the late twentieth century catallaxy, a steel mill (for example) does not suffice on its own, to produce a washing-machine

or other final goods. As outlined above, a myriad of complementary investments must intervene: in factories and machines, to utilise the steel along with other inputs. Where factories produce intermediate goods (such as machinery), further investments and inputs are needed (in succeeding stages, nearer consumption) to produce final output. Then investments must be made in distribution facilities, to bring the final goods to the point of use. Steel output, in sum, is changed into final consumption goods *only* in cooperation with a series of complementary, heterogeneous investments, made in a definite succession of stages down to final consumption. The same is true of all other investments and capital goods. In short, any investment can help to produce final goods only as part of a “chain” of complementary investments, “completed” to final output stage.

Thus in this catallaxy, the particular array of final goods and services required by its participants is produced by lengthy “chains” of heterogeneous investments, both “fixed” and “circulating”. To produce this final output, *each* investment link in these “chains” of production must be in place: from the retail stage (nearest final consumption) to the stage furthest removed.

Now in any historical context, that collection of final goods and services actually in people’s hands, obviously constitutes the final consumption stage of the investment structure found in that context. All the various heterogeneous investments that go to provide these final outputs, may then be classified as contributing to stages closer to, or further from, final consumption. A retail shop obviously is closer to final consumption than a steel mill, while the latter is further removed. Some investments are specific to stages further from, or closer to, the final consumption stage. Again, a steel mill obviously will always be further removed from consumption than a retail shop, while the latter will always be closer to the final stage. Other investments are versatile and may be used at almost any point in the production structure. For example, a lorry may be used to transport goods at any stage, while electricity is used at all stages — from final consumption to the stage furthest removed.

The outputs of a single production unit may be used at several different stages. Thus a paper mill may supply a greeting card manufacturer (closer to final consumption) and also a manufacturer of legal stationery. This stationery may be used in advising the head office of a steel mill (much further removed from consumption.) (And the legal firm may also supply legal services to a retail shop — perhaps selling washing-machines — much nearer final consumption.)

We have seen that steel output goes to produce washing machines and other similar final goods (closer to final consumption stage) Steel is also used

in producing mining machinery (much more distant from final consumption.) Even in Anglo-Saxon England, the metal-smith supplied tools to the carpenter (nearer consumption) as well as the woodcutter and charcoal-burner (further removed from consumption.) We have to begin with the final goods being produced, and trace through the “chains” of investment producing these final goods, in order to obtain the different stages in which these investment goods are used.

Turning now to production and consumption in early Anglo-Saxon England: if we compare this with the huge array of final outputs and the intricate production structure in the late twentieth century catallaxy, it is clear that the content, quality, quantity and range of final outputs are all determined by the “lengths” of the production structure involved — i.e. very broadly by the “length” of the investment chain intervening between final consumption and the stage furthest removed: — the “lengthier” this chain, the greater the variety of specific investments and the number of stages into which these investments can be classified, starting from final consumption and working back to the most “distant” stage. But the heterogeneous investments and the investment processes forming a “lengthier” capital structure are also more and more specialised. So as the investment structure “lengthens”, the production processes — i.e. the investments composing them — become ever more finely specialised, and an ever-growing number of such highly-specialised processes have to “mesh” together and cooperate to produce any final output. (Consider the examples above — furniture, washing-machines — and *generalise* to all other final goods and services.)

We have seen that the capital structure consists of various heterogeneous investments that form a series of stages of production between final consumption and the stage furthest removed. This means that in shifting from a (relatively) “shorter” to a (relatively) “longer” investment structure, we change from producing one “mix” of specific investments and capital goods to another such “mix”. The outputs constituting the first set “fit into” fewer stages between final consumption and the stage furthest removed, while the second set “fit into” more such stages. But in a “lengthier” investment structure output and investment processes also become more specialised. Consider, at one extreme, the relatively limited range and type of capital goods in the relatively “short” production structure of early Anglo-Saxon England. At the other extreme, consider the vast array of highly-specialised investments and capital goods, their variety and range, and all the different production processes found in the far more extended capital structure found in the late twentieth century catallaxy.

Extending the capital structure means investing in stages further removed from final consumption: versatile outputs are directed to these stages, with a

(relative) decline in stages nearer consumption. (Initially, more steel goes into the production of mining machinery or other types of machinery, less into factories producing final goods. Investments are also made to increase steel output — to provide more inputs when additional machinery is installed in these factories. Investments must be made elsewhere in other stages further removed from consumption, to provide all the other inputs needed...)

In a “lengthier” production structure, the “mix” of investment outputs now includes new capital goods and investments. New processes are also started. Many — most — investment goods used previously, will continue to be used, although at different points in the capital structure, perhaps in other stages — all relative to final consumption. Output of some investment goods will increase; output of others will fall and for some there will be no change. Many investment goods will have to be discarded: they no longer “fit into” a more extended capital structure. That is, they cannot complement the various investments now forming this extended production structure.

Some investment outputs are specific to “lengthier” production structures: they can be produced (and are appropriately produced) only when the capital structure is already very considerably extended. Examples include a steel mill or computers. Other capital goods are specific to “shorter” such structures — for example, stone tools. Such investment goods are no longer produced as and when the capital structure is extended: they cannot now be used in any production process. Many capital goods are useable in production structures of different “lengths”: e.g. coal, bricks, timber, a wheatfield. Such goods are used at different stages in the production process, in relation to the final consumption stage, as and when other, complementary investments change, new investments are produced, and the overall “length” of the production structure is altered. For example, in a (relatively) “shorter” production structure, wheat may be sold directly to bakers or final buyers in a local market. The buyers then convert the wheat into flour at the local mill (water-powered.) Here, the wheatfield is in a stage of production not too far removed from final consumption. In a more extended capital structure, the wheat is sold to manufacturers, who convert it into flour in mills using power-driven machinery. The flour may then go via wholesalers and retailers to final buyers. Or it may go to other manufacturers for eventual conversion (in factories using machinery, skilled and unskilled labour and a host of other inputs) into a variety of prepared food-stuffs (such as biscuits.) These then go via a distribution network to final buyers. The wheatfield is now used in a stage of production very much further from final consumption. It is also part of a far “lengthier” production structure, one with an entirely new range of new and additional investments and production processes.

Consider also the Shetland and Hebridean knitters and weavers who, in the late twentieth century, produce virtually the same outputs as in earlier periods. But they no longer directly barter with, or sell to, final users. Their outputs go via intermediate buyers to urban retail establishments fitted out by professional shop-fitters, the fittings (in turn) produced in machine-using factories, and transported in lorries from warehouse to shop. Legal and insurance services enter into the production of the retail services that provide the fabrics and knitwear to final consumers. Craftsmen might continue to make the spinning-wheels and looms used by weavers, but the craft tools are factory-produced, the outcome of a far “lengthier” production structure. And the knitters now use steel (not bone) knitting needles.

Another instance: the Midlands furniture factory which, from the 1920s to the 1970s, produced substantial, durable furniture, sold to wholesalers. It then switched to lighter, more colourful and varied furniture sold directly to final customers. But in the 1970s, the machinery, the fabrics and other inputs used are the product of “lengthier” investment structures. Many fabrics, for example, are made from artificial fibres i.e. chemically; the lorries and ships used are almost certainly Japanese; the machinery may be made from Japanese steel; and so on...)

In sum, to say the capital structure is altered is to say that there are changes in the content of investments and/or the production stages in which they are used (relative to final consumption.) In addition, many investments are moved to other locations.

Extension of the capital structure means intensifying the division of labour — greater specialisation and exchange. Again, consider the autarkic production of early Anglo-Saxon England. Much the larger part of the production process for virtually all final goods, was carried out within the household: i.e., there was only some restricted specialisation of labour. Turning now to the vastly extended production structure of the late twentieth century catallaxy: there are now innumerable different lines of employment and an incomparably greater degree of specialisation. So, as the capital structure is extended over time, new and more specialised lines of employment open up. Old occupations disappear and many others are modified. An extended capital structure and increasing specialisation in employment are two sides of the same coin. (One need only cast ones mind back to the 1920s, for example, or any period in the nineteenth, eighteenth, seventeenth... centuries to see how many specialisations have disappeared or contracted, while many others have developed and grown).

Finally, to consumption output. Many types of final goods (and services) can be produced only from fairly “lengthy” — highly specialised — production structures; for example, electronic goods, cars, computer games, etc. Other goods of consumption goods are produced from capital structures of varying “lengths”. One example is foodstuffs. The difference is in content, range, quality and quantity: all improving and changing with the “length” of the investment structure which produced the foodstuffs. (Compare the heavy rye or barley bread produced in early Anglo-Saxon England with the range and quantity and incomparably better quality of the different kinds of wheat bread found in the late twentieth century in “developed” areas. And consider now the entire range of foodstuffs produced there....)

We have seen that extension of the capital structure means changes in the ‘mix’ of capital goods produced — such that they ‘fit into’ a ‘lengthier’ production structure. In such an extension, existing capital goods and investments, where possible, are shifted into stages further from final consumption or used there more extensively; some capital goods and investments are no longer useable and are discarded; new investment outputs are produced. The composition and timing of final output likewise change. Extending the capital structure means an eventual switch from one collection of final goods and services — those produced from a relatively shorter structure and available in the somewhat nearer future — to a different such collection: produced from a ‘lengthier’ production structure, becoming available somewhat later in time. The time-horizon over which consumption can continue is thereby extended also.

In summary: to extend the capital structure means shifting some resources away from producing final output in the nearer future. That is, in this nearer period, the actual level and variety of final output is kept some distance below some achievable level — in order *to* supply the resources needed for those investment processes that will eventually provide more and different final output at a somewhat later period — for a somewhat longer period of time. Obviously, the final output available in the nearer future is the limit within which resources can be allocated to maintain and extend the future availability of such output. Where the final outputs produced in the near future are narrower in range and smaller in quantities, there the notional opportunity cost is higher, of shifting resources into stages further from final consumption. With an increase in the range and quantities of final outputs producible in the closer future, the notional opportunity cost drops, of using resources in ‘lengthier’ production processes.

The actual height of these opportunity costs, however, reflects the time-preferences of those who receive and dispose of final output (in any given context). Where people attach a relatively high value to obtaining such output

in the nearer future, there the actual opportunity costs are higher, of shifting resources into stages further from final consumption. Conversely, when people value increasingly, the availability of final outputs at a somewhat later time, actual opportunity costs are reduced, of moving resources into 'lengthier' production processes.

In short, once a capital structure is 'lengthened', it does not maintain itself automatically for all time, irrespective of people's actions. Such an extended investment structure, as stated, increases the flow of final outputs, thus offering the possibility of reducing the opportunity cost of maintaining and extending these lengthier processes. But people's time preferences, expressed in their actions, determine what actually happens to that capital structure: — - what is decisive are their relative preferences for obtaining final outputs in the nearer future relative to a later period.

Thus, with an extended capital structure it is possible to increase considerably the flow of final outputs in the nearer future by shortening this structure: i.e. shifting resources into stages nearer consumption and reducing their utilisation in stages further removed. (The potential for such a shortening depends on the "length" of this investment structure). Of course the opportunity cost of this course of action is a reduced flow of final outputs at some later date — since the investment structure has been "shortened". Conversely if in the nearer future people will accept a lower level of final outputs, then resources may be transferred into maintaining and extending the capital structure — thus ensuring the continued (and improved) flow of final outputs at some later time. In short, in any context people's time preferences are expressed in the "length" of the capital structure in that context: the extent to which people wish to shift available resources into production of final outputs to be had at a later date, relative to production for a closer period.

Again we may look at the final goods and services produced within and by autarkic households in early Anglo-Saxon England: coarse grains, some fruits and vegetables, dairy products, meat, ale, some simple footwear and clothing; some pottery; a few brooches. All these are the outcome of relatively short investment processes; the quantities produced are sufficient for only a short period of consumption — e.g. from harvest to harvest. In this context, one investment which would (in effect) extend the production structure is an improved metal-tipped plough; another such would be an improved metal-tipped hoe. Both implements help to raise the quality and quantity of agricultural output. Under given conditions (e.g. variations in the weather) and with given harvest fluctuations, these investments enable slightly larger food stocks to be carried from one harvest to the next, for as long as the tools last.

In exchange for the metal tips made by the smith, the farmer supplies him with grain, cloth or some combination. In doing this, the farmer decides to reduce his (and his household's) consumption in the nearer future — in order to obtain final goods at a later date, for a longer period. Here the farmer is not acting *qua* farmer — but as a recipient of final outputs: he is deciding how to dispose of these final goods over time — i.e. he determines the *time-shape* of the consumption he can obtain with the resources of his particular context. As farmer, he produces final outputs. As recipient of these outputs, he determines their disposal over different time-periods.

In transferring some consumption goods to the smith, the farmer in effect moves his and his wife's labour, and other resources, from the investment stage nearest consumption to stages further removed: i.e. he shifts from producing consumer goods in the nearer future to producing final goods for a later and longer time-period. The smith puts in additional time at his forge, making more use of his tools, using inputs supplied by the charcoal-burner and ironworker. They get some grain and cloth in exchange; and they, in turn, put more effort and other resources into producing additional quantities of charcoal and iron. Metal-smith, charcoal-burner and ironworker either put a little less effort into their own food production or give up some leisure or both, to achieve this greater output of investment goods (charcoal, iron, metal tips.)

Once he begins using his new and more productive implements, the farmer has to decide whether to allocate some of the additional output to repairs and replacement or consume the lot. This decision is neither automatic nor mechanical nor fore-ordained: it expresses his time-preferences as a receiver of final goods; and these time-preferences could have changed. If he now attaches a very high value to obtaining more final outputs in the nearer future, he will not set aside any grain or cloth for repairs and eventual replacements — i.e., he will make no provision for raising final outputs at a later date and for a longer period. Only if he wishes to continue providing into a later period in the future, will the farmer use some of his higher grain output to pay the smith for repairing and then replacing these implements. Only in such a case will the extended capital structure be maintained, with the smith and other artisans continuing to produce additional investment goods — i.e., devoting more time and other resources to production stages further removed from final consumption.

I hope it is clear that in thus cooperating to supply the farmer with improved implements, these artisans are not demonstrating their own time-preferences: they act only as the farmer's agents. Suppose (for example) the smith made these tools on his own decision, but specifically intending to sell them to the farmer. If the latter refused to buy them, the smith would have

lost his time and other resources, and lost some of his own grain production to boot. The farmer will buy the tools only if he wishes to reduce his own consumption and transfer the resources to producing final goods for a longer period, into the future.

Suppose again the smith took payment from the farmer but failed to deliver the implements (or repair them, if they were already made.) The farmer would then demand a return of the grain and cloth; he would look for another smith prepared to do the job (assuming, that is, that he still wished to alter the time-shape of his consumption.) And since (in this context) all households are very largely autarkic (producing much of their own food and other consumption items) — let us further suppose the smith and other artisans also wished to have such improved agricultural tools. To implement this decision, they too would have to reduce the time and other resources going into food production, and transfer these inputs to produce more charcoal, iron, and metal tips. (They would also have to work out how to barter these items amongst themselves, probably along with some grain and cloth.) Now, in deciding to reduce their consumption in the near future, and provide instead for consumption later in time, these artisans too are acting in their capacity as recipients of final output, *not* as producers of investment goods.

The farmer's son, in due course, will inherit his father's agricultural implements and other assets. Obviously this inheritance means he can already provide for a longer future period than otherwise. But again this son's actions will express his time-preferences. He may choose to raise his consumption in the near future and not allow for repairs and replacement, thus reducing the flow of final outputs at some future time. Or he may continue to set aside grain and cloth to pay for maintenance and renewal of these tools, thus maintaining the existing investment structure. If he chooses to extend the time horizon of his future consumption even further, he may use some of his higher grain output to pay for other improved tools. Or he may plant some of his land to a new variety of rye or barley (relying on stocks of grain of known varieties to cover any failure).

In any given context, the "length" of the capital structure manifests the time preferences of those who dispose of final outputs. In their actions they demonstrate the particular time-shape of consumption they will act to secure: how much in the nearer future and how far into the later future to provide for (within the limits set by such final outputs as are available in that context.)

In sum: D.i. A capital structure manifests itself in the changing content of people's productive and exchange activities. It reflects their composite, changing 'time preferences': desire to provide for future consumption.

D. ii. A capital structure is an instrumental, ends-independent social order. — *Given* its overall ‘length’, as determined by people’s composite time preferences:- The *composite* concrete range of changing final outputs that people buy and utilise, determine its form and extent. These final outputs determine the specific, concrete capital combinations and production processes that make up the links in the investment chains involved.

D. iii. A capital structure is a ‘complex’ phenomenon, incorporating all the changing information about changing production conditions, possessed by all its participants. Its formation and continued functioning utilise all the particular changing knowledge of particular circumstances that its participants acquire. Capital and operating gains and losses transmit this ever-changing information.

D. iv. A specific capital structure is an historical development, specific to particular historical circumstances.

D. v. A capital structure is an undesigned order; it *cannot* be designed, as it consists of the ever-changing concrete investments made in all firms involved in producing the range of final outputs.

FOOTNOTE CHAPTER 6

1. L. M. Lachmann, *Capital and Its Structure* (Kansas City: Sheed Andrews 2nd ed 1978).

PART II: EARLY MODERN ENGLAND

CHAPTER 7

The Consumption Stage: Food And Clothing

BETWEEN 1520 AND 1701, the English population is estimated to have grown by about 111 percent, from around 2.40 million to some 5.06 million. This last figure represents a slight drop (about 4.2 percent) from the peak estimate — 5.28 million — for 1657.¹ Over the sixteenth and seventeenth centuries, this much larger population was enabled to produce increasing quantities of an expanding range of final goods and services, all improving in quality. Analytically, this change *has* to be separated into the two distinct components producing this composite outcome: firstly, growth in the *capacity* or potential to achieve ends, and secondly, the actual, specific ends for which this capacity was concretely used.

a. When we look at growth in the quality, quantity and range of final outputs, we are looking at *only* the *final* stages of production, nearest final use, of some particular capital structures. But production in these last stages of production is possible *only because* there already exist previous stages of investment with investment goods that link up into “chains” completed down to the final output stage. In other words, production in these last stages is only the final outcome of a lengthier production process involving specific investment goods in a chain of investments going back through a number of previous stages of production. Growth diversification and improvement in final outputs

can occur only as and if this *capacity* to produce final outputs — the capital structure — is extended. Building up the production structure (the capacity to produce final outputs) means that more and more investment goods — versatile and specific — are now being used in stages of investment further and further removed from final use, while more and new investment goods are produced to help “complete” these lengthier chains of investment down to the stage of final use. Thus there is a “lengthening” in the entire production process — an increase in the number of investment stages intervening — between final use and the stage further removed.

To investigate this requires tracing through and assessing the various specific investment that form the “chains” of capital growth involved, to see how much further these “chains” have been extended back from the stage of final use. There is no simple substitute for such an examination of the capital structure and its investment relationships: merely looking to simple increases in the quantities of particular investment goods gives *no* clue. That is because what needs to be known is how investment goods — of *various kinds* — formed investment “chains” leading to the final outputs produced.

b. So far as ends are concerned: Had the people of England all been sincere and devout Buddhists in the early modern period, I would now be reporting a great increase in leisure time (to be used for meditation and reading the scriptures), accompanied by a moderate increase in a restricted range of material goods and service (since material ends are so much less important to the true Buddhist). But to *extend* the leisure available to a growing Buddhist population, and to provide the modest increases in material goods and services needed to fulfil the moderate material requirements of this growing populace, would *still* require an increase in the capacity to supply both more leisure and modest material necessities, for more and more people. So, for a growing Buddhist population, I would be describing the corresponding *kind* of capital structure and extensions in it: the kind that made *possible* this *type* of increase in final output — in leisure more than in material products. The kinds of concrete investments that would form and extend this type of capital structure would be very different indeed from these that produced and greater growth in material outputs.

Now since the people of England in fact preferred material ends I report instead that the growth in the *capacity* to provide final output was *actually* used to produce a substantial growth in the range, qualities and quantities of material goods and services, together with an increase in leisure (which, however, was used to pursue material kinds of leisure activities). This kind of growth in final output — consisting more in material outputs than in leisure — was made possible *only* because capacity grew: ie the capital structure was extended;

In short: final outputs — *whatever* their actual content — can be increased, improved and diversified only as and if the capital structure is extended: its investment “chains” are lengthened further from the final stages of use.

c. A capital structure is thus analogous to a language which serves only as an instrument through which people say what they please. Just so, a capital structure (of interrelated investments) is only instrumental: it provides the means — including leisure — needed to obtain those ends that people do in fact find desirable. As and when this capital structure is extended, greater supplies of means are produced — supplies of whatever means people need in the attainment of whatever — diverse and contradictory — ends they severally seek. (Again, the means here would include leisure.) It follows — and this must be emphasised — that all “final” outputs are still only *instruments*: they are still only means toward various ends. In short: the capital structure is an ends independent social formation; its gradual extension — of its investment “chains”, the productive processes involved — is what makes possible the growing provision of an expanding range of specific means from its final stages of production; these means are needed by people to secure those specific and concrete ends they wish to obtain. And so we return to the growing and improving **range of final outputs** turned out in the final production stages of the growing capital structure — the chains of investments — found in early modern England: Here and in the next chapter (ch. 8) I look at consumer goods and services. I then consider the distributive stages (ch. 9) and then the various production stages (ch. 10).

Diet: Breadstuffs

For the bulk of the population, grain was the main foodstuff, taken chiefly as barley bread, which even the poor ate.² Rye remained the staple around York and in some other areas up to the late seventeenth century. Wheat was still a luxury grain. For all these grains, there was, to the twentieth century historian unaccustomed to a diet high in grain, “a bewildering variety of quantities, types and prices.”³

The very poorest routinely ate as bread, a mix of cheaper foodstuffs, such as oats, peas and beans with acorns or tares and lentils; peas with rye or maslin; or oats and maslin. When harvests fell, such mixtures were also used by the poor. Thus in Norfolk in 1623, buckwheat and barley were mixed — a hitherto unaccustomed and so unpalatable combination.

Other Items

After bread, for most households, pies, puddings and “porridge” or thick stew were the next major items, followed by cheese and milk or whey; even the poorest had some cheese (except in Cumbria). Otherwise, poorer households in lowland areas ate bacon; pigkeeping spread with potato cultivation in the seventeenth century. Such households used mostly lard, with only a little butter. In a Suffolk prison of the late sixteenth century, inmates had two main meals, each made up of four ounces of rye bread with cereal or legume “porridge”, beer, and either four ounces of meat or about five ounces of cheese or “a good herring”. In poorhouses and hospitals, peas and beans were included. Eggs are never mentioned in such diets. Clearly the bulk of such a basic diet consisted of grains, including the inferior rye, but the minor part did include meat or fish. P.J. Bowden argues that dairy products, eggs and meat may not have bulked large in the landless labourer’s diet and their role may have decreased as his real income fell — i.e. grain rose as a proportion of his diet through the sixteenth and up to the mid-seventeenth century. But in the prison diet just mentioned, the quantity of meat or cheese (by weight) equalled or exceeded that of bread, although grain was also taken in other forms: i.e. non-grain items were quite significant in even the most basic diets.

To the staples of barley bread, other grain preparations, dairy products and bacon, the majority of the population could add eggs and poultry, including ducks and, in many areas, geese. The poor had pigeons. The majority also had beef, veal, mutton, lamb and salt fish. Several areas (from Yorkshire to Kent) had rabbit (also eaten by the poor) while the East and South-east had turkey.

Even the poorest in the lowland areas ate root vegetables (radishes, carrots, parsnips), cabbages, lettuce and garden herbs. By the late sixteenth century, villagers from around York went there for seed vegetables. To the roots and greens mentioned, the majority of the population added onions, turnips and potatoes (which even the poorest tried by the late seventeenth century); caraway, mustard and liquorice were used for flavouring. By the late sixteenth century, seasonal fruits and vegetables (eg. dessert apples and peas) and root vegetables were sold retail in shops in both London and the provinces. Apples, cherries and pears were the most widely consumed fruits; they were available in scores of varieties by the late seventeenth century. Prunes were also widely consumed by the later sixteenth century. They were widely stocked in shops and sold at fairs, along with imported dried fruit and spices, even in upland areas. Prunes were among the cargoes imported then into Norwich and Weymouth. Between the late sixteenth and late seventeenth century, output rose sufficiently to reduce the price by 56 percent: In 1580-99, they sold (in Ripon)

for 3d. a pound. By 1681, the pricing unit was three pounds, and the cost was 4d (in Lancaster; the shop sold a cwt. of prunes per week in summer).⁴ The poorest in lowland areas had hedge-fruits and wild berries and nuts. Many (except the very poorest) kept beehives, including townsmen.

For the very poorest in upland Cumbria, oat and barley preparations (oat-cakes, bread, beer etc.) constituted the bulk of their diet. Some meat was taken, but cheese appears to have been a rarity. Only the better-off had bacon, poultry, peas and beans; the wealthier households added wildfowl, deer, fish and fruits (apples, pears, cherries, plums).⁵ Thus in Cumbria only the most prosperous had items that in lowland areas were consumed by the majority.

Drink

In the West of England, cider was drunk; the better-off also had mead; the poorest drank perry. The Welsh drank metheglin. Both beer and ale were drunk by the entire population, even the very poorest⁶.

Beer replaced ale (except in home-brewing) — more rapidly in the South and the Midlands, but in other areas by the later seventeenth century. This meant that a product of far better quality (including potency) was available at lower prices than an inferior product, which sold at higher prices: Ale was a heavy, thick, low-quality liquid which had to be drunk soon after manufacture. Beer was far better in quality: it kept longer, it was clearer, lighter, more tasty and effective, and transportable. In Boston in 1547 and in Chester in 1561, beer was significantly cheaper than ale: the best ale cost 15 percent more than the best beer; which also had more strength, while the price of ordinary ale was 50 percent higher than that of single beer. In the 1570s, in eastern England, strong beer sold at 2½d.-3d. a gallon, while ale retailed at 3d. a gallon. But beer cost only 1d. a gallon to brew; ale cost 2d. Even stronger beers were also now available, costing three times more than the strongest to date. Otherwise, there were at least three standard types: double, middle, small, progressively weaker in content. Lower income groups drank small beer, which then was quite nutritious, containing 150-200 calories a pint. In Portsmouth, sometime after 1625, the three types sold for 10s., 8s. and 6s. a barrel respectively. London prices were higher, of course, they ranged from 14s. to 8s. Over the sixteenth century, London prices appear to have risen by two-thirds. In Norwich, on the other hand, over the half-century between the 1560's and the 1610's, prices rose by 20 percent. In Canterbury over the 80 years between the 1560's and the 1630's officially-set prices rose by 25 percent.

Consumption certainly increased over these two centuries. Peter Clark attributes this partly to taste and unemployment, and then goes on: "The

general rise in drinking was also possibly a result of food shortages and the efficacy of malt liquor as a nutritional substitute.”⁷ Now “food shortages” mean a *fall* in the barley harvest but a “general rise in drinking” means more beer which means a *larger* barley crop. Since barley foodstuffs (the staple at the time) and beer were both produced from the same barley harvest, a change in its size would have to affect *both* products in exactly the same way. Thus if the barley crop declined, so there were “food shortages”, the supply of beer must also have fallen, because this same drop in the harvest must also have raised the cost of brewing. The converse also holds, of course: it is an increase in the barley harvest which makes possible an increased supply of beer (via the channel of a lower brewing cost). But with more barley, there cannot be “food shortages”. Thus increased beer consumption means that barley harvests were rising which means barley foodstuffs were also increasing (I discuss the question of dearth below).

Over the sixteenth and seventeenth centuries, two imported foodstuffs definitely went from upper-class luxuries to mass consumption commodities. These were sugar and tobacco. Imported fresh fruits, dried fruits and spices — especially pepper — also became common consumption items.

Sugar

During the sixteenth century, small quantities of sugar started being imported through Antwerp, from the Portuguese Atlantic islands and Brazil.⁸ In mid-century, some came direct from Morocco. As the century progresses, there is indirect evidence of a continuing rise in imports. By 1544, a sugar-refining industry had started in London. By the later sixteenth century, provincial ports were also involved: thus, Southampton imported sugar for transshipment to London, while sugar, molasses and syrup were all being imported into Norwich. In 1568, a Welsh pedlar bought sugar candy (amongst other things) at Hereford fair: which suggests that by now imports were sufficiently high so that large numbers of the population, even at lower income and social levels, could buy small quantities as a small-scale luxury. In the late 1570s, it was stocked even in Kirkby Lonsdale. At the end of the sixteenth century, both sugar and candy were being retailed in Ripon. With rising imports, sugar refining began in Bristol in 1612. By the mid-seventeenth century, the quantity imported was so great and consequently the price had fallen so far, that sugar was used wholesale to sweeten wine.

Brazil remained the main European supplier to the 1640s. Brazilian output expanded sufficiently to bring prices down by the 1630s to far below the sixteenth-century level: in 1634-35, sugar sold retail at around 1sh. 3d. to

1sh. 6d. per pound. Although the West Indies were colonised permanently in 1624, sugar production required much investment in buildings, equipment and slaves. So Barbados first grew sugar in 1637. Costs turned out to be lower than in Brazil and continued falling; the rise in production reduced the price to about 9d. per pound, wholesale, in the later 1650s. Jamaica grew sugar from 1655 and West Indian output expanded so greatly that by the 1660s it had replaced Brazilian production in England and northern Europe. Glasgow opened its first sugar refinery in 1677. Continued growth in production pushed prices down even further: by 1684-89, the retail price of sugar stood at 6d.-7d. per lb. — 60 percent below its level of the 1630s. Customs duties prevented the price from falling even more.

Over these two centuries, the value of sugar imports rose from an estimated £25,349 in 1560 — some 3.3 percent of all London imports — to an average of £630,000 p.a. in 1699-1701, or 11 percent of all English imports (on average for these three years). In the 1660s, imports of sugar were estimated to run at 10,000 tons p.a.; by 1700, this figure exceeded 24,000 tons p.a. Two thirds was consumed at home; the other third was re-exported⁹.

Tobacco

Small quantities of tobacco started coming into England via Spain from the late sixteenth century onwards¹⁰. The ultimate source is given variously: Central America; Venezuela and Brazil; the Spanish Caribbean. It was an expensive luxury for the wealthy; an import duty was placed in 1604. With the permanent settlement of the American mainland in 1607, cultivation began in Virginia five years later and the first Virginia tobacco reached England in 1614. As cultivation spread on both the mainland and the West Indies, output increased rapidly through the 1620s and 1630s and continued climbing thereafter.

English tobacco imports rose from around 50-60,000 lbs. in 1615 to 38 million lbs. in 1700. Tobacco was a major import into Bristol from the 1630s onwards; into Liverpool from 1670 and into Whitehaven from 1685. The total value of all tobacco imports rose from £55,000 in 1622 (3.5 percent of all London imports) to an average of £249,000 in the three years 1699-1701 (4.3 percent of all English imports). The vast rise in output reduced the price dramatically.

At the end of the sixteenth century, tobacco retailed by the pipeful, at 3d. per fill. Then as imports increased, it sold by the pound, at 20s.-40s. retail, up to 1619. In mid-century, “Spanish” tobacco sold at 7sh. per pound in Ipswich: 17.½-35 percent of its price in the early seventeenth century. By the 1670s, the

retail price stood at a shilling or less per pound, though the best Virginia cost more than twice as much at 2s. 2d. per pound. In 1681, average tobacco sold retail at 6d. per pound. The range of qualities may have widened — “chewing” tobacco retailed at 3s. per pound in the 1690s. Inventory valuations — approximate wholesale prices — fell from 9sh. per pound in Wigan in 1617 to 1sh.8d. per pound in Oxfordshire, 15 years later. By 1681, the wholesale price was as low as 2d. per lb.

In the years 1663-69, import duties (at 2d. per lb.) were well over 100 per cent of the plantation cost in Virginia. After 1685, these duties were some three times the Virginia cost.

By the later sixteenth century, tobacco was already being retailed in an Ipswich shop; it was sold in Wigan in 1617. Otherwise, the early retailers were apothecaries and, in London, specialist tobacco-shops. By the early seventeenth century, tobacco was sold by the pipeful at alehouses, and smoked in communal pipes. (Many victuallers’ inventories include pipes and tobacco). Many retail purchases were made at the alehouse from victualler or tapster or from itinerant dealers selling wholesale to the alehouse-keeper. By the 1630s, tobacco was smoked across the nation: retailing licenses — instituted to raise revenue — were spread throughout all regions. There were concentrations in London and Middlesex, of course, and in Somerset, Devon and Cornwall. In 1657, Salisbury held 8 licenses, with a total of 58 in other towns and villages in Wiltshire. The rest of England and Wales had a total of 1,997. The range of sellers continued to widen: mercers, chandlers, ironmongers, barbers and peddlars added tobacco to all the other goods they carried.

Other Food Imports

Imported fruit, both fresh (oranges, lemons) and dried (figs, currants, raisins) as well as spices (pepper, ginger, cinnamon, cloves, mace, nutmeg) — all became commonly consumed in this period.¹¹ At the aggregate level, the evidence is not as clear-cut as with sugar and tobacco; but the other evidence is of exactly the same character. The total value of London imports of currants and raisins in 1560 was £16,557; for all of England, this figure averaged £174,000 in the three years 1699-1701, and it included other dried fruits. Over the same period, the value of spice imports (not including pepper) went from £6,714 to £27,000. (The spices are nutmeg, cloves, mace, cinnamon). Pepper imports rose from £16,474 to £103,000. For all these commodities, the greatest apparent increases came between 1560 and 1622; thereafter growth decelerated or levelled off.

By the later 1560s, oranges and lemons were being imported into provincial ports (such as Weymouth), and also carried into Cumbria: in February 1569, 100 oranges were sent from London to Newcastle and then to Keswick at a cost of less than a farthing each. Six artichokes were included — at 4d. each, they were several times as expensive as the imported fruit. The buyers were German copper miners. In 1581, some 20,000 oranges and 1,000 lemons were shipped into Norwich.

Raisins and figs had reached even Kendal well before the 1540s. By the later sixteenth century, imported dried fruit (raisins, currants, figs) was sent regularly from London to the provincial ports, with further trans-shipments. All were sold widely in shops and fairs, in lowland and upland areas. By the early seventeenth century, some merchants were predominantly wholesalers — i.e. the quantities involved had definitely risen. Even in the 1580s, imported dried fruit was not much more expensive than locally-produced prunes: raisins sold at 4d. a pound, currants at 4d.-6d. a pound, prunes at 3d. a pound in Ripon between 1580-99.

By the late 1570s, spices were widely stocked in shops in lowland and upland areas; they were also sold at fairs. Pepper was the most widely used — it was carried even by pedlars in most areas, including Wales, from the late 1560s. Pedlars also carried ginger (about the same price as pepper); and some had saffron (more expensive). At least one Lincolnshire chapman in the early seventeenth century was a walking spice-shop: he could supply the entire range (including mace, cinnamon, cloves, nutmeg). One shop in Lincolnshire had turmeric by 1619. Thus a wide range of spices was used regularly by the mass of the population by the early seventeenth century.

The Upper Classes

The diet of the wealthy was distinguished by its composition, quality, quantity and variety.¹² Grain was the smaller percentage and that consisted of the luxury food, wheat: the major part was made up of various kinds of meat, fish and poultry, according to season. Harrison lists beef, mutton, veal, lamb, kid, pork, cony, capon. The Star Chamber dinner accounts are much grander, of course: listing 18 different sorts of bird, including domestic poultry, wildfowl, gamebirds and waterfowl. Besides oysters, salmon and three sorts of eel, there are 18 kinds of fish, both salt and freshwater, and five varieties of shellfish.

The range of vegetables was also much wider. Harrison complained that men now ate what had been hitherto considered suitable only for hogs or wild animals. He reported that both merchant and gentry tables now had such unseemly victuals as gourds, pumpkins, cucumbers, radishes, two sorts

of parsnips, carrots, cabbages, salad greens and even — mushrooms and aubergines. The Star Chamber accounts mention artichokes, cauliflowers and peas; two sorts of vinegar and olive oil were used in salad dressings. In addition, water-cress, leeks, sorrel and endive were consumed by the wealthy. By the late seventeenth century, some vegetables were differentiated yet further: there were eight varieties of lettuce, four of watercress, three types of cucumbers and five kinds of onions.

Luxury consumption included a far wider range of fruits. Harrison's list of upper-class novelties included melons; others in this category were apricots, plums, goose-berries, cherries. Again, by the late seventeenth century, there was a huge range of varieties of all types of fruits — those listed, plus apples and pears. Imports — oranges and lemons — were also eaten, of course.

Large quantities of beer and ale were drunk, but wine was, of course, the upper-class drink. Between 1563-65 and 1620, the value of wine imports rose about 5.4 times. There was a shift towards cheaper wines from Spain: they rose from 40 to 50 percent of the total. Between 1622 and the three years 1699-1701, wine imports almost doubled again, but significantly, they fell as a proportion of total imports from just under 18 to somewhat over 9 percent: ie, *non-luxury* imports rose much faster¹³.

Looking now at more specific data for upper-class food and drink consumption: From the Lisle letters it is clear that in the 1530's, such items as venison, partridge, quail, heron, crane, stork, salmon, sturgeon, carp and capon pasties were given as gifts amongst the very wealthy, ie those forming part of court circles¹⁴. This means that even at this very high level, these foodstuffs were luxuries, not ordinary item of daily consumption. Even quince marmalade and other conserves were still luxuries here, sent round as gifts, because of the quantities of expensive sugar required. (Henry VIII was quite fond of Lady Lisle's marmalade and damson preserves, as were other recipients.) Artichokes, melons, cherries, pomegranates, grapes, oranges, lemons, fresh peas-in-the-pod and cherry and other conserves were also sent as gifts, as were barrels of herring, cod, sardines and of course, wine together with entire cheeses. The artichokes from the gardens of Lord Lisle's official Calais residence were reserved for Henry VIII. On another occasion, he was given a basket of fresh peas-in-the-pod. Parmesan cheese was another luxury gift (or bribe) for high officials.

The supplies purchased for Lord Lisle's family and household — ie for the routine consumption of his family members, personal staff and servants — included 60 beef carcasses; 300 mutton; 60 lamb; 20 pork; 40 flitches of bacon; 100 "couple" of ling (the most expensive saltfish); 200 "couple" of

“haberdine” (salted cod — cheaper by more than 60 percent); 100 “couple” of stockfish; 6 barrels of butter, nearly 900 lbs of cheese and “1000-weight” of tallow. The items bought specifically for Lord and Lady Lisle (by John Husee, their man of business) included: white salt (ie, the most expensive kind); ling; sprats; capons; a gammon of bacon; fine marmalade (at 9d. a lb — the coarse type, at 6d a lb, was not worth it, he said); comfits (8d. a lb); cherries (4d. the lb); “the best grapes”; conger eels (at 5s each); 30 in a firkin (they cost 14s. 10 d. including the barrel and carriage to Calais); wax candles; and 188 sweet oranges (these were actually a gift from Husee — he couldn’t get 200). A wide range of spices, other tropical products and flavourings were also sent to Lady Lisle, together with barrels of quinces and bushels of barberries (to be made into preserves). The quinces were clearly a luxury — small ones could cost up to 8sh. per hundred (which Husee considered too dear); the barberries cost 3sh. 4d. the basket plus 1d. for shipping to Calais.

The tropical products and flavourings were obtained in wholesale quantities; they included sugar, cumin, ginger, cinnamon, mace, cloves, pepper, nutmeg, currants, two sorts of raisins, figs (fresh and dried), almonds, two kinds of rice, sandalwood, licorice and aniseed. Isinglass and prunes were also sent. The total amounts spent on each occasion ranged from £8-17-0 to £12-12-0. Fine sugar cost between 6½d. to 8d. a lb; coarse or middle sugar cost 5 d. Rice could be had for 1d. or 1½d. a lb. Almonds cost 1½d. a lb., while raisins were 3d. or 7d. the lb. Pepper was bought at 1sh. 10d. the lb. The other spices were far more expensive; they ranged from 2¼d. to 5d. the ounce. At the lower end of this scale were ginger, mace, nutmeg (which however, cost 6d. on one occasion) and cinnamon (which was also purchased at 2½d. the ounce); cloves cost between 3¾d. and 4½d per ounce; currants were 3d., figs came from 2s. 4d. to 4s. per basket (or 30 lbs). Wine was purchased in Calais itself; certainly barrels were sent across to England as gifts, and were also received by the Lisles.

In 1655, a book of recipes was published, said to have been taken from those used for Queen Henrietta Maria ¹⁵. It had recipes for a variety of fish: pike, mullet, carp, salmon, sole, plaice, flounders, anchovies; and also for potted pigeons and potted venison. Other dishes involved shoulder of mutton, capon, fat beef, calves’ meat, oysters, etc. Practically all dishes required lengthy preparation and long cooking, with many spices, wine, much butter, many eggs, and quantities of items such as artichokes, lemons, oranges, almonds, currants, raisins, dates, etc. A “Turkish dish” combined beef or mutton with rice, pepper and onions. There were many recipes for keeping food over long periods (up to six months or a year): for preserving meats, and pickling cucumbers, lemons, walnuts, quinces, etc. Substantial quantities were involved, eg one recipe was for preserving “baked buttocks”. Sweet dishes were now established

as routine: sugar was no longer a special delicacy; there were many different sorts of cakes, and other sweet preparations, such as candied fruits, syrups, etc. Large quantities of sugar were used, both in these dishes and for preserving foods. Salads were also now an established item of diet. “The finest olive oil” is set down as an ingredient, so other sorts were also available. Silver utensils are mentioned throughout the book: for preparation, cooking, serving and eating.

A printed recipe book means that the items mentioned in it are consumed by a far wider range of people (and far larger numbers) than the handfuls making up county society or court circles: the continued growth of output had made it possible for more and more families and households to increase and diversify their diet.

Andrew Appleby compares the vast range of luxury items consumed at a feast given by the Duke of Buckingham in 1508 with the food consumed daily by the very poorest segment of the population.¹⁶ This procedure is not very helpful in identifying either the normal daily consumption of the wealthy, or the diet of the 95 per cent (or so) of the population who fell into neither category. It is rather like examining the vast range of sumptuous fare provided at some really wealthy family’s wedding feast in twentieth-century India, with the meagre daily consumption of beggars at the very bottom of the scale. This tells us nothing about either the actual everyday consumption of the very wealthy, or the daily diet of the hundreds of millions in between. The point here is not to minimize these differences but rather to get a wider-ranging and more realistic picture.

D. M. Palliser says, “The effect of the increasing trade and commercial farming was reflected in a richer diet for the well-to-do. They enjoyed plentiful meat, fish, dairy produce, wheaten bread, beer and wine.”¹⁷ In other words, “the increasing trade and commercial farming” consisted of an expansion in *luxury* foodstuffs: the wealthy were producing and trading upper-class foods amongst themselves (according to Palliser), while the mass of the population lived by subsistence farming, with some employed in the production of luxury foods. In fact, of course, the bulk of grain output consisted of *mass-consumption* grains: barley, rye, oats; only the smaller part consisted of wheat (itself relatively delicate in its farming requirements). Similarly, in agricultural marketing, malt and barley “formed the staples of the domestic cereal trade”, *not* wheat. Of those disputes in Chancery involving grain, only 13 percent concerned wheat; the bulk were over barley.¹⁸ The livestock trade overwhelmingly dealt in cattle, sheep and bacon, *not* the quail, plover, woodcock, pheasant, partridge, heron, crane, peacock, etc, etc. itemised in the Star Chamber accounts quoted by Appleby. Equally for fish: the bulk of the trade was in saltfish for

mass consumption, not in the salmon, trout, oysters, crayfish, crabs, etc. etc. which Appleby quotes. The bulk of the drink trade consisted of mass-consumption ale and beer, *not* upper-class wine. In short, “the expansion in trade and commercial farming” was an expansion in *mass-consumption* foodstuffs, *not* the items consumed by the well-to-do (*contra* Palliser).

Dearth

Historians have engaged in extensive discussions of the recurrence of “dearth” in the sixteenth and seventeenth centuries: its causes, how (or whether) the very poorest obtained grain, the impact on death rates. To put this into perspective, let us look at the developments made possible *because* food output had *already* reached and *maintained* the required level: The total English population grew by about 70 percent between 1520 and 1600, from around 2.4 million to perhaps 4.1 million. The non-agricultural segment rose somewhat faster, by 79 percent, from a little over 25, to a little under 27 percent of the total. The bulk of this non-agricultural segment was rural, *not* urban; its rural percentage declined from 74 to 69 percent, its urban percentage rose correspondingly. The entire urban population more than doubled, from 161,000 to 335,000; its proportion to the total rose somewhat from 6.7 to 8.2 percent.¹⁹ In short, non-food agricultural output (wool, industrial crops) had risen to the extent needed for this sustained expansion of non-agricultural employment and output. This expansion was in both range and quantity, and in both by-employments and full-time specialisations.

For the majority of the population, grain (i.e. barley) formed the bulk of their diet. So when grain output dipped temporarily, how did the *majority* do, at this lower level? Now when barley production fell below normal, JPs complained that brewers and maltsters bought supplies, keeping out the poor.²⁰ Clearly, these brewers were not producing for their own households; they sold beer (via innkeepers) to the vast majority of the populace (beer is not a luxury good). What happened, then, to this mass-consumption item? In making beer, cheaper grains are not readily substituted for barley (unlike ale),²¹ so when barley production fell to a lower level, beer production did likewise. Now for the same majority who consumed beer, breadstuffs were the main item of diet — i.e. they came first. But brewers, maltsters and others did *not* complain that farmers, grain and meal merchants had withheld barley supplies: — i.e., at this lower level of barley output, supplies of breadcorn *continued* for the *majority* of the population. But they had less beer.

Even at a lower level of grain output, those payments and transfers normally made in grain continued as usual.²² Journeymen were still fed by their

masters, as were urban and farm servants who lived in (although some smaller farmers did dismiss servants when grain harvests dipped). Farm servants living out continued to be paid partly in grain, as did carpenters and builders; day-labourers were still paid partly in food and drink. But there might be some more theft prosecutions when farm workers took grain illegally. Farmers continued to sell grain to labourers at farm-gate prices, (although these increased when the harvest dipped) and to advance grain to some labourers on credit, against future work. The informal credit market — involving neighbours, kin and retailers — continued its functioning.

With a reduced barley harvest, the poor ate inferior grains or ate less, as they did when all grain crops dipped. But even at this lower level of output, there was enough grain so farmers could continue supplying cottagers, widows etc. with corn as part gift, part sale. Gleaning continued (though in some areas landlord and farmers tried to limit numbers). Beggars still got a share when corn was sown or winnowed.

Some transfers and payments in kind were instituted only when grain output *fell* to a lower level. Share croppers received grain from their landlords to make up for the decline in output. Landowners, large and small; farmers; urban and rural merchants; the urban gentry — all provided more grains to both the rural and urban poor as part gift, part sale. Sometimes farm tenants received grain the same way. Farmers also provided grain on credit to the poor of their locality. The clergy, landowners and farmers spent much on charity; urban trade guilds supplied relief; and grain was distributed charitably in urban areas.

Town officials in both London and the provinces, imported Baltic rye for the poor as part gifts; some grain was given away. Some JPs in rural areas required merchants and farmers to give grain to the poor in addition to the amounts sold. The very poorest migrated to other regions that had a smaller decline in their grain harvest, or to urban areas. Theft also increased.²³ So far as actual starvation goes, there was no change in local (parish) death rates in many years when the grain harvest fell.²⁴ Only in some years did local death rates increase after a fall in grain output. These pockets of starvation were more pronounced in the north-west and far north, during the harvest declines of 1557-59, 1586-88, 1597-98 and 1622-23. During the first three periods, mortality also rose — though *not* to Cumbrian levels — in particular parts of the midlands and the south-west. The parishes affected were in remote, upland or moorland areas or in valleys in less specialized farming regions. The harvest declines of 1622-23 produced starvation only in particular parishes in the north-west and far north.

In all these periods of reduced grain output, all other regions experienced their normal death rates. Thus, following the smaller harvests of 1535 and 1556, the proportion of observed parishes with crisis mortality reached a peak of 20.5 percent in November 1557. This maximum figure was only 8.9 percent in 1597-98 and 6.8 percent in 1622-23. In other words, even when grain output dropped most sharply (in the mid-sixteenth century) for nearly 80 percent of the parishes for which there are data, there was sufficient food: their death rates remained normal. This was true for nearly 91 percent of observed parishes in 1597-98 and for over 93 percent in 1622-23. The areas suffering starvation were less densely-settled; so the proportions of the *population* for whom there was sufficient grain even when output fell, would have been higher still.

R.B. Outhwaite argues that “[s]ubsistence crises were likely to occur” in certain other areas also: pastoral, grain-importing regions, those with “lots of small farmers, labourers and artisans”, and “communities struggling with industrial change and depression.”²⁵ Outhwaite offers no estimates of death rates in these areas; their characteristics are *not* those of the grain-crisis parishes in the Wrigley-Schofield data (above).

At the aggregate level, mortality data confirm that grain crises were localised. When grain prices rose, national death rates followed over the next two to three years, but then fell below average, so that over a five-year period there was no impact on overall mortality. In other words, high grain prices appear to have changed the timing rather than the long-term level of aggregate mortality. Finally, when fatal epidemics occurred (e.g. plague) the geographical pattern of crisis mortality was reversed: the grain-crisis parishes were barely affected; mortality was highest in urban areas and in the densely-settled, more productive agricultural regions.²⁶

Grain crises ended even in the upland areas after 1623. For further perspective: in the seventeenth century, total population rose by 23 percent, the non-agricultural segment more than doubled, rising from about 27 to 45 percent of the total; the rural proportion of this segment fell from 69 to 63 percent. The urban population increased by over 2½ times, from 337,000 to 850,000, more than doubling as a proportion of the total, from 8.2 to 17.0 percent.²⁷ Non-agricultural output and employment increased and diversified even more.

Historians on Dearth

Against these continuing long term developments, we may examine some historians’ views of the causes of and cures for, dearth. This overview should

help to underline certain of the agricultural and economic developments of the period. John Walter interprets the continued use of grain payments and transfers in two ways. Firstly, as “valuable protection” against “harvest failure” and “market prices”.²⁸ This, however, is to assume that grain output in fact continued undiminished — it was just that prices rose. Only on this assumption can transfers and payments in grain be seen as channels for circumventing high prices to get at the unabated flow of grain continuing behind. Secondly, Walter — in effect — sees the volume of grain barter and grain transfers together with social differentiation, as reasons why grain harvests were prevented from falling. Upland areas (says Walter) did have poor natural conditions but they also lacked resident gentry and magistrates to distribute grain or organise its import. So as these areas had a far smaller number of transfers and payments in grain, their harvests fell further than in those regions that were more socially differentiated (he says in effect). Walter also argues that upland areas had the worst of both worlds: they had sacrificed self-sufficiency so they combined a higher natural risk with economic risk — the grain market mechanism was too undeveloped to transfer grain during dearth.²⁹

These arguments get the cart before the horse. When grain output drops, payments and transfers in grain can continue *only because* sufficient grain is *still* produced at this lower level to *continue* with such transactions in kind. Nor can social differentiation *produce* grain; there has to be an independent explanation. Again, grain self-sufficiency can disappear *only* if abundant and therefore cheap transport facilities exist to bring in this high-bulk, low-value good. If there are few and therefore expensive transport services, there is no *capacity* to carry bulky grain, in addition to higher-value, lower-bulk goods. But if grain cannot be brought in, it must continue to be grown locally, and hence there has to be self sufficiency. By the same token, only limited exchange is possible outside the region.

Other historians also feel that because the poor purchased grain, therefore harvests fell. Thus Outhwaite argues that as a rising population moved out of agriculture into other occupations, “decreasing proportions... were able to provide food for themselves; increasing proportions became dependent on the market for grain.” As grain prices rose relative to the nominal wage-index (compiled by Phelps-Brown and Hopkins), “increasing numbers were becoming harvest-sensitive, with this sensitivity becoming rawly-exposed when... the harvest failed.”³⁰ Everitt likewise argues: “In consequence of this increased dependence on local markets, periods of dearth stuck the labouring population with growing severity.”³¹ Wrigley and Schofield first state that with a severe harvest deficiency, many subsistence farmers would be forced to buy food. Then, forgetting this, they say on the same

page: where agricultural labourers and craftsmen did not have “direct access to food from their own plots”, their standard of living fell further than indicated by falls in the real wage-index (compiled by Phelps-Brown and Hopkins). They conclude: “... both the increasing prevalence of wage labour in agriculture and the growth of the non-agricultural sector... between the sixteenth and nineteenth centuries will have meant that a rising proportion of the population was adversely affected by high food prices as consumers and as producers.”³²

There are two implicit assumptions behind all these arguments: firstly, in subsistence farming, grain output never falls below subsistence level — production is always maintained at or above this level. Secondly, grain output remained constant behind any rise in grain prices. But as we have just seen, starvation deaths occurred in just those peripheral areas with a high degree of subsistence production. There were *no* subsistence crises in the overwhelming majority of parishes where the mass of the population obtained grain through exchange — whether barter or purchase. Exchange meant that areas best suited to grain production could specialise and so increase overall output, while other areas concentrated on other agricultural and industrial products. Only as barley output continued rising would any temporary decline in its production still leave sufficient food supplies, for the vast majority of the population. And only with such an assured food supply would it be possible for a growing proportion of the population to specialise increasingly, on a *permanent* basis, in the production of non-food output. As both grain and non-food output expanded, the latter grew faster, gradually becoming the larger proportion of total output.

Now barley was purchased routinely at all times for both consumption and production purposes (as by brewers, maltsters, bakers). This marketing network remained unchanged during dearth as at other times. No one says, however, that because grain was purchased, therefore harvests were abundant: it is obvious that the larger quantity of grain has reduced its price. The opposite is not as obvious, however: that a decline in grain output must lead to a price increase. Here, the fact that grain is purchased is seen by many historians as the *cause* of the rise in price. But the marketing network simply provided the channels through which grain flowed: the quantities/prices were determined ultimately by the harvest. Both these general considerations and the historical context need to be firmly grasped if discussions of the causes and ending of grain crises are to be meaningful.

Outhwaite concurs with Appleby that grain crises ended in Cumbria as people left the remoter areas to concentrate in the more accessible portions and as they increased their exchanges with areas outside. More broadly, he underlines the significance of overall population change. During the seventeenth century (he points out), population growth decelerated; population then fell.

It recovered only gradually, remaining stagnant from 1640 to 1740. This reduced the demand for grain, which then led to agricultural diversification and higher yields; marketing improved. But “the number of grain consumers rose also” and the price of grain remained volatile. So Outhwaite argues grain crises disappeared not so much because of “supply changes” as because per capita incomes rose. This occurred as employment shifted towards trade and industry and both population and unemployment fell. Also more people now had modest items (clothing, household goods) to pawn or sell as needed.³³

This last line of argument says in effect that *grain* crises occurred because *non*-food output was low; grain crises disappeared as *non*-food output increased. But a larger volume of industrial production can exchange for more grain (than before) only if *grain* production rises. Moreover, it is somewhat misleading to say population stagnated between 1640 and 1740. Population kept rising to 1657, when it was 2.2 times its size in 1520. It then fell by just under 8 percent to its trough in 1686, but this was still more than double its level in 1520. Then between 1686 and 1741, population rose by almost 15 percent. (By contrast, between 1621, when population began decelerating, and 1676 — also an interval of 55 years — population rose by only 6.6 percent or only 45 percent as fast). In 1741, the English population was 2.3 times greater than in 1520. Thus grain crises occurred when population (in 1556 and 1596) was about 25 to 40 percent *below* its peak of 1656. Subsistence crises ended (in the early 1620s) when it was about double its 1520 level and still growing. Only *after* grain crises had ceased, did population decelerate.³⁴

Dearth and Subsistence Production

Finally, to sharpen the perspective, I turn to the effects of a fall in grain output when this output is only just above subsistence level. This means that subsistence grain production constitutes the bulk of agricultural output and so there is a large volume of barter. In such circumstances, the famines that occurred were widespread and long-lasting in their impact. Thus in sixteenth and seventeenth-century India, “the usual scenes of horror marking a serious famine” included: large numbers of unburied corpses; cannibalism; “choked” slave markets; the sale of children by their parents. The leading historian of Mughal India, Irfan Habib, assesses one episode of scarcity thus: it had only a limited impact (he says) because the Mughal emperor, Shahjahan, ordered that children sold by their parents should be repurchased and restored by Mughal officials — which meant the numbers could not have been large — i.e. it was only a moderate scarcity.³⁵ Not only villages, but entire towns and cities were emptied during famine, as those remaining fled from the areas of crop failure. Cattle, of course, also perished wholesale. Neighbouring regions experienced

significant looting. After a famine, large areas remained uncultivated and were re-farmed only very slowly. Cloth and handicraft output declined in quantity and quality, as many skilled workers died and as cotton production fell, raising costs.³⁶

In comparing the Indian census data for the period 1871-1911, when famine still occurred, with the English population estimates for 1520-1600, we find that the Indian population grew at a much *slower* pace than the English — i.e., the latter grew much faster. Thus total population in England grew at a rate some 88 percent higher than in India; the growth rate of the English agricultural population was some 96 percent greater; and England's urban population grew at a rate some 70 percent higher than in India (for the two different periods compared).³⁷

During famines in tropical Africa, lineage heads used to sell some members — including children — into slavery, to raise food for the rest. This appears to have been a significant source, on occasion, for the trans-Atlantic slave trade in the later eighteenth century.³⁸ Thus in sixteenth and seventeenth-century India, and in parts of Africa in the eighteenth century, grain output was normally so close to subsistence that a decline often meant famine: i.e., *mass* starvation, *mass* death, de-population, slavery. For England, these comparisons further clarify the substantial height *above* subsistence that grain output had achieved even by the sixteenth century.

Prof Tapan Raychaudhuri says, “When one reads ... European accounts of India and other major Asian civilisations from the early modern age, one often has the impression of reading descriptions of a first world ... written by people from less fortunate climes”.³⁹ But the mass famines and de-population, especially of urban areas, described by Mughal officials and European merchants alike, are scarcely characteristic of a “first world”; and such famines and loss of population are found nowhere in the “less fortunate climes” of the period. Furthermore, amongst the weavers and others who died in such numbers were those who produced textiles for the English East India Company. That is, they produced mass-consumption cotton goods ultimately purchased by working-class buyers in England: even chapmen carried Indian calicoes in their packs [see below]. But these ordinary English workmen and women (in the seventeenth and eighteenth century) most definitely did *not* face the periodic mass famines that their Indian counterparts did. Prof Raychaudhuri goes on, “Clive compared Murshidabad, a provincial city in Bengal, in some ways favourably with London”. But Murshidabad then was the capital of the (nominally) Mughal *Subah* [province] of Bengal. (One might as well try to describe York as a provincial city located in the north of England.) In any case, a slightly later account of Murshidabad is much less flattering. But whatever the case,

Raychaudhuri's assessment in effect looks only to the luxury goods and services purchased by middle and high-ranking Mughal officials and extremely wealthy merchants (two of whom were bankers to the rulers of Bengal). To look only to such small upper-income groups, is to be oblivious to the mass of the Indian population, who in all areas then, lived so close to the margin of subsistence as to periodically face the grim reality of famine ⁴⁰.

Now to the other final goods and services produced in early modern England. First, however, to give a context for the money values to be mentioned: the "standard" male wage rose from 4d. a day in the 1580s and earlier to 8d. a day in the 1620s; in 1650 it stood at 1s ⁴¹. Family incomes were, of course, higher; and almost everyone followed more than one occupation — ie, specialisation was as yet incomplete. Most agricultural labourers followed non-agricultural by-employments for most of the year; craftsmen in towns usually kept some animals or otherwise had some toehold in rural production. Many townsmen followed more than one (labour) occupation. We now return to the final outputs found in sixteenth and seventeenth-century England.

Clothing

D.M. Palliser contrasts the value of certain items from the Earl of Leicester's wardrobe in 1588 (£545) with the value of a barber's clothing in 1584 (£1) and the cost of a shoemaker's stock in 1594 (£1-11-8), both in Worcester. ⁴² The comparison is dramatic but uninformative: it tells us nothing about the millions of people in between — i.e., such a contrast says nothing about the total output of mass-consumption clothing and footwear, in relation to the luxury varieties.

Clothing rose substantially in quantity, quality and variety in these two centuries. The value of a rural labourer's clothing, as a proportion of his assets, varied from 5 per cent (south Midlands) to 12 per cent (the North-West). In the early seventeenth century: it was worth about 8sh. in the North and the West Midlands; about 10sh. in Cumberland; around 13sh. 4d. in East Anglia. In Hertfordshire, Warwickshire and Somerset, the labourer's clothing was valued at about £1, sometimes £2. Some of his wages were paid annually in clothing; a smock or shirt, shoes and stockings, gloves at harvest-time. ⁴³

In Norwich, between 1584 and 1675, in inventories of up to £10-15, clothing came to a maximum of 20 per cent of the total. Its average value rose a little, from about 15s. at the end of the sixteenth century to around £1 in 1675; thus the clothing of the urban poor was worth distinctly more than that of the agricultural labourer. There were wide variations, of course: one man left clothing worth 5s. in 1595, while a clerk had a gown worth £1:6s. 8d., together with

other clothing worth as much again; his clothes were some 40 per cent of his total assets. A “lame, nearly blind” man left 6sh. 8d. worth of clothing; a draper had clothing worth only 10sh. in an estate of £8.10s.8d.⁴⁴

In those chapmen’s inventories where clothing is valued separately, there are very wide variations.⁴⁵ In 1588, a stallkeeping chapman in Winslow, Bucks., left clothing worth 6s.8d., or somewhat under 8 per cent of his personal goods (£4.4s.4d.) In 1595 in Linge, Norfolk, another stallkeeping chapman had clothes worth a substantial sum: £4.5s.9d., or a huge 78 per cent of his personal inventory. A century later, a chapman in Brampton, Cumberland, left clothes worth £3 and a watch valued at £2, but he had only his stock-in-trade beside: he travelled on foot. And in 1707, a Canterbury chapman and shopkeeper also left apparel valued at £3, but this was just over 6 per cent of his goods and chattels, worth a considerably larger £48.10s.8d.

Between the periods 1530-69 and 1610-49 in the Forest of Arden, the average value of apparel left by small to middling farmers and a few craftsmen and labourers went from 21sh. to £1.18sh. As a proportion of all goods and chattels, it fell from just under 13 to just under 11 per cent.⁴⁶ Rural and urban testators in late sixteenth-century Oxfordshire left apparel with an average value of £1-4-0 (at current prices) or just under 13 per cent of all their consumer goods. A century later in south Worcestershire, the value of clothing in urban and rural inventories stood at £2-16-0 or just over 9½ per cent of the total value of consumer goods left. In four dockside parishes in the East End of London, during the years 1661-64, the average value of clothing left was somewhat higher: £3-12-0, just under 15 percent of all consumer goods assessed.⁴⁷

During this period the prices of many outputs undoubtedly rose, but there is no adequate price index. There is, however, a range of indirect evidence, which when taken together, does point to a definite increase in both the quantity and quality of clothing. Now with the Oxfordshire and Worcestershire inventories just mentioned, the average value of clothing increased about 2½ times in absolute terms between the late sixteenth and the late seventeenth century, though the proportion declined, relative to other consumer goods. But there is some evidence from cloth prices that quantities of clothing did increase. Carole Shammas has also calculated the average prices of some six different types of woollen fabrics found in shopkeepers’ inventories over this period in a number of widely dispersed regions, ranging from Devon to Essex to Yorkshire. The current prices of three fabric groups (baize, heavy broadcloths and kerseys) declined by 13.9, 30.2 and 34.4 percent, respectively. The prices of two fabrics (serge and flannel) remained virtually unchanged (rising by only 0.8 and 1.0 percent respectively). The price of the last type of fabric (friezes) rose very steeply — by 122 percent. Finally, a new type of textile

(stuffs) appeared in inventories in the early seventeenth century; its price fell by 24 percent over the century⁴⁸. These seven textile groups are, of course, only a fraction of the vast number of varieties produced and imported during these two centuries (see below). But given the geographical spread of these price quotations, it is a fair inference that there was a decline in the prices of at least some textiles widely used to make garments. Thus the further inference is that the quantities made would have increased. Furthermore, in the inventories here referred to, where the information is available, there is a decided jump in the proportion devoted to furniture and a clear rise in the quantity and range of household linen (see below). The inference then is that real outputs, not just money values, were rising; thus some improvement in clothing would also have occurred.

As to quality, work clothes were generally of sack cloth, canvas, skins or the cheapest woollens⁴⁹. But above this level there was an almost mind-boggling array of textiles: woollen, linen, hemp and mixed fabrics. Silk was gradually added to this range, which was itself continuously modified (see below). By way of comparison, the range of handwoven products in twentieth-century India is similarly extensive, with much the same huge scale of variety. But these products are ready-to-use lengths of cloth: different sorts of *saris*, certain types of men's garments, towels, tablecloths, etc.

In 16th century England, sumptuary legislation demonstrates that the quality of clothing certainly rose. Acts of Apparel were passed in 1510, 1515 (twice), 1533 and 1554; they were broadened by Proclamations made in 1562, 1566, 1574, 1580, 1588 and 1597: the pace rose as the century progressed⁵⁰. These legislative acts and decrees attempted to restrict the use of fur and the better fabrics to certain specified groups, based partly on rank and partly on income. Smaller and smaller quantities of the superior fabrics (silks, velvets, etc), of specified colours, could be used on particular items only, as one went down the social and income scale: rank and income were to be revealed in dress⁵¹. The clear inference is that the more expensive fabrics were in fact being used further and further down the socioeconomic scale: which implies also a wider use of the better qualities of the more basic fabrics.

There is little direct evidence on clothing quantities; most inventories lump clothing in with "purse" or "ready money". Also, it is definitely possible that legatees removed clothing before the inventory was made; chapmen's wills contains bequests of clothing up to nearly the end of the seventeenth century⁵². Where apparel is separately valued, rural labourers' inventories very rarely list individual items. In Norwich, by contrast, clothing is itemised. In the chapmen's inventories already mentioned, two late sixteenth-century inventories list the individual items of clothing, but two inventories of the late seventeenth

and early eighteenth century simply give a total value. In 349 Suffolk inventories of the years 1570-79, shirts are mentioned 37 times; shifts are not referred to. In 397 such inventories from the period 1680-1700, there are 13 references to shirts and 3 to shifts. In the Forest of Arden inventories mentioned above, where clothing was specified, an average of 6.4 garments was listed during the years 1530-69; this average rose to 11.4 during the period 1570-1609. But in the next forty years, to 1649, clothes are only very rarely listed individually⁵³.

It is possible to infer from all the above that as the quantity and value of clothing rise initially, it is itemised; then, as the total value of clothing continues rising, but the quantity and value of other consumer goods rise even faster, the individual items of dress are no longer listed, and even the total value is not given separately. Thus this body of evidence argues indirectly for an increase in the quantity of clothing: garments were itemised when only small quantities were produced; as the quantity increased, they ceased to be listed individually. There is other indirect evidence which also points to a growth in the volume of clothing.

By 1688, Gregory King was estimating that some 10 million shirts and smocks would be consumed annually, or more than seven such items per family. He also put figures of 4 million on bands and cravats (plain and fancy) and 2 million on neckerchiefs and tuckers (plain and laced), in addition to skirts, breeches, doublets, coats and shirts on the same mass scale. He estimated annual expenditure on accessories — bands, cravats, neckerchiefs, tuckers, as also hats, caps, gloves, mittens, stockings, shoe-strings and buckles, at 10sh. per head or about £2.3 million yearly. At the other end of the spectrum, parish children in Suffolk in the 1630s were already provided with two shifts or shirts each, confirming that the mass of the population routinely possessed larger quantities of such basic items⁵⁴.

Purchase of Cloth

Garments were produced partly within the household, partly outside. Now John Patten assumes that cloth sent to the tailor for making up was woven at home and the yarn too was homespun⁵⁵. Alan Everitt reports a farm labourer from Shenley (Herts.) with a respectable store of household linen; Everitt assumes the housewife had spun the flax and hemp herself. In this case, the labourer had several by-employments, including the spinning of flax and hemp⁵⁶; so here it seems more likely that the yarn was indeed exchanged directly for cloth with the weaver. In the late seventeenth century, some gentry households did on occasion have yarn spun to order; they also had cloth woven, finished, dyed or bleached to order⁵⁷. But otherwise, chapmen carried a huge variety

of linen and cotton textiles from the early seventeenth century onwards — i.e., cloth was *purchased* at even the lowest income-levels. Shops had an even larger range of textiles, since they included the immense variety of woollens. Further, the textile industry was the largest non-agricultural occupation throughout England at the time. The luxury sector is clearly demarcated and is only the minor part of total production — i.e. the bulk of the output was for mass consumption — as indeed is indicated by sumptuary legislation: the upper classes wore a wide range of silk fabrics. Patten himself goes on to stress the ubiquity of local weavers in Norfolk, Suffolk and even Lincolnshire, producing a range of fabrics for local demand; some to be converted into clothes by the local tailor, others to be used for household purposes (eg as bed-hangings)⁵⁸.

As people purchased cloth directly, they were knowledgeable about the different varieties and their suitability for different uses. There is some direct evidence for this, at both higher and lower income-levels. The household account of one gentry family show that in May 1573 a servant was sent from Ludlow to Lancashire on two separate occasions to purchase three different qualities of linen at local markets⁵⁹. In 1641, Henry Best gave a detailed listing of the various types of linen then available and their various uses, both in particular items of clothing and for household purposes⁶⁰. At the end of the seventeenth century, the same type of information, only far more detailed, was available in a cheap handbook addressed to sempstresses, drapers, chapmen and their customers. This short work gave an extensive and apparently exhaustive guide to the vast variety of cottons and linens and their best uses, whether as shirts, smocks, shifts, babies' nappies, kerchiefs, cravats, head-cloths; or as bed-hangings, sheets, table-cloths, napkins, window-curtains, wall-hangings⁶¹. Some twenty five different sorts of cotton and linen were discussed for making shifts and shirts alone. All the huge range of cottons came from India of course; the bulk of the linens were also imported, from the Low Countries and parts of Germany. Thus a significant proportion of the textiles used for both personal and household purposes was imported.

Carole Shammas sees in Best's account the technical knowledge which a head of household then possessed, of the materials used in manufacturing consumer goods — i.e., she sees Best as being knowledgeable about manufacturing methods⁶². Margaret Spufford, on the other hand, is puzzled as to how people obtained the heavier and more complicated woollen garments which the housewife could not produce at home. Tailors carried no materials (and, in fact, they left only their own equipment, unlike other craftsmen). So she believes that the tailor, in village or market-town, first obtained cloth from the mercer or draper in a larger town and then made up this heavy clothing⁶³. Both these reactions come from an environment in which there is so much

industrial and distributive capital that all garments, from underwear to outerwear, are produced readymade in a vast range, in huge quantities, and then sold through an extensive retail network. But where the capital structure is far shorter, then labour services are more prominent in producing most outputs. In such a context, clothing is produced individually to order at all income-levels, by tailors using simple equipment, and many items are home-produced. This is the case in mid-twentieth-century India (as in other LDCs): tailors use simple treadle or — hand-operated sewing machines — *not* electrically-operated industrial types, set in a factory or workshop. Because cloth is purchased to requirement and taste by the customer and then handed to the tailor for making up, a knowledge of the different types of textiles being sold and their different uses, has to be, and is, commonplace. The tailor cannot first obtain the cloth, as Spufford suggests, because it is his customers who have to select the cloth according to their own circumstances. It is this type of circumstantial knowledge which is found in Best and other sources from seventeenth-century England: not technical information about the structure and components of consumer goods, *pace* Shamma, but consumer information about the relative usefulness of different kinds of textiles for different consumption purposes.

Textile Types

At a *very* rough count, Kerridge discusses some 170 odd varieties of cloth produced in the early modern period, for clothing and household purposes. Most of these varieties were woollen, but there were also hemp, linen and (later) silk textiles, together with an enormous range of mixed fabrics: linen and wool, hemp and wool, hemp and linen; and later, wool and silk, linen and silk. In some types one of the two yarns was itself a mixture. Goat's hair was used in some fabrics, very often mixed with linen. wool or silk. The range of products changed considerable over the period: many older types died out, a large number of new types were developed. Some of the latter also disappeared, rapidly or after some time; but most survived. A substantial part of the growth occurred from the later sixteenth century onwards. And fabrics (both old and new) were frequently modified and altered⁶⁴.

Textiles varied substantially: in weight, width, length, colour, finish, pattern. The latter could be woven in — and these could be very intricate — or else the pattern was the result of the various ways in which different coloured yarns were combined in the weave. Fabrics were produced for specific purposes: to be turned into clothing or for household use (some types could be used for both purposes). Clothing fabrics in turn were further specialised for particular uses: for women's coats, dresses, kirtles, different items of under-clothing, scarves, head-dresses, boot and shoe uppers; and for men's coats,

vests, jerkins, doublets and breeches. A range of textiles was produced for lining different garments. There were different fabrics for winter, spring and summer coats; for cloaks, gowns, cassocks, jackets, aprons and drawers. Waterproof cloth was available as also tough and washable types for children's clothing and caps. Flannel was first produced in the sixteenth century and used for shirts, trousers, underwear and washcloths.

As mentioned working clothes were made of canvas, sack cloth, skins or very cheap woollens. The first three generally provided work garments for rural labourers. Ipswich and surrounding towns produced a mixed linen-hemp fabric specifically for smocks and other work-clothes. In 1522, in a landowning household, four yards of frieze were purchased at 6d. the yard, "for a coat for the kitchen boy". In August 1538, John Husee sent Lady Lisle three ells of a "good" canvas, at just over 5d. the ell — "[it] will serve for the boys of the kitchen". A pedlar in 1590 was described (contemporaneously) as dressed in a leather jerkin and canvas breeches — but the former was of good quality Spanish leather and fashionably slashed, while his breeches were "venetians": again, well in fashion: wide and reaching to the knee. A petition in 1593 objected to a tax on leather clothing because the poorest wore mostly leather breeches and jerkins. A late sixteenth century leather worker in Gateshead was described as a "jerkin-maker"; he had both jerkins and footwear in stock. In 1618, in a noble household, 1s. 6d. was paid for "[s]heep-skins for the stable boy's britches"⁶⁵.

Coming now to woollen fabrics: there was (as seen already) a huge array of qualities and types. The very cheapest kinds were not very salubrious: their fibres were stuck together with nameless substances (so they had a distinctive pungency). Other cheap varieties were made from hairy wools (very low quality) and often left undyed. But this was only at the lowest end of an immense selection, varying in weight, finish, colour and pattern.

The rural labourer's good suit was woollen. Poorer women used wool where those with higher income used good-quality linen. Thus in 1563, in a rural area in Essex, a woollen "rail" was stolen — this was a kerchief tied around the shoulders. It was valued at 1s.; — further up the scale, it would have been of cambric or lawn. At the upper end of the mass-consumption scale, came the liveries provided in noble households. In the later 1530's, in the Lisle household, 36 yards of woollen cloth [type unspecified] were bought for the grooms at 4s. the yard. Cloth for yeomen's liveries was slightly more expensive at 4s. 8d. and 5s. the yard (a total of 57 yards was bought, in two lots, at the first price; 132¼ yards were purchased at the higher price). Husee advised Lady Lisle that, at this level, 2½ yards was the maximum needed for a livery; 2¼ yards would do for some. But on another occasion, 3 yards of cloth was

bought for a personal servant's livery at 5s. the yard. Nearly a century later, in 1632, in another noble household, 4½ yards of cloth was purchased at only 2s. 2d. a yard, "to make the foole a coat". A footman's suit took 3½ yards of kersey at 4s. 6d. a yard, while broadcloth for a groom's coat was twice as expensive at 9s. the yard (2½ yards were bought) ⁶⁶.

By the second half of the sixteenth century, the quantities of linen and calico had increased to the point where even the poorer groups had some items in these fabrics. Thus an Exeter widow of this period left 16 holland kerchiefs valued at 1sh. 3d. each and 10 calico kerchiefs valued at 6d. each ⁶⁷. By the later sixteenth century, shops and chapmen carried an extensive selection of mass-consumption fabrics, both imported and domestic, woollen, linen and various mixtures. In the next century, this range expanded to even more varieties and it now included various Indian cottons and even silks.

Many of the textiles described by Kerridge were produced specifically as furnishing fabrics, or as bedding or for other household use. I discuss this further below; but the point needs to be borne in mind because the selection of fabrics carried by shopkeepers and chapmen — which we now turn to — included not just the varieties suitable for clothing but also those intended for household purposes. Some varieties were, of course, suitable for both kinds of use.

In 1578, in so remote a spot as Kirkby Lonsdale, a shop carried some sixteen different varieties of cloth — various kinds of woollens, linens and mixed fabrics, all in a wide variety of colours ⁶⁸. In the 1580s and 1590s, a mercer in Ripon, Yorks. carried some twenty varieties of cloth — linen, woollen, silk and mixed fabrics, with further differences in quality, colour and width. These textiles were all imported from other parts of England or from abroad, including Milan, Genoa and Ulm; he carried no locally-made textiles. Harden sold at 4.½d. to 7d. a yard, canvas, at 1s.4d. to 3s.10d. a yard, and taffeta (silk or linen) at 2s.-6s. He also had (from cheapest to most expensive) buffin (coarse cloth for gowns), sacking (used for dresses), durance (a hard-wearing woollen), silk rash, and fustian (a mixed linen-cotton fabric imported from northern Italy and Germany). Their wholesale prices ranged from 16sh.-18sh. a piece (buffin), to 20s.-24s. (sacking), 27s.-33s. (durance) and 40s.-82s. (fustian). In Durham in 1597, a mercer had (amongst other things) "French coloured velvet" at 13s. a yard. Thus by the later sixteenth century, consumers were already purchasing cloth produced over widely-dispersed regions across England and the continent.

Margaret Spufford has examined the inventories of chapmen who had shops and stalls, besides those who travelled on foot. Those with cloth in their inventories, from the late sixteenth to the end of the seventeenth century, came

from Kent, Norfolk, Buckinghamshire, Gloucestershire, Hereford, Lancashire, Cumberland and Newcastle. Thus we are looking here at changes in the range of cloth purchased at lower income-levels, at widely-dispersed points. In 1588, a shopkeeper in Winslow, Bucks., had three kinds each of “middle” cloth and holland, two sorts of “Lancashire” cloth and eight other types of linen. He also carried a cheap woollen fabric called “black cotton” (to confuse historians). Thus he already sold both imported and domestic cloth; the price range went from 3d. an ell for the cheapest variety of “middle” cloth to 2s.2d. an ell for the better kind of holland. In 1595, in Linge, Norfolk, a shopkeeper carried two kinds of holland and twelve other varieties of cloth. The cheapest was “white cloth” at 7d. an ell; the most expensive, lawn at 5s.6d. an ell.

A shopkeeper at Great Yarmouth in 1628 sold a much more extensive range of fabrics: six kinds of Scotch cloth [a sort of very cheap linen]; three kinds each of holland, twill and fustian; two sorts each of calico, canvas, say, and “osnabridge” linen; and nine other types of fabrics, including mixed varieties such as linsey-woolsey. Indian cottons, it will be noted, had already reached lower-income groups; the calicoes, at 11d. and 1s.3d. a yard, were in the middle of the price range. The latter went from 5d. a yard (“Inderlyn” cloth) to 3s.4d. a yard for the best sort of holland. By 1642, in a Newcastle shop, the stock included eleven types of linen, ranging from 10d. to 2s.6d. a yard; nine kinds of “cloath” (unspecified), from 9d. to 2sh.3d. a yard; four sorts of “Scotish” cloth; three types of say; two kinds each of fustian and of “falden” cloth; plus dimity, ticking, holland, cambric and lawn. The price range went from 9d. per yard for the cheapest “cloath”, to 5s.6d. for lawn. A stallkeeper in Monkland, Hereford, in 1665 had a very restricted range: five types of the cheapest cloth, ranging from apron cloth at 9d. a yard to flaxen cloth for 1s.8d. an ell, and including both hempen cloth and “harden” cloth — the toughest sort of linen for sheets. But even at this level, cloth was now being produced for specific purposes.

In 1690, a stallkeeper in Great Chart, Kent, carried six types of holland, three kinds of muslin and thirteen other varieties of cloth. For fabrics priced by the yard, the range went from 9d. (narrow muslin, “white striped dimity”) to 1s.4d. (“kenting”). Priced by the ell, the fabrics cost from 4d. (“white hamells”) to 2s.8d. (the best holland). Calico, at 9d. a yard, and the muslins, at 9d., 10d., and 1s.2d. a yard, were still in the middle of the price range, overall; but now there were more varieties of such Indian cottons being stocked. In 1691, a shopkeeper in Randwick, Glos., had twelve kinds of holland, including two superior varieties, at nine different prices, ranging from 1sh.3d. to 5s. an ell. He also carried five kinds of Osenbridge cloth (in different colours); four kinds of dowlas; three kinds each of French canvas, “white cloth”, “linsey”,

fustian and “slease cloth” (Silesian linen); two sorts of flaxen cloth and “inderling” (this last was amongst the cheapest fabric). Serge came in two colours, and he had ten further kinds of cloth, including one specially woven for tablecloths. The prices ranged from 4d. an ell for “coarse cloth” and the cheapest sort of inderling to 5s. an ell for the better of the two superior varieties of holland. Calico, at 6d. a yard, was near the lower end of the scale. In 1692 a (female) stallkeeper in Donington, Lancashire, carried seven kinds of holland; four types of Scotch cloth; three kinds each of coarse cloth and blue woolsey; two kinds of blue linen and six other varieties. “Pickling”, at 5d. a yard was the cheapest sort of cloth; the most expensive was the holland at 2s.9d. an ell. A chapman in Brampton, Cumberland, who travelled on foot, carried a variety of small consumer items, but he also had five types of Scotch cloth, at prices ranging from 10.½d. to 1s.3d. a yard. Finally, to illustrate the varieties of imported and domestic fabrics available in even the remoter areas, at the lowest income-levels, we have the stock carried by a chapman on foot in Penrith, Cumberland, in 1683; holland and cambric from the Low Countries; domestically-finished linen; Scotch cloth; Bengals, muslins and calicoes from the range of Indian cottons; and silks.

Thus over these two centuries in England, a widening range and variety of cloth of all types, imported and domestic, was purchased at even low income levels. The variety of fabrics and range of prices is not unlike the situation found in mid-twentieth-century India: there too customers select from a huge range of mill-made textiles at retail level, picking out various types and lengths of cloth to be made up at home and by the tailor, into various garments and household items⁶⁹. In short, in both early modern England and in LDCs in the twentieth century, a similar knowledge of fabrics and their best uses is necessary, because in both cases the production of clothing (and of household textiles) is still partly within the sphere of household production for household use, and has only partly moved out⁷⁰. In “developed” countries, on the other hand, where the capital structure is far more extended, several stages of production intervene between the output of cloth from textile mills and the clothing and household textiles found in households. The mill cloth goes into factories and workshops, where industrial machines working with labour and other inputs, convert the mill cloth into garments, household linens, etc. In the next stage, there are warehouses, transport and distributive investments, to bring the clothing and household linen down to the stage of final consumption by individuals and within the household.

Making Clothing

In early modern England, the simpler items of clothing were home-sewn: shirts, shifts, petticoats, aprons, smocks, waistcoats. By the late seventeenth century, specially-woven cloth was produced which could be used for infants' nappies; these too would have been made up at home⁷¹. There is indirect evidence for the extent of home sewing (not just of clothing — see below) in the range of thread varieties already being sold retail: some eleven or twelve varieties by the later sixteenth century⁷². A draper in Kirkby Lonsdale in 1578 stocked four different kinds of ordinary sewing thread, ranging from 10d. to 6s. a pound; and three types of silk thread: the London variety cost 10d. or 10.½d. an ounce, while Spanish silk cost either 18d. or 20d. (thus silk cost between 4 and 32 times as much as linen or woollen thread). The point is not so much the wide gap in prices, as that in even so remote a location there was a demand for superior varieties of thread. The different prices otherwise reflected differences in strength and weight and therefore the different uses to which the various items being made would be put. A gentry household account for the same year from Kent, shows that three different sorts of thread were bought for household purposes, at prices of 2s., 3s. and 7s. a pound; silk thread was also purchased, for personal sewing, at 12d. an ounce (between 5 and 16 times as much again). These prices, from near London, hardly differ from those in remote Cumbria, which says something about the distribution network. In the 1580s and 90s, in Ripon, Yorks., a mercer's accounts show that he usually bought thread at 1s.6d. a pound. But he also bought Coventry thread at 3s. to 6s. 4d. a pound and "sister's" thread at £1. He sold silk at 2s. 6d. an ounce. From the late sixteenth century onwards, if not earlier, chapmen carried various sorts of thread, ranging from "coarse" to silk, both in their packs and in their shops and stalls, in widely-dispersed areas.

That thread was sold by the pound gives an indication of the amount of home sewing being undertaken, of simple clothing and household linen. Other items needed for home sewing were also widely available from at least the middle of the sixteenth century onwards. Needles were imported into London from Spain in 1549; such imports were valued at £471-1- in 1559. By 1578, they were sold even in Cumbria. In the late sixteenth century, needles began to be manufactured in England in imitation of the Spanish originals; by at least the early seventeenth century, thimbles and scissors had been added. Chapmen carried needles and needle cases, thimbles and scissors and these items were sold in shops and stalls in many regions scattered through the country⁷³.

The expansion of tailoring services is an indirect indicator of growth in the volume of clothing. There is information on the geographical spread of these services in east Anglia, i.e., the number of locations where tailors were found.

Between 1500-99 and 1659-99, the number of rural parishes in Norfolk and Suffolk in which tailors were recorded went from 172 to 300, an increase of just over 74 per cent. Tailors were then the most widespread non-agricultural occupational group (previously, they came second)⁷⁴. Over the same period, the number of towns in the same region with tailors rose from 34 to 39 (out of 47); in both cases they were the second most widely reported occupation⁷⁵. Again over the same period, but in Norfolk market towns alone, the number with tailors rose from 12 to 15 (out of 19); they were again the second most widespread occupation⁷⁶. The above figures only tell us the number of places from which tailors were reported; they do not, of course, tell us how many tailors there were. This last information is available for Norwich. Between 1525 and 1571, the numbers of freemen in the broad occupational grouping of “clothing” went from 54 to 165, an increase of just over three times. Tailors, as a proportion of this grouping, fell from 89 to 76 per cent. Between 1501-25 and 1651-75, admissions of freemen into the clothing group (ie the flow into this group) rose from 69 to 266, an increase of just under 3.9 times. The proportion of tailors fell from 97 to 72 per cent. The population of Norwich is estimated to have risen from 11,000 in 1591-1600 to about 30,000 in 1693, a growth of 2.7 times⁷⁷. The inferences from the above are that, first, all suppliers of clothing, i.e. the volume, rose faster than population and, second, that the relative decline in tailors amongst these suppliers implies that supplies of other items of clothing (hats, caps, bodices, stockings, etc) rose relative to tailored garments. The range was increasing along with the quantity.

Accessories

Further indirect evidence for the increase in clothing is found in the range of complementary items sold by chapmen to lower-income groups from the late sixteenth century onwards. In the utilitarian category, these items included laces, points, inkle, tape, hooks and eyes, pins and band strings [bands were flat collars]. Buttons were utilitarian but could also be decorative (and expensive), while ribbons, lace and fringe were plain frippery. There was a wide variety in all these items, at a wide range of prices⁷⁸. Besides being produced in England, inkle and thread points were also imported. In 1559, imports of thread points were valued at £234; imported inkle came to £8,812 (it fell to £1,816 in 1565). In 1588, a shopkeeper in Winslow, Bucks., sold points, coloured tape, inkle, coarse inkle and coarse black inkle. In 1595, in Linge, Norfolk, a stallkeeper sold coarse inkle and points. In Ripon, Yorks., during the 1580s and 90s, a mercer bought silk points at 7s.-8s. the gross; thread points were far cheaper; they could be had wholesale at 1sh.4d.-1s.8d. a gross. He also sold a variety of inkle and gartering at various prices. In 1613, in Sutton St. James, Lancs.,

a shopkeeper had fine inkle, coloured inkle, points, leather laces, thread laces, lace binding and crewel binding on sale. In Great Yarmouth in 1628, a shopkeeper sold white inkle, thread points and bandstrings. A shopkeeper in Newcastle in 1642 sold points at 1s.4d. per gross, short and long leather points, white and silk points, sleeve points, thread laces, inkle, cotton tape at 1.¼d. a yard, “steadle belting” at 4d. a yard, and three kinds of band strings at 6d., 8d., and 1s.6d. a dozen. In 1680, in Bury, Lancs., leather laces cost 1.½d. a dozen and thread laces, 2.½d. per dozen, while silk laces were 2d. each. Per dozen, leather points were 3d., thread points, 1d., and silk points 8d. Knee-points cost 1sh.4d. a dozen. Green and blue inkle cost 3d. a yard, while coarse inkle came at 4d. per yard. For 1d. you could buy 9 yards of linen tape, 2 yards of woollen tape, or 1½ yards of the cotton variety. In Donington, Lancs., a female stallkeeper sold “loome laces” in 1692.

Pins were used to fasten garments and in sewing, lace- and hat-making. Their use is therefore an indirect indicator of the increased volume and variety of clothing being worn, and also of sewing being done at home and by the tailor and sempstress⁷⁹. Up to the mid-sixteenth century, the bulk of the pins used were imported from Holland. Then, sometime between the 1560s and 1570s, a domestic industry developed, using wire imported from Germany and Sweden. But 80 per cent of the demand — the very cheapest pins — was still supplied by imports. Dutch pins were two-thirds the cost of English pins and sometimes half; they were also better for the finer fabrics. Medium-quality pins were, however, supplied by the English industries. In 1559, pin imports were valued at £3,279; in 1565; at £4,274; the estimate for 1597 is £40,000. In 1609, it was estimated that £60,000 worth of pins were used annually. There were some 13 or 19 different types, according to metal (brass or iron) and weight, but they also differed in size, shape and style. Different-sized packets were also available. In 1574 a draper’s ship in Kirkby Lonsdale carried three kinds of pin, priced at 9¼d., 1s.1d., and 1sh.6d. per thousand. In 1588, pins were sold at 7d. per thousand at a shop in Winslow, Bucks.; at 6d. per thousand in St. Albans in 1607; at 6d. a gross in Newcastle in 1642; and they cost 4sh. a dozen at a shop in Randwick, Glos., in 1691. They were, of course, carried widely by chapmen. In a gentry household in Kent in 1574, the children were each allowed 3s. worth of pins every six months. Metal hooks and eyes were used by the poorer classes by the end of the sixteenth century; they cost 1s. per thousand.

Silk, silver and brass buttons were already being imported before the mid-sixteenth century; in 1559, they were worth £108-10⁸⁰. Imported metal buttons were available in Kirkby Lonsdale in 1578. Shops also stocked thread, hair, “gimp” and “haringe” buttons. In the 1580s and 90s a Ripon mercer

carried silk, hair, thread, corded and tufted buttons. He bought hair and thread buttons at 6d. the gross wholesale, but for silk and gold “long buttons” he paid 12s. a dozen. Silk buttons cost 2d. a dozen (retail) in Winslow, Bucks. in 1588. They cost 1s. 4d. per gross in Great Yarmouth in 1628; “gimp” buttons sold for 6d. a gross. In Radnorshire in 1675 the same prices prevailed for the same two varieties. In 1642, in Newcastle, a shopkeeper stocked a range of buttons, including hair buttons, at prices ranging from 5d. a gross to 2s.6d. for ten. He also sold “clasps” and “great clasps”; the Yarmouth shopkeeper (above) also had “clasps” in 1628. Buttons were carried widely by chapmen, of course.

Ribbons and lace were also widely sold⁸¹. Lace was imported into London before 1549. In 1559 imports of “laces of all sorts” were valued at £775-6-8. By the early seventeenth century, lace and ribbons were made in Norwich; in 1608 it was claimed English supplies had ousted imports of ribbons, silk laces, points, silk garters, girdles, etc. In 1688, Gregory King estimated that some £400,000 was spent annually on thread, ribbons, fringe, embroidery, and gold, silver and worsted lace. In Kirkby Lonsdale in 1578, a draper’s shop carried several different sorts of lace including Norwich and Scottish varieties; it also sold fringes. In 1588, a shopkeeper in Winslow, Bucks., sold “coloured fringe”, he also had silk lace at 1s.4d. an ounce, together with four other kinds of lace: “statute”, “narrow statute”, crewel and “parchment”. In 1595, in Linge, Norfolk, a stallkeeper had silk lace in various colours, at 1s.2d. an ounce. A Ripon mercer, in the 1580s and 90s, carried a range of different types of ribbon at a range of prices. He bought fringe wholesale at 3s.-4s. a pound, and also sold it retail. A shopkeeper in Great Yarmouth in 1628 carried silk and “oramy” lace; ribbon (unspecified); “mixed”, black, and cotton ribbon; and “tinsel”. A Newcastle shopkeeper in 1642 sold ribbon at 2s.4d. and 3s.6d. per dozen; “ferit” ribbon at 3s. per dozen, and silk ribbons at 4s.4d. per dozen. He also carried lace at 3d. and 5d. a yard; bone lace at 1½d and 2¼d a yard; then at penny increments from 3d. to 11d; and then at nine different prices ranging from 1s.2d. to 3s.8d. a yard. A chapman in Grantham, Lincs., carried “ribonds and cotton” together with broad, narrow, fine and coarse lace amongst his stock in 1679. The following year, in Bury, Lancs., a chapman carried bone lace at 1d. and 3d. a yard, and white bone lace at 1sh.6d. for a dozen yards. A female stallkeeper in Dorington, Lancs., in 1692 had “ferit” ribbon, lace at 6d. or 1s.2d. a yard, and bone lace at 2d. per yard, with a cheaper variety at 1s.4d. for a dozen yards. At the gentry level, a Kent household purchased in 1578, gold and silver bone lace at 6s.8d. and 8s. a yard; fine white lace at 8s.8d. a yard, white and black lace at 2s.4d. and 2s. a yard, white and black lace at 2s.4d. and 2s. a yard, and yellow crown lace at 1s.4d. a yard. In Bedfordshire and Buckinghamshire, at the end

of the seventeenth century, the lace then produced sold at 30s. a yard, where the variety previously made had sold at 8s. a yard.

Ready-made Items

By the late sixteenth and early seventeenth century, a variety of accessories and small items of dress were already available readymade in chapmen's wares, i.e. at the lower end of the income and price scale⁸². "Oxford" (i.e. Woodstock) gloves were sold in Kirkby Lonsdale in 1578. A shopkeeper in Winslow, Bucks., was already selling girdles in 1588, while in 1615, a chapman sold gloves from his pack in Rickmansworth. In 1628, a shopkeeper in Great Yarmouth sold "bodies" at 2s. a pair, "wrought" sleeves at 4½d a pair, "wrought" coifs at 7¼d each, "garterings" at 1s.4d. a dozen, and garters at 4½d a fair. Bands [flat collars] for men cost 3d. each, children's laced bands were 5d. each, plain bands, 7d. and laced falling bands, 8d. each. He also had in stock, silk garters, silk girdles, silk "masks", forehead cloths, "sundry sorts" of gloves, "small purses", silk purses and children's bags. A Newcastle shopkeeper in 1642 carried neckcloths at 1s. each, garters at 2¼d., 3d. and 5d. a pair, "masks" at 7d. each, belts at 1d. each, blue coifs at 3d. each, coifs at 4d. each, and "largest blue coifs" at 4½d. each. Children's gloves cost 2½d. a pair, men's gloves, 4d. Gloves (unspecified) were available at 5d., 6d., 8d., 10d. and 2s. 6d. a pair. He also had purses at 1/6 each, other neckcloths and handkerchiefs, and a "Wakefield cap" at 6d.

In 1663, a Tweedmouth chapman had stockings, including "little coarse" pairs, and "blue capes" in his pack. In 1679 a chapman in Grantham, Lincs., carried calico caps for children in his pack; while in 1680, another chapman, in Bury, Lancs., carried children's calico hoods at 2d. each, black serge coifs at 8d. each, silk capes at 6d. each and stuff and calico capes at 2d. a pair. Children's gloves could be had for 1½d. per pair, women's gloves for 3½d., men's gloves for 4d., and coarse men's gloves for 2d. a pair. A Penrith chapman had gloves and muffs for sale in 1683. In Great Chart, Kent, a stallkeeper had muslin neckcloths for 9d. each, in 1690. The next year, a shopkeeper in Randwick, Glos., had stockings, cravats, capes, linen sleeves, silk hoods, scarfs, stomachers, "whisks" and "small things" in stock. In 1692 in Donington, Lancs., a female stallkeeper carried cadis [to hold up garters] at 6d. and 8d. a dozen, "Bungall" [Bengal] caps at 3d. each, other caps and coifs at 4d., silk scarves at 1s.5d. each, gloves at 5d. and 9d. a pair, and stockings at 3d., 6d., 10d and 1s. a pair. And in 1695, in Brampton, Cumberland, a chapman had silk handkerchiefs at 1s. 5d. each, with half-silk handkerchiefs in two sizes at 7d. and 10½d. in his pack. The inventories used here do not indicate whether any of the gloves mentioned were knitted. Gloves were certainly knitted, of course (a

pair have even survived from late seventeenth century Shetland), but only knitted stockings were subject to aulnage (see further); this suggests that knitted gloves were for home consumption or only local sale. I discuss the distribution and production of leather gloves below. By the mid-seventeenth century, thin, supple, washable — non-shrink — leather gloves were available; “washed leather” riding gloves were sold by pedlars in the North-east in the 1690s.

Caps were already being imported before 1549. In 1559, imported hats and hatbands were valued at £8,025-3-4; imported gloves, at £2,636-10-0; and girdles, at £998-10-0. Hats were already being sold in a shop in Richmond, Yorks., in 1578, while silk, felt and linen hats were available in Kirkby Lonsdale. Hats were sold in 1588 in a shop in Winslow, Bucks., at 6d., 8d., 1s., 1s. 6d., 1s. 8d., and 2s. each. An Exeter hatter’s inventory of 1589 included “cypress”: a thin transparent textile, silk or mixed silk and linen. It was relatively cheap: the smooth variety cost 7d. a yard, the crimped variety came to 1sh. the yard. A century later, Gregory King estimated that the annual consumption of hats and caps came to 4.9 million (just under one per head), together with 8 million pairs of gloves and mittens and 6 million shoestrings and buckles ⁸³.

Stockings

Up to the early sixteenth century, in rural areas, knitted stockings were produced within the household for household use and for purely local sale; children also generally wore them. Otherwise, especially in upper-class dress, hose (for both sexes) were made from cloth, attached to breeches or pants and held up by garters above the knee. But home knitting developed into a by-employment in the first half of the sixteenth century, and this expansion and its continuation is confirmed by a petition of 1655 which by then distinguished between “public” and “private” knitting. Thus by the mid-sixteenth century, knitted stockings were commonly worn at all social levels, but the poor continued to wear stockings that were half-cloth and half-knitted, up to a century later ⁸⁴.

Stockings were produced for inter-regional, national and international distribution. This means more stockings were purchased and more came from other regions. During the last thirty years of the sixteenth century, the (part-time) knitting of stockings for wider sale developed as a regional specialism in Wales and at least ten English counties in the Midlands and the West and North of England; the districts involved increased during the seventeenth century. By the 1590s, it was a substantial industry, with knitters of both sexes and with steadily growing exports to Ireland and the Continent. Aulnage began to be charged on stockings in 1578. In the 1630s and 1640s, framework knitting

of worsted stockings spread first through Leicestershire and Nottinghamshire, then other areas in the Midlands. Gregory King estimated that in 1688 two pairs of knitted stockings were bought per head — i.e. 10 million pairs annually. Joan Thirsk feels this total could be more than doubled to an upper estimate of 22 million pairs, assuming a maximum population of 5½million purchasing 4 pairs per head every year. Some 1¾million pairs were also exported annually by the end of the seventeenth century. By 1615, it was estimated that one-third of long wool output went into stockings, two-thirds into the New Draperies.

Knitted stockings were far superior in quality to cloth hose: stockings could be washed oftener (if desired); they were better fitting, stayed in shape longer, and they came in a variety of designs and colours⁸⁵. Ordinary woollen and worsted stockings were produced in all regions; in 1614 a Boston testator left one of his sons “the stockings now at knitting”. The northern counties supplied the cheapest and toughest stockings. Made from coarse, hairy wool, they were warm and hard-wearing. Next up were worsted stockings in different qualities (made from the same combed long Midland wool used for worsted cloth). Jersey stockings came at the top of the scale; they were made from the very fine yarn spun on the small wheels developed in Guernsey and Jersey. This method was taken up in Norfolk and the knitting of jersey stockings spread quickly in Norwich and Yarmouth. By the 1570s there were already wide regional variations in types of yarn, weight, pattern, colours, decoration. Stockings were available in eight or nine different colours, in various shades, in a mixture of colours, and in stripes, also in different colours. For the best quality stockings, embroidery, e.g. with quirks and clocks, was added after knitting. Length and size also varied (for adults and children); the range of varieties increased as output expanded. In the late sixteenth century, commentators denounced these “Frenchified” and “Babylonian” fashions, with their “light wanton colours.” In the 1670s, one Guernsey merchant alone ordered some 33 different kinds of good-quality stockings, varying by size, design and colour. A range of further types were knitted for ordinary use.

In Nottingham in 1519, a pair of knitted woollen stockings were priced at 5d⁸⁶. In 1578, stockings from the northern counties cost between 1s. and 1s.6d. In Kirkby Lonsdale in the same year, the cheapest variety cost 7d.; thereafter stocking prices rose at 2d. increments from 1s. to 1s.10d. In 1580, Customs valuations of short woollen hose were set at 8d., of long hose, at 3s.4d. This means retail prices were about double — i.e. 1s. 4d. and 6s. 8d. respectively. The best worsted stockings sold in 1590 at 8s.-9s. A 1600 customs valuation put coarse jersey stockings at 2sh.8d. and plain jersey at 4s., again presumably half their actual retail value (perhaps 5sh.4d. and 8sh. respectively).

In the seventeenth century, the price of northern stockings fell below a shilling. A shopkeeper in Bury, Lancs., had 59 pairs of stockings on hand in 1668, at prices ranging from 3d. to 1s.6d. a pair. Guernsey worsted stockings sold wholesale in the 1670s at 2s.6d. to 10s. 10d. a pair; again, retail prices were perhaps twice as much, at 5s. to £1-1-8 a pair. A northern hosier in the 1680s carried boys' and childrens' woollen hose at 8d. and 10d. a pair; in Leicester in the 1690s, worsted stockings cost from 1s.6d. to 2s.6d. a pair. A (female) stallkeeper in Donington, Lancs., had 31 pairs of stockings in 1692, at 3d., 6d., 10d., 1s. and 1s.1d. a pair. And a shopkeeper in Grantham, Lincs., carried 192 pairs of women's stockings in 1696 at around 6d. each. Such impressionistic evidence is all we can hope for but it seems safe to say that stockings were available in a wide price range. Nor do prices appear to have risen very much if at all; and since money prices generally rose over the period, it would seem stocking prices may have fallen behind other prices.

Footwear

Shoemakers generally produced to order, i.e., they both produced the good and sold direct to customers: there was no separate distributive stage⁸⁷. But many also kept stock on hand. In Chelmsford in 1560, 57 pairs of shoes were stolen from a shoemaker's shop; their total value was £2-13-4. In 1571, a Banbury shoemaker had 96 pairs of shoes plus 2 pairs of boots on hand at a total value of £11-3-4. In 1574, in the same town, a shoemaker carried 163 pairs of shoes at about 2sh.3d. a pair; he had 2 pairs of boots at 4sh. A Devon shoemaker in 1590 had 42 pairs of shoes "great and small" and a pair of boots in stock, all worth some £4-11-4. In 1594, a Worcester shoemaker carried 14 pairs of men's shoes at about 2s.3½d a pair, 14 pairs of women's shoes at 1s., and 8 pairs of children's shoes at 6d. He also had 2 pairs of boots at 4s. each. Another shoemaker there had the same stock of women's and children's shoes at the same prices, but he had 20 pairs of men's shoes at 1s.7d. a pair. In 1623, in Chester, a shoemaker had 117 pairs of shoes on hand: some were children's shoes, others were for adults, from "size 3 to size 12". In 1633 in Petworth, a shoemaker carried 63 pairs of shoes at 9½d a pair. In 1663, a shoemaker's stock of boots and shoes was valued at £9-19-6. Thus footwear appears to have been relatively cheap in relation to the other items of dress mentioned above. But before the mid-sixteenth century, even ordinary shoes displayed fashion features. Of black cattle hide they may be, but their toes varied in shape (exactly as with upper-class footwear) and they were slashed to reveal the coloured stockings beneath.

Better quality shoes were made by cordwainers, who also made leather clothing and fastenings⁸⁸. But pointmakers were already organised separately

in Tewkesbury in 1579, as were glovers and pouchmakers. All these light leather workers made other leather personal goods as well: belts, bags and purses. Shoemakers were found in only 27 rural parishes in Norfolk and Suffolk in 1500-99; in 1650-99, this figure was 32. But those involved in the leather trades — including cordwainers, tanners and others engaged in manufacturing — were reported in 71 rural parishes in 1500-99, and in 241 parishes in 1650-99. In towns, the coverage was far higher: the number in which cordwainers/shoemakers were found went from 35 to 43 (over the same area and time periods). Glovers were already found in 20 such towns during the sixteenth century; by 1650-99, this figure had risen marginally to 22. In 1500-99, the five largest towns had specialist cobbler — “translators”: who both repaired shoes and altered them in size. This occupation was found in only two towns in 1650-99: suggesting that as output rose, it was not necessary to re-use shoes thus; the labour and other resources could be used for other purposes. Out of 19 Norfolk market towns in 1500-99, cordwainers were found in 10; by 1650-99, they were available in 18 such towns. Norwich had 44 cordwainer/shoemakers in 1525; they formed 56 percent of the leatherworkers in the city. By 1671, there were 90 cordwainers — more than twice the number in 1525; they constituted 62½ per cent of all leatherworkers. During the years 1501-25, 34 cordwainers and shoemakers were admitted to the freedom, some 45 per cent of all leatherwork admissions. In 1651-75, this number rose to 115, or just over two-thirds of the leatherworker group. Taken in conjunction with the expansion of leather manufacturing in rural parishes, this suggests that in the supply of shoes and light leather goods, the final stages of manufacturing-cum-distribution, nearer the final consumption stage, became more concentrated in towns, while the stages of manufacturing further removed, became more concentrated in rural areas. The implication is that transport facilities also expanded (as we shall see).

How to Keep Trim

Besides the items dealt with above, a number of other personal goods also became available at the lowest income-levels during the early modern period — i.e. they were now mass consumption goods⁸⁹. Combs were certainly on sale in 1588 because a shop in Winslow, Bucks., had comb boxes at less than a penny. each. In 1642, a shopkeeper in Newcastle carried large horn combs; other horn combs at 1d. and 2d. other combs at 3d.; and bone combs at 6¾d. each. He also had comb cases at 1½d. In 1680 a chapman travelling on foot in Bury, Lancs. had white bone combs in his pack at ¾d. each, as also horn combs at 1½d. and “ivory” combs at 2d., together with comb cases at three for a penny. Other chapmen who carried their own packs also had combs in stock

in Grantham, Lincs., in 1679; in Penrith in 1683, and in Brampton in 1695. Mrs. Spufford gives an illustration of a small double-sided seventeenth-century bone comb; it is identical with the wooden combs produced by rural and small urban craftsmen in twentieth-century India. “Berde” (?beard) brushes and “robyn” (?robing — i.e. clothes) brushes were sold in 1588 by a shopkeeper in Winslow Bucks; four of the first kind and two of the second were valued together at only 4d. the lot. He also had two other brushes (unspecified) at 4d. each. Two brushes (unspecified) were also available at 8d. each in a shop in Great Yarmouth in 1628, while a Newcastle shop carried two “beard brushes” in 1642. A “great” looking glass was available for 1sh. in a Winslow shop in 1588. In 1628 in Great Yarmouth, small looking-glasses were available at about 1¾d. each; the shopkeeper also had a single “great gilt” glass at the princely sum of £1-4-0. In 1642 in Newcastle, a shopkeeper had “great glasses” at 8d. in total, he also had one glass at 5d. In 1661 a Bristol shop could supply what was clearly an exceptional looking-glass: it was “corded in red leather” and cost 5s. In 1677, a Newcastle warehouse carried glasses at 2¾d. each; they were also stocked in shops in Bury, Lancs., in 1668 and in Randwick, Glos., in 1691. Chapmen generally carried pocket looking-glasses during the seventeenth century. In 1588, a shopkeeper in Winslow, Bucks., sold knives at ¾d. each [knives were used then where nail scissors are used now]. In 1642, a Newcastle shop stocked a wide range of such knives: at 1½d., 4d., 6d., and 3s. each. The cheapest were “jackaleg” knives at ½ a dozen, while a quantity of “elfin-blades” were valued at 2s. The implication of all the above is that, even at the lowest income-levels, a wider range of material means were being produced to enable people to achieve a neater, trimmer appearance. (Hygiene also improved, with a larger supply of combs and brushes and more resources to trim nails properly.)

Ready-made Clothing

Finally, the range of ready-made garments expanded greatly from the late seventeenth century onwards. Ready-made shirts were available in one merchants shop in Exeter as early as 1564. By the 1670s an Oxford “salesman” had not only shirts, but a range of other linen garments as well: coats, trousers, frocks, morning-gowns, petticoats, bodices, drawers, and children’s coats. In Dover in the 1680s, shirts, breeches, men’s and boys’ suits, women’s petticoats, children’s coats, vests and “undercloths” could all be bought readymade, as well as canvas frocks, “close” coats and camlet coats. In Great Chart, Kent, in 1690, a shopkeeper had shirts in stock. In Randwick Glos., in 1692, a shopkeeper sold shirts at 3s. each. In Canterbury in 1703, the range had grown much further, with garments priced according to size and fabric; stocks were

also larger. Women's and girls' gowns cost from 3s. (for "small girls' gowns") to 7s.; petticoats went from 3s. to 5s.6d. Damask mantuas cost 8sh. For men's and boys' breeches, the range was 2s.6d. (for "small boys") to 7s. Waistcoats went from 2s. to 10s. (for "large boys" the cost was 4s.) A child's coat cost 4s. or 5s.6d. A "little boy's coat" was priced at 3s.6d. Boys' coats ranged from 4s.6. to 7s. A "large boy's coat" cost 10s. Men's coats (lined) went from 14s. to 20s. In 1705 in Sittingbourne, it was possible to buy boys' dimity frocks, men's frocks, canvas frocks and canvas drawers. Thus in some urban areas by the beginning of the eighteenth century, a growing range of ready-made clothing was available. And by the late seventeenth century, "bodies" and children's waistcoats were being sold in Cambridgeshire ⁹⁰.

The Better-off

We come now to items above the mass-consumption range. As we have seen, the majority of the population dressed in wool and linen. An Essex tradesman in 1609 wore a black stuff doublet, a white frieze jerkin, a pair of pleated fustian "hose" [breeches], ash-coloured knitted stockings and a banded black hat ⁹¹. As we also saw above, silk was added to the mass-consumption range only from the late sixteenth century onwards mainly for such small items as buttons, laces, points, ribbons, kerchiefs, capes, hoods, garters, girdles and purses. Silk hats were also available. But above this level, although clothing was still mostly woollen, the cloth was of superior quality and greater use was made of luxury silk fabrics. Fur was also now used. By the mid-sixteenth century, many middle income urban wardrobes contained at least one or two larger items of clothing made from silk. Country gentlemen and urban merchants during most of his period dressed in both wool and silk, but from the early seventeenth century onwards, wool started growing in prominence. Leather was still used in the sixteenth century for luxury garments, but not later.

Throughout most of this period, tailoring was rudimentary — that is, by the standards achieved later: "many... garments do not appear to have been made to fit the wearer". What distinguished middle and upper income clothing from the mass-consumption level, was fabric quality, decoration and ornament. Tailoring skills and therefore standards rose only from the late seventeenth century onwards: ie the quality of clothing was now defined increasingly by the quality of its tailoring. Thus investment rose in tailors' equipment, training and workshops. together with improvements in their quality. That is, more goods and services, of better quality were now produced for, and invested in, the production stage just preceding final consumption. Hence the quality of the final good — clothing — improved so conspicuously. But items of

clothing were also more differentiated: some were used purely for fashion and effect, and, of course, quantities were far greater⁹².

In the later 1530's, 42 yards of woollen cloth costing 5s. 4d. a yard were purchased for the gentlemen of the official Lisle household. On another occasion, 22½ yards of "a very good cloth" called "marble" was purchased at the slightly higher price of 5s. 8d. a yard for their liveries. Even at this level, Hussee still considered 2½ yards as the maximum, "except for the very greatest"⁹³. In 1559, a sarcenet tippet worth 20s. was reported stolen at Essex Quarter Sessions. In 1570, an Exeter cordwainer had two gowns trimmed all round with fur, besides two doublets, three cloaks, two caps and a hat. An Exeter widow in 1587 left a taffeta apron, eight other aprons, four petticoats, four clothgowns, three hats, 26 kerchiefs "and other trumpery" (the exasperated executor was evidently male.). A merchant in the same city had, in 1589, two doublets, two pairs of "hose" [breeches], three gowns, a coat and two cloaks, all woollen, besides a leather jerkin, a cap and a hat⁹⁴.

In the early seventeenth century, a gentleman from a land-owning family bought 7 yards of ash-coloured satin for a doublet and hose at 14s. a yard, plus 5s. 4d. worth of taffeta for the lining and facings. For his cloak, however, he bought woollen cloth: 3¼ yards at 11s. a yard, together with 36 buttons to decorate both doublet and cloak. Another landowner (in 1612) bought 3¾ yards of velvet to make "venetians" (fashionable wide knee-breeches). In 1620, an Exeter alderman possessed a substantial wardrobe: three satin suits, eight gowns, twelve cloaks, two tippets and a muff [a luxury item, made of satin on velvet, decorated and embroidered]; he also had a head-brush⁹⁵.

In the mid-seventeenth century, James Master, a country gentleman of Kent, bought brown cloth for a suit at 15s. a yard and "Spanish" cloth for a cloak at 23s. a yard. A short cloak took 3¼ yards but he also had made a long stuff cloak which took 8¼ yards of the material. He purchased 3 yards of "watchet" [light blue-green] satin for a waistcoat at 11s. a yard. On other occasions, he bought 2¾ yards of scarlet mohair at 6s. a yard, and 3¾ yards of shalloon serge [double twilled worsted] at the same price. A Hereford merchant bought 10 yards of black silk mohair at 5s. 6d. a yard in 1642. In 1675, a gentry family's account-book recorded the purchase of 5 yards of Lyon mantua at 4s. a yard, while in 1696, another country gentleman paid 36s. for 4.1/8 yards of silk mantua to line his waistcoat. Holland for his shirts cost James Master 3s. a yard, but the holland for his kerchiefs cost more than twice as much: 7s. an ell and 9s. for 1¼ ells (each length made 6 kerchiefs)⁹⁶.

Buttons to decorate the kerchief cost 2d. each [a button was attached by a string to one corner] — His footboy, however, got the very cheap domestic linen

— scotch cloth — for his six kerchiefs, which took $1\frac{1}{4}$ yards. — Master also bought 18 “rich gold and silver flat buttons for my scarlet cloake”, paying 25s. 6d. for the lot, and he paid 3s. 6d for “21 yards of ribbon to trim my sute”. The tailoring of a greatcoat and a satin waistcoat cost him 35sh., while the making of a “gray riding cloak” and a “sad colour[dark] cloath sute” came to £3-15-0. In the 1650’s, Sir Miles Stapleton owned a satin suit and cloak trimmed with 36 yards of silver ribbon. He paid 3s. for buttons to decorate Lady Stapleton’s kerchiefs, while “two fine large new-fashioned holland aprons” set him back 38s⁹⁷.

Beaver hats were available from the beginning of the seventeenth century; they cost around £3-£4. A country gentleman around this time owned a black beaver hat with a gold band, for which he paid 64sh. Such hats were known as castors. Demi-castors were also available, made of a mixture of beaver and rabbit fur. James Master of Kent owned a “French castor with band” which cost a suspiciously low £1-12-6 in 1648. A demi-castor which was reported stolen at Essex Quarter Sessions in 1645 was valued at only 1sh. Felt hats, in the early part of the century, could range from 4sh. (for a “Dutch” felt) to 16s. Hats were also made of “shag” — usually a coarse, hairy worsted but coarse hair or silk on occasion. In the later 1640’s, James Master paid 6s. for a shag hat and band, but a “Shagge French hat with ribbons”, (!!) cost twice as much. A “fine straw hat” with a lined brim was priced at 34s. by a Sussex haberdasher in 1632. Hats were also made of silk or velvet, lined with taffeta or velvet, and they had buckram stiffening. They were trimmed in a variety of ways: with crewel, silk or ribbon bands or cords; ribbon loops; feathers or rows of decorative buttons. Hatbands could be of copper, silver or gold. To “new-dye” a hat cost 1s. Caps, including night caps, were embroidered and made from fine cloth, linen, silk, velvet or brocade. Gloves were mostly leather, but worsted and silk gloves are also mentioned. James Master paid 3s. 3d. each for two pairs of “cordovan [Spanish leather] double seamed” gloves (in 1646)⁹⁸.

Although knitted stockings were used increasingly from the mid-sixteenth century onwards, cloth or half-knitted stockings were still made for rough wear, from various fabrics: canvas, buckram, linen, kersey, worsted, serge, jersey. Pepys, in 1661, wore a pair of half-cloth black stockings. Silk stockings remained an opulent luxury to the early seventeenth century; their output then increased sufficiently to bring them into middle-income wardrobes. In 1589, an Exeter merchant left two pairs of woollen stockings. At the beginning of the seventeenth century, a land-owning gentleman paid 25s. for a pair of silk stockings. In 1620, an Exeter alderman owned six pairs of silk stockings, “both good and bad”, besides silk garters. James Master of Kent paid 6s. 6d. for a pair of worsted stockings, 9s. 6d. for a half-silk pair and 19sh. for a pair made

of “greene silk” in 1647. Garters to hold up the stockings were decorative and expensive and could often cost £1 or more a pair. They were made of ribbon or net, taffeta, silk, cloth or silver or gold and often had spangles or gold fringes or braid. Cheaper varieties were also available: a Sussex haberdasher in 1632 had gold and silver garters at 2s. a pair but worsted garters cost 7s. 11d. the pair⁹⁹.

“Stirrup hose” or “boot hose” and socks were worn over stockings when riding, for protection. James Master bought two pairs of “anle worsted socks” for 1s. 7d. each in 1646. In 1661, Sir Miles Stapleton paid 15s. for a pair of new woollen riding stockings and a further 2s. 6d. for a girdle and six points to tie them up. Boot-hose “tops” were visible over the boots and so were attached separately to the hose. These “tops” were decorative and usually cost more than the hose themselves. James Master paid at various times in the late 1640’s and 1650’s: 3s. 6d. for a pair of black “topps” with gold and silver fringe; 4s. for scarlet serge tops; 5s. for “white riding tops” and 6s. for the red serge variety. He bought two “great” pairs of plain tops for 5s. 6d. each; two “little” pairs cost 3s. each. Two yards of lace for tops cost 5s. 6d. a yard on one occasion but 11s. 6d. a yard on another. Sir Miles Stapleton paid on 1s. for a pair of thread boot-hose but their tops were made of “new silk” and cost 7s. 6d.¹⁰⁰.

A variety of shoes, boots and overshoes were worn in the seventeenth century. An Oxford undergraduate, in his three years there between 1619 and 1622, bought three pairs of boots at 7s to 8s. 6d. a pair; four pairs of shoes at 1sh. each, and fifteen pairs at between 2s. 4d. to 2s. 8d. He also bought a pair of “pantofles”. Various items were repaired on nine occasions. In comparison, his garters cost him 7s.-8s. and his stockings, 6s. 6d.-7s. Again, his shoes appear to have been relatively inexpensive in comparison to other clothing items. James Master (in the later 1640’s) paid 12s. for a pair of “dark-coloured boots”, 15s. for white Spanish leather boots and 16s. for a pair of boots with “golosches” [overshoes]. Sir Miles Stapleton bought Spanish leather shoes with “galloatives” [overshoes] on two occasions, at a cost of 7s. and then 8s. 2d. (in the later seventeenth century)¹⁰¹.

FOOTNOTES CHAPTER 7

1. E.A. Wrigley, “Urban growth and agricultural change: England and the Continent in the early modern period”, in R.I. Rotberg and T.K. Rabb (eds.) *Population and Economy: From the Traditional to the Modern Worlds* (Cambridge University Press, 1986), Tables 3, 4; E.A. Wrigley and R.S. Schofield, *The Population History of England, 1541-1871* (Cambridge: Cambridge University Press, paperback ed, 1989) Table A3.3.

2. This paragraph and those following, on foodstuffs, are based on: Alan Everitt, "Farm Labourers", Ch.VII in Joan Thirsk (ed) *Agrarian History of England and Wales, Vol IV: 1500-1640* (Cambridge University Press 1967) pp.416, 417, 450-53; Joan Thirsk, "Farming Techniques", Ch.III in *ibid.*, pp.175, 177, 185-88, 192-197; J.A. Chartres, *Internal Trade in England, 1500-1700* (Macmillan 1977) pp.20-23, 25-27, 35-36; J.A. Sharpe, *Early Modern England: A Social History, 1550-1760* (Edward Arnold, corr. ed., 1988) p.50; Carole Shammas, "Food expenditures and economic well-being in early modern England," *J. Econ. Hist.* 43(1983) pp.97-99; D.M. Palliser, *The Age of Elizabeth, 1547-1603* (Longman, 2nd ed. 1992) pp.7, 133; *idem*, "Civic mentality and the environment in Tudor York", in Jonathan Barry (ed) *The Tudor and Stuart Town: A Reader, 1530-1688* (Longman 1990) pp.216-218; John Patten, "Urban occupations in pre-industrial England", *Trans.Inst. Brit. Geographers* new ser.2 (1977) pp.304, 305; *idem*, *English Towns, 1500-1700* (Folkestone: Dawson Books 1978) p.186.
3. J.A. Chartres, *Internal Trade in England*, p.18.
4. T.S. Willan, *The Inland Trade* (Manchester University Press 1976) pp.52, 61, 66, 81, 93; J.F. Pound, *Tudor and Stuart Norwich* (Chichester: Phillimore 1988) pp.56-57; Margaret Spufford, *The Great Reclothing of Rural England* (Hambledon Press 1984) p.66.
5. Andrew Appleby, *Famine in Tudor and Stuart England* (Stanford University Press 1978) pp. 43-47; J. Thirsk, *AHEW, IV: 1500-1640*, p.192.
6. This, and the following two paragraphs are based on: Peter Clark, *The English Alehouse: A Social History 1200-1830* (Longman 1983), pp.95-104, 106, 111; J. Thirsk, *AHEW, IV: 1500-1640*, p.196; Alan Everitt, *ibid.*, p.453.
7. Clark, p.111.
8. This paragraph and those following, on sugar, are based on: C.G.A. Clay, *Economic Expansion and Social Change: England, 1500-1700* (Cambridge University Press 1984) II, 111, 122, 128, 168-69; D.A. Farnie, "The commercial empire of the Atlantic, 1607-1783", *Econ.Hist.Rev.* sec.ser. 15(1962) pp.209, 210; Ralph Davis, *A Commercial Revolution: English Overseas Trade in the Seventeenth and Eighteenth Centuries* (Historical Association, 1967)p.11; *idem*, "English foreign trade, 1660-1700" in W.E. Minchinton (ed) *The Growth of English Overseas Trade in the Seventeenth and Eighteenth Centuries* (Methuen 1969) pp.81-82; *idem*, *English Overseas Trade, 1500-1700* (Macmillan 1973) pp.35-36; J.F. Pound, *Tudor and Stuart Norwich*, pp.56-57; T.S. Willan, *Inland Trade*, pp.35, 55, 61, 143.
9. C. Clay, *Economic Expansion...*, II, 124, 169; R. Davis, "English foreign trade, 1660-1700", p.96.
10. This paragraph and those following, on tobacco, are based on: C. Clay, *Economic Expansion...*, II, 137-38, Tables XVII, XIX, 168; R. Davis, *A Commercial Revolution...*, p.10; *idem*, "English foreign trade, 1660-1700", pp.80-81, 87-88; *idem*, *English Overseas Trade*, pp.34-35; D.A. Farnie, "Commercial empire...", p.208; P. Clark, *English Alehouse* pp.85, 125, 134-35, 138; T.S. Willan, *Inland Trade*, pp.78, 81, 82-83, 93, 137; J. Paten, "Urban occupations...", p.305.
11. This paragraph and those following, on fruit and spice imports, are based on: C. Clay, *Economic Expansion...*, II, 124, Table XVII; T.S. Willan, *Inland Trade* pp.20, 30, 36-39, 52, 55, 61, 66, 80, 81; Andrew Appleby, "Diet in sixteenth-century England" in Charles Webster (ed) *Health, Medicine and Mortality in the Sixteenth Century* (Cambridge University Press 1979), p.100; J.F. Pound, *Tudor and Stuart Norwich*, pp.56-57; W.G. Hoskins, "The Elizabethan merchants of Exeter" in P. Clark (ed) *The Early Modern Town* (Longman 1976) pp.153-54; Joyce Youings, *Sixteenth*

- Century England* (Penguin 1984), p.96; M. Spufford, *Great Reclothing*, pp.62, 64, 66, 178, 179; J. Patten, "Urban occupations...", p.305.
12. This paragraph and those following, on upper-class food consumption, is based on: D.M. Palliser, *The Age of Elizabeth*, p.133; *idem*, "Civic mentality...", p.217; A. Appleby, "Diet in sixteenth century England", pp.98-100; J. Thirsk, *AHEW IV: 1500-1660*, p.196; *idem*, *Economic Policy and Projects* (Oxford: Clarendon Press 1978) pp.106-107.
 13. This paragraph is based on Clay, II, p.124 and Tables XVI, XVII.
 14. Information taken from: Muriel St. Clair Byrne (ed) *The Lisle Letters*, 6 vols (Chicago: University of Chicago Press, 1981), Index, S.V. "Food and household supplies".
 15. Verity Isitt, *Take A Buttock of Beefe* (Southampton: Ashford Press 1987).
 16. A. Appleby, "Diet in sixteenth-century England", p.98.
 17. D.M. Palliser, *The Age of Elizabeth*, p.7.
 18. J.A. Chartres, *Internal Trade in England*, p.19 (quote); p.18 (Chancery suits).
 19. Calculated from E.A. Wrigley, "Urban growth and agricultural change...", Tables 3,4.
 20. A. Everitt, *AHEW, IV: 1500-1660*, pp.451, 583, 584.
 21. P. Clark, *English Alehouse*, pp.100, 101.
 22. This paragraph and those following, on the continuance of payments and transfers in kind, and on specific responses to a fall in grain production, are based on: John Walter, "The social economy of dearth in early modern England", in John Walter and Roger Schofield (eds) *Famine, Disease and the Social Order in Early Modern Society* (Cambridge University Press 1989) pp. 77-78, 91-92, 96-106, 114, 116, 118-120, 127n.
 23. J. Walter, "The social economy of dearth....", pp. 77-78, 123-124.
 24. The information in this and the following paragraph is based on: E.A. Wrigley and R.S. Schofield, *The Population History of England, 1541-1871* (Cambridge University Press, paperback ed, 1989) pp.664-667, 670-679, Table A10.5.
 25. R.B. Outhwaite, *Dearth, Public Policy and Social Disturbance in England, 1550-1800* (Macmillan 1991) p.30.
 26. E.A. Wrigley and R.S. Schofield, *Population History of England*, pp.399., 672-678.
 27. Calculated from E.A. Wrigley, "Urban growth and agricultural change....", Tables 3, 4.
 28. J. Walter, "The social economy of dearth....": Walter uses these phrases a number of times on pp.96-98, 101, 103.
 29. J. Walter, "The social economy of dearth....", p.123.
 30. R.B. Outhwaite, *Dearth, Public Policy*pp. 24-25.
 31. A. Everitt, *AHEW, IV: 1500-1640*, p.451.
 32. E.A. Wrigley and R.S. Schofield, *Population History of England*, p.313.
 33. R.B. Outhwaite, *Dearth, Public Policy*....., pp.32-34, Quotes from p.33.
 34. Calculated from: E.A. Wrigley, "Urban growth and agricultural change...", Tables 3, 4; Wrigley and Schofield, *Population History*, Table A3.3.
 35. Irfan Habib, *The Agrarian System of Mughal India* (London and Bombay: Asia Publishing House, 1963) pp. 100-110. Quote from p.107. For the "moderate scarcity", see p.105fn.35.
 36. I. Habib, *Agrarian System*, pp.100-110; W.H. Moreland, *From Akbar to Aurangzeb: A Study in Indian Economic History* (Macmillan 1921; repr. Delhi: Oriental Books,

- 1972), Ch.7. Both Habib and Moreland rely on contemporaneous reports by European merchants resident in India, as well as by Mughal officials.
37. Calculated from: E.A. Wrigley, "Urban growth....", Tables 3, 4: Kingsley Davis, *The Population of India and Pakistan* (1951; reiss. New York: Russell and Russell 1968), p.15, Table 17.
 38. Philip D. Curtin, "Nutrition in African History", in T.K. Rabb and R.I. Rothberg (ed) *Hunger and History* (Cambridge University Press 1983) pp.181-183.
 39. Tapan Raychaudhuri, "British Rule in India: an Assessment", ch.15 in P.J. Marshall (ed) *Cambridge Illustrated History of the British Empire* (London: Book Club Associates, 1996) p.361.
 40. Quotation from Raychaudhuri, *loc.cit.* For Murshidabad, see Mark Bence-Jones, *Clive of India* (London: Book Club Associates, 1974) pp.88-89 and esp. pp.102-103. The full quotation from Clive reads: "The city of Murshidabad is as extensive, populous and rich as the city of London, with this difference, that there are individuals in the first possessing infinitely greater property than any in the last city". (As quoted in Bence-Jones, p.145.) The alternative descriptions of Murshidabad, for 1759, refers to narrow streets and huts, but also to palaces, temples and mosques on the riverside. (Bence-Jones, *loc.cit.*) For the effect of periodic famines on the cost and availability of cloth in seventeenth and eighteenth century India, see K.N. Chaudhuri, *The Trading World of Asia and the English East India Company, 1660-1760* (Cambridge University Press 1978) pp.252, 265-70.
 41. Joan Thirsk, *Economic Policy and Projects: The Development of a Consumer Society in Early Modern England* (Oxford: Clarendon Press, 1978) p. 79n.
 42. D.M. Palliser, *The Age of Elizabeth, 1547-1603* (London: Longman, 2nd ed., 1992), p. 134.
 43. Alan Everitt, "Farm Labourers", Ch. VII in Joan Thirsk (ed) *The Agrarian History of England and Wales, Vol. IV: 1500-1640* (Cambridge University Press, 1967) pp. 437, 449-50.
 44. J.F. Pound, *Tudor and Stuart Norwich* (Chichester: Phillimore, 1988) pp. 134, 137-38.
 45. This paragraph is based on: Margaret Spufford, *The Great Re-clothing of Rural England* (London: Hambledon Press 1984) pp. 154-55, 158-59, 167-68, 172-76.
 46. Victor Skipp, "Economic and Social Change in the Forest of Arden, 1530-1649" in Joan Thirsk (ed) *Land, Church and People* (Reading: British Agricultural History Society 1970) Table X. There is an unfortunate error in this table. The average value of gold and silver in *all* inventories for 1610-49 should be 5 *shillings*, not £5. All the other average values are consistent with the figures given.
 47. Carole Shammas, *The Pre-Industrial Consumer in England and America* (Oxford: Clarendon Press 1990) Tables 4.5, 4.6.
 48. Shammas, Table 4.8.
 49. Everitt, p. 450; also see below (for woollens).
 50. The information on sumptuary legislation comes from: N.B. Harte, "State control of dress and social change in pre-industrial England" in D.C. Coleman and A.H. John (eds) *Trade, Government and Economy in Pre-industrial England* (London: Weidenfeld and Nicolson, 1976). For the statutes and proclamations mentioned, see p. 135.
 51. Harte, pp. 142-43; also p. 137.
 52. Spufford, pp. 125-126 and inventories; and pp. 128-29, 182, 151, 154, 164.

53. Everitt, p. 450; Pound, p. 138; Spufford, pp. 158, 176, 155, 168, 125-26; Victor Skipp, *Crisis and Development: An Ecological Case Study of the Forest of Arden, 1570-1674* (C.U.P. 1978) p. 70.
54. Spufford, p. 136; Thirsk, p. 176.
55. John Patten, "Changing occupational structures in the East Anglian countryside, 1500-1700", in H.S.A. Fox and R.A. Butlin (eds) *Change in the Countryside* (London: Institute of British Geographers, 1979) p. 111.
56. Everitt, p. 448.
57. Shamma, p. 270.
58. Patten, p. 113.
59. Thirsk, p. 119fn.
60. Shamma, pp. 200-201.
61. Spufford, pp. 107-109, 110-113, 118-122.
62. Shamma, p. 201.
63. Spufford, pp. 122-123. For equipment left by tailors (but no goods) see T.S. Willan, *The Inland Trade* (Manchester University Press 1976), p. 56.
64. This and the following paragraph, on textile types and uses, are based on: Eric Kerridge, *Textile Manufactures in Early Modern England* (Manchester University Press 1986), chaps. 1-9. Some specific points only: disappearance of old types: pp. 28-33, 39, 42-43; new types that failed: pp. 26, 28-29, 57-58, 72-83. A new type which did badly: p. 50. Mixed yarns: pp. 67, 76.
65. Rural labourers: Everitt, p. 450; special fabric for smocks: Kerridge, p. 23; frieze: C. Willett and Phillis Cunnington, *Handbook of English Costume in the Sixteenth Century* (London: Faber and Faber, 2nd ed 1970) p. 31; Husee: Muriel St. Clair Byrne (ed), *The Lisle Letters*, 6 vols (University of Chicago Press 1981), no. 1206; fashionable pedlar: C.W. Cunnington, "Costume" in Ralph Edwards *et al.*, *The Tudor Period, 1500-1603* (London: The Connoisseur, 1956) p. 123. Leather clothing: Palliser, p. 134; John Waterer, "Leather" in Edwards *et al.*, *The Tudor Period*, p. 154; Willan, p. 57. Stable boy: C. Willett and Phillis Cunnington, *Handbook of English Costume in the Seventeenth Century* (London: Faber, 3rd ed, 1972) p. 54.
66. Rural Labourers: Everitt, p. 450; woollen "rail": Cunningtons, *Handbook... Sixteenth Century*, pp. 67-68; Husee: Byrne, *Lisle Letters*, nos. 389, 497, 1205, 1206; noble household of 1632: C.W. Cunnington, "Costume" in Ralph Edwards *et al.*, *The Stuart Period, 1603-1714* (London: The Connoisseur, 1957) p. 138.
67. Cunningtons, *Handbook... Sixteenth Century*, p. 185.
68. The and the following paragraphs on varieties of cloth carried by shops and chapmen, are based on: Willan, pp. 61, 65; Spufford, pp. 172-75, 158-59, 182-84, 186-90, 161-62, 163, 190-93, 165-66, 21.
69. For example, longcloth was usually used for petticoats: it was thickish, rough in finish and only came in a dull white. To make petticoats out of poplin was considered somewhat luxurious; it was a lighter, more expensive type of cotton fabric, with a smooth, shiny finish. It came in several colours and could also be used for shirts.
70. Quite separate and distinct from all this, is the knowledge of traditional hand-woven fabrics, which is inseparable from the kinds of traditional garments worn in India. Saris are now mill-woven, but the majority are hand-woven, in cotton or silk, in a vast range of weaves, patterns and colours, distinctive to each region. Similarly, certain kinds of traditional garments for men, which consist of a length of fabric wrapped differently (from the waist down) according to region, are still hand-woven [*dhori, lungi, mundu*].

71. Thirsk, p. 48; Spufford, pp. 104, 113, 118, 121, 122.
72. Information on thread from Thirsk, pp. 106, 121, 114; also Spufford, pp. 52, 58, 66, 92, 152, 158, 166, 174, 175, 179, 185, 189, 193; and Willan, p. 66.
73. Thirsk, pp. 13-14, 183, 121, 50; Spufford, Ch. 6., *passim*, esp. p. 92 and pp. 21, 64, 66, 153, 185, 189.
74. Patten, Table II.
75. J.F. Patten, *English Towns, 1500-1700* (Folkestone, Kent: Dawson, 1978) pp. 254, 283.
76. Pound, Tables 1.1, 1.3
77. Pound, Tables 5.6, 5.17, 5.12, 5.16 (clothing group and percentage of tailors in group); Table 3.1 and p. 30 (Norwich population).
78. The following information is from: Spufford, pp. 94, 152-53, 185, 184-85, 187, 188, 189, 166; Willan, p. 66. Information on imports from Thirsk, pp. 183, 184 (inkle, thread points).
79. Information on pins is collated from: Thirsk, pp. 78-81, 182; Spufford, pp. 21, 92, 94, 98, 175, 193.
80. Information on buttons from Thirsk, pp. 14, 182, 121; Spufford, pp. 185, 189, 98, 174, 92, 83; Willan, p. 66. For hooks and eyes see Cunningtons, *Handbook Sixteenth Century*, p. 90.
81. The following paragraph is based on: Thirsk, pp. 14, 183, 44, 136, 176, 121, 113-114, 131-32; Spufford, pp. 175, 158, 184, 186-188, 152, 153, 166; Willan, p. 66.
82. The following is based on: Spufford, pp. 21, 52, 70, 133, (Shetland gloves), 152-53, 154, 163, 165, 175, 184-85, 188-89, 193; Thirsk, pp. 120, 121; Waterer, p. 155, Willan, p. 78.
83. Spufford, p. 174 (hats); Thirsk, pp. 14, 121 (silk hats), 176 (Gregory King), 183 (import figures); Willan, p. 61 (hats) Exeter hatters Cunningtons, *Handbook...Sixteenth Century* p.
84. This paragraph is based on: Thirsk, pp. 5-6, 44-45, 113, 126, 167-68; *idem*, "The fantastical folly of fashion: the English stocking-knitting industry, 1500-1700", in N.B. Harte and K.G. Ponting (eds) *Textile History and Economic History* (Manchester University Press 1973). Also see Cunnington, *Handbook, seventeenth century*, p. 61; also pp. 51-56, 58-60, 62-66, 71.
85. This paragraph is based on: Thirsk, *Economic Policy and Projects*, pp. 106, 104, 113, 125; *idem*, "Fantastical folly...", pp. 52, 57-59; Spufford, pp. 110, 102.
86. Price Information from: Thirsk, "Fantastical Folly...", pp. 56-57, 59, 66; *idem*, *Economic Policy and Projects*, p. 113; Spufford, pp. 102, 166.
87. This paragraph is based on: Willan, pp. 56-57, 78-79; Palliser, p. 34; Waterer, pp. 154-55; L.A. Clarkson, "The organisation of the English leather industry in the late sixteenth and seventeenth centuries", *Econ. Hist. Rev.*, 13 (1960-61) p. 252.
88. This paragraph is based on: Patten, "Changing occupational structures...", Tables II, III and p. 112; *idem*, *English Towns, 1500-1700*, pp. 153-54, 252, 254, 258-59, 283; Clarkson, pp. 521, 253; Waterer, p. 152; Pound, Tables 1.1, 1.3, 5.5, 5.6, 5.12, 5.17, 5.18 and p. 180.
89. This paragraph is based on: Spufford, pp. 21, 66, 92, 98, 152-54, 174, 184, 185, 188, 189.
90. Spufford, pp. 123-25, 163, 193.
91. Cunnington, "Costume" in Edwards et al, *The Stuart Period*, p. 138.
92. *Ibid*, pp. 135 (quote), 139.

93. *Lisle Letters*, nos. 387, 389, 1205, 1206.
94. Cunningham, "Costume" in Edwards et al., *The Tudor Period...*, pp. 122-23.
95. Cunningham, *Handbook...Seventeenth Century*, pp. 18, 47; *idem*, "Costume" in Edwards et al. *The Stuart Period*, p. 138.
96. Cunningham, *loc. cit.*; *idem*, *Handbook...Seventeenth Century*, pp. 145, 24, 203, 205, 77, 167.
97. Cunningham, *Handbook...Seventeenth Century*, pp. 77, 29, 52, 152, 191.
98. Cunningham, "Costume" in Edwards et al., *The Stuart Period...*, p. 138, *idem*, *Handbook...Seventeenth Century*, pp. 67, 69, 70, 76.
99. Cunningham, "Costume" in Edwards et al., *The Tudor Period...*, p. 122, *idem*, "Costume" in Edwards et al., *The Stuart Period...*, p. 138, *idem*, *Handbook...Seventeenth Century*, pp. 61, 63, 64, 160 (Pepys).
100. , pp. 160, 161, 64, 65.
101. *Ibid*, pp. 56, 59, 60, 156, 158, Willan, *Inland Trade*, pp. 56-57.

CHAPTER 8

The Consumption Stage: Beyond The Basics

Household Furnishings (to continue with the consumption stage)

These two centuries saw a substantial growth in the quantity and range of household furnishings. At first the quantities produced and imported sufficed only for the upper and middle-income groups; then, from the late sixteenth century onwards, the quantities increased to the point where all income groups could obtain a very wide selection of soft furnishings. As mentioned above, Kerridge covers a number of furnishing and household textiles in his discussion. These fabrics were variously woollen, linen, hemp, or a mixture of linen and hemp. In the late seventeenth century, linen-cotton mixtures were added. These were textiles to be used in food preparation (sieves, strainers, butter-muslin, cheesecloth) and in cleaning (mops, floor cloths). A range of bedding and bed-linen were produced: mattress-covers, bolsters, pillows; sheets, blankets, bedcovers, bed-hangings. Other products included window-curtains (including roller blinds), cupboard cloths, tapestries, cushions, upholstery, and “carpets” (actually put on furniture)¹. Indeed, as Joan Thirsk puts it,

“By the end of the seventeenth century people had a choice of so many different qualities of linen for domestic use and personal wear, that it was impossible to count them...”²

Contemporaneous observers certainly noted an increase in soft furnishings. In Essex, William Harrison contrasted the late 1570’s (when he wrote) with the earlier part of the century: People then had only rough straw pallets. Sheet and bedcovers were made of various coarse, shaggy materials; a “good round log” served for a head-rest. Servants slept straight on the pallet with

no sheet; consequently, the straws stuck into and chafed their skin. A flock mattress, acquired after many years, with “a sack of chaff” at the head signified improved living; feather beds were only for the wealthy, and only women in childbirth had pillows. But now in the late sixteenth century it was not just noblemen, gentry and merchants who far exceeded their forebears in this respect — even ordinary farmers did so: The latter now had “three or four feather beds” with bolsters, pillows, fine bed-hangings, coverlets, tapestries, table-carpet and table-linen³. Similarly, Richard Carew recalled that in Cornwall in the mid-sixteenth century, people slept on “straw and a blanket”, linen sheets were hardly known⁴.

By the late sixteenth century, not only linen sheets but decorative furnishings had reached well down the social and material scale, as seen in some inventories from the Cambridgeshire fens. In 1589, a testator left just 13 shillings in cash, but he also distributed two pairs of sheets, a pillow and another sheet amongst his three sons. In 1591, a labourer disposed of flaxen sheets in his will. In 1594, in a husbandman’s will, each child received three or four pairs of sheets; his wife got the painted cloths⁵.

Window-curtains began appearing in a very few inventories in the last sixteenth century, but they spread unevenly. Just under 1½ percent of a sample Suffolk inventories listed them between 1570 and 1599. A Warwickshire wool-man left three tablecloths, eight napkins, painted cloths and window-curtains in 1592. In the late seventeenth century, they were still very rare in Cambridgeshire but the Suffolk proportion had risen to 13.4 percent⁶.

In the Forest of Arden in the inventories of small-to-middling farmers and craftsmen, there was an average of three linen sheets, one tablecloth and one napkin in the period 1530-69. This implies that many inventories had no tablecloths or napkins. But in the years 1610-49, there were, on average, six linen sheets, two tablecloths and as many as ten napkins. This implies that practically all inventories had a tablecloth and that the number of napkins had jumped substantially⁷.

Turning now to the inventories from both rural and urban areas in Oxfordshire in the late sixteenth century and in south Worcestershire a century later: the total value of bed and table linen left, on average at current prices, went from £1-8-0 to £2-6-0. In absolute terms this meant an increase of just over 64 percent, but as a proportion of all consumer goods, it fell from just under 15 to just under 8 percent. In four East End parishes in London, the average value of household linen came to £2-2-0 (in the years 1661-64) or just under 9 percent of the value of consumer goods left. Again, price evidence clearly suggests that quantities of linen rose sharply; other evidence definitely points in the same

direction. The price quotations are from the same shopkeepers' inventories as before; five very different types of linen are included. The prices of four types fell over this period, with the declines ranging from 15.1 to 55.6 percent. The remaining linen fabric rose in price by some 38 percent. Two new types of linen were added, at the cheapest end of the scale, in the early seventeenth century. By the end of the century, their prices had fallen by 15.3 and 16.1 percent respectively. Again all these varieties represent only a fraction of the kinds available in the period. But given the geographical diversity of the price information, the same inference as before seems plausible: the prices of significant types of linen fell. In conjunction with the increased value of all household linen at current prices, in the Oxfordshire and south Worcestershire inventories (above), the definite inference is that quantities rose substantially.

A further piece of evidence is that the value of household linen was correlated with household size, not with wealth. The inference is that such linen was cheap enough to be purchased as needed. This in turn implies that it was produced in the substantial quantities required to keep prices so low. We do not know, of course, exactly which types of linen were actually purchased by these testators; but all this information, taken together, points to a very large rise in quantities⁸.

Other pieces of evidence also point to a large growth of output during the seventeenth century. Thus in rural Suffolk, between the 1580s and the 1680s, the average inventory at the upper end of the scale increased 107 percent (from £55 to £114), while the value of linen left went from £1 16s to £3 18s, an increase of 117 percent. Consequently, the proportion remained virtually steady, going from 3.3 to 3.4 percent. But at the lowest end of the wealth spectrum, the change was dramatic. Average wealth rose 86 percent (from £7 to £13) while the value of linen increased 271 percent (from 7s to £1 6s); thus the proportion doubled, from 5 to 10 percent⁹. And elsewhere in the same century: in 1611, a relatively well-off farm labourer in Yorkshire's East Riding left domestic goods worth £18; they included painted cloths, six cushions, a carpet and bed linen. In 1612, a truly exceptional labourer from Hertfordshire (who also kept bees and cows), left 8 pairs of sheets, 4 towels, 4 tablecloths, 1 dozen napkins, 2 cupboard cloths and 3 cushions. In 1617, in Warwickshire, a labourer left goods worth £11, including sheets, napkins and a hand-towel¹⁰.

The chapmen's inventories mentioned earlier, show an increase in quantities of linen left, between the late sixteenth century and the first few years of the eighteenth. In 1588, in Buckinghamshire, the inventory included three pairs of sheets plus a carpet worth 2s.6d., while in 1596 in Norfolk the only linen left was a "payre of old course sheetes" worth 2s.8d. But in 1613, in Lincolnshire, the household goods included 9 pairs of sheets, 3 "pillowbeares", 6 napkins,

3 towels and “painted cloths”, the latter worth 2s. By 1703, in Canterbury, the linen was made up of 4 pairs of sheets, 6 pillow “coats”, 1 dozen napkins, 1 dozen towels, 1 dozen nappies and 6 shirts, all worth £2. An inventory of 1704 from Sittingbourne included 6 tablecloths, 3 dozen napkins and 12 pairs of pillowcases. Finally in 1707, in Canterbury, the linen consisted of 18 pairs of sheets (“good and bad”), 3 tablecloths, 2 dozen napkins “and other course Linnen”, all valued at £4 14s ¹¹.

Linen output appears to have accelerated in the later seventeenth century. In the course of the century more and more inventories from four parishes in northeast Warwickshire contained bed and window curtains (the latter in three different colours), cushions, and good quality sheets and tablecloths. But in the last two decades of the century, increasing quantities of better quality linen appeared in inventories near the bottom of the scale. In Cambridgeshire in the 1670s, linen formed a minimum of nine to ten percent of inventories across the board, from all wealth and social groups and practically all farming areas. Even labourers owned at least two sheets per bed — one had four pairs and two pairs of pillowcases, all worth the vast sum of £7; another had bed curtains. In four Shropshire parishes, inventories from the 1660s and 1670s mentioned, on average, three sheets per bed; this figure rose to five from the 1680s onwards ¹².

At the retail level, shops began stocking fabrics produced specifically for household purposes. In 1614, a Lincolnshire chapman’s inventory included 30 pairs of coarse linen sheets, 24 pairs of better-quality sheets, 21 “pillow-bears”, 6 tablecloths, 6 dozen napkins and a pair of linen curtains. By the end of the seventeenth century a wide range of linen and cotton fabrics were purchased routinely at the lowest income levels for a variety of furnishings — so much so, that guides were published to the types available and their uses. Indian cottons were used for bed-hangings, valances and window curtains; silk and cotton mixtures were also used for the latter. Sheets were made from a wide variety of linens (both imported and domestic); the toughest lasted up to 12 years, other types lasted half as long. “Ordinary sheets” (for servants and the poor) were made from hempcloth or from different sorts of brown linen; this last also provided the painted cloths that now decorated many walls. It was also used to pack goods and then re-used in the kitchen and household. Towels were made from hempcloth. By now, the materials for making up tablecloths and napkins were sold in sets, from the same fabrics, which were produced in different widths specifically for this purpose. Each set contained three lengths, to make up one tablecloth and two napkins; the prices and qualities ranged from 9d. a yard (for the cheapest napkin cloth) to 6s. a yard (for the best quality tablecloth material) ¹³.

Beds and Bedding

We now turn to the supplies of beds and bedding. The evidence for growth here is more diffused and indirect. In the Oxfordshire inventories already mentioned, beds and bedding (ie bedframe, mattress, pillows, curtains, blankets, coverlets) came to an average of £2 8s., or nearly 26 percent of the household total, in the years 1551-90. In south Worcestershire in 1669-70, the value of bed and bedding had risen nearly 2.9 times, to £6 18s.; the proportion fell slightly, to less than 24 percent. Similarly in the four parishes in east London referred to above: beds and bedding were worth, on average, £5 10s, or an increase of some 2.3 times; the proportion, however, declined to somewhat under 23 percent of the value of all household goods. (Once again, current prices were used in the absence of a satisfactory price index.)¹⁴

But as with household linen, the changes at the other end of the scale were striking. Between 1584 and 1675, in inventories from the lowest income groups in Norwich, the value of beds and bedding rose faster than other household goods. It was almost always the single most important item in these inventories: in 60 percent, the bedding came to between 30 and 60 percent of the value of all household goods. Up to 1600, in 86 percent of the inventories, it was worth less than £3. By 1675, this proportion had dropped to 55 percent, ie in nearly half the inventories, the bedding was worth £3 and upwards¹⁵. Some part of this undoubtedly reflects the general rise in prices, but since bedding also rose relative to other household items, the inference is that quantities were rising. Since ownership of better quality beds and bedding spread down the income scale, this inference seems justified.

In 1584, a low-income Norwich inventory (worth £5 19s. 3d.) included feather, trundle and transom beds. In another such inventory of 1595, the bedding came to only 4s. 8d, or just 17 percent of the total (£1 7s. 3d). But in 1618, a “lame and almost blind” man left goods worth £2 6s. 8d.; 43 percent consisted of his bedding. In 1638, an inventory consisting solely of old furniture worth just £1 5s., included an old bedstead with feather bed. A widow left a bed worth £3 3sh 6d, her other furniture was worth only about 7 shillings. A pointmaker’s bedding came to £2 5s 4d, his servant’s trundle bed was valued at only 2 shillings. The two together came to just under 54 percent of the value of all his goods¹⁶.

Elsewhere: a Cambridgeshire carpenter left £12 in cash, a feather bed and household linen in 1591. A Midlands tanner left a bed, a flock bed, a pillow, two bolsters, four blankets, a bedcover, a carpet and painted cloths, all worth £1 in 1592. In the Cambridgeshire fens, a husbandman left his widow “the” feather bed in 1594. He also owned another bed with at least two coverlets. A

Worcestershire husbandman of 1613, not well-off, had domestic goods worth only £3 5s. 2d., but they included three bedsteads (and some painted cloths). A cutler and part-time spinner in the Forest of Arden had only a “chaffebedde” in 1634, but it was furnished with feather pillow and bolster. An Essex farmer left furniture worth over £9 in 1638; £5 of that was the value of his “Joyned bedsted with all that belongeth to it”. And returning to the fens in 1675, a small farmer left a crop of grain and hay worth only £3 but he had a feather bed¹⁷.

Further down the scale: A Yorkshire farm labourer left a number of beds in 1611 (together with various household furnishings). In 1612, a Hertfordshire labourer left a bedstead worth £5, together with other beds. In 1617, a Warwickshire labourer owned a feather bed and an expensive joined bedstead (in an inventory worth £11). A labourer from a western county had a bedstead with pillow, feather bolsters, blankets and coverlet in 1634. And even a Cornish labourer in 1637, had a bedstead with an old coverlet in his very modest inventory (the domestic goods came to just 14s. 9d.). By the first part of the century, even living-in farm servants and harvest labourers slept better, at least in Hertfordshire: various farmers had separate chambers for them, one with two bedsteads, flock beds, blankets and bolsters; another had four beds and bedding, all worth £6; a third farmer provided two beds and a coffer¹⁸.

In the chapmen’s inventories already mentioned: in 1588 in Buckinghamshire, a chapman left a bedstead, a trundle bed, a feather bed, a blanket, bolster and pillow (his domestic inventory totalled £2 16s. 8d.). In 1613, a Lincolnshire chapman owned two “standbedds” and a trundle bed “with furniture” (ie bedding etc). A Lancashire chapman in 1680 had “a pair of bedstockes” worth 6sh. and a feather pillow worth 6d.; they came to 30 percent of the value of his household goods. In 1691, a Gloucestershire chapman had a “bedstead with appertenances” together with a tester bed, while a pair of blankets, a rug and two pillows all came to 18s. In Canterbury in 1703, a chapman left a flock bed worth £1 and a bedstead with curtains and blankets (in the “best chamber”). In 1704 a chapman in Sittingbourne, much better off, owned three bedsteads, three feather beds, two flock beds, four feather pillows, one flock pillow, a feather and a flock bolster, nine blankets (two old), one rug, two coverlets (one old), and a pair of bed curtains. And in 1707 in Canterbury, a chapman owned two bedsteads with curtains and valances, a feather bed, two flock beds, three bolsters, three blankets, two rugs, one coverlet, two old pillows and a “halfe headbedstead”, all worth £4 1s., or just over 22 percent of his household goods (by value)¹⁹.

Furniture

The sixteenth and seventeenth centuries saw definite and distinct improvements in the quality of furniture, together with increases in the range and quantity. Up to about the middle of the sixteenth century, only a very few types are found, whatever the income level, but varieties increased markedly during the later seventeenth century. To appreciate the significance of items mentioned in inventories, it is necessary first to see what the quality improvement consisted in.

During the sixteenth century, at all social and material levels, furniture included mainly such things as benches, often fixed to the wall, forms, settles, stools, chests (large and small), and “cupboards” — open shelves for display and storage, with or without enclosed portions. Trestle tables were used extensively, though other types were also made. Chairs (wooden with open arms) were relatively few, compared with other types of seating, as were larger enclosed “presses” compared with chests, at even the highest levels ²⁰.

In the early sixteenth century, carpenters made many of these items. In addition, turners made stools and then chairs (the latter from at least the late fifteenth century onward). As items made by turners required both more skill and appropriate tools, they were of better quality. Turned stools were lighter and so more portable, while turned chairs were found in lower income houses throughout the sixteenth century. From its beginning, joiners increasingly produced furniture, but not alone: turners and carvers also participated in the process. Joined furniture grew in quantity from the middle of the century onwards, particularly at middle and upper income levels. Joinery involved much more sophisticated techniques, so a given input not only produced more output, it was far better in quality, with less cracking and warping. Thus while furniture became lighter, it remained strong and stable. Joiners’ products are distinguished as such in inventories; the range increased gradually from mid-century onwards, going from bedsteads, tables, chairs and stools to forms, presses and “cupboards” (open shelves) ²¹.

At the upper end of the scale, “framed” tables (with fixed tops) were first produced; then “draw” tables (with leaves) were added in the mid-sixteenth century. Small tables with oval, round, polygonal or octagonal tops also appeared. Still at this end, the cofferer covered chairs with leather or other materials, later upholsterers began to insert studding between frame and outer covering, thus adding another item to their output of bed-hangings and mattresses. By the later sixteenth century, cushions were built into chair seats, while upholstered stools had reached the merchant classes. Up to 1550, forms were occasionally produced in pairs or sets to go with dining

tables; after mid-century, this became more frequent. From the same time, light “court cupboards” were produced. They could be disassembled easily, into at least two sections, and had a standard three shelves from around 1575 — such standardisation is an indirect indication of the quantities produced. By the end of the century, they were common amongst larger farmers. During the later sixteenth century, the carpenter’s three-legged stool (whose construction was virtually foolproof) was replaced increasingly by the joiner’s four-legged stool, which was produced in sufficient quantities to reach very far down the social and material scale. Occasionally, stools were produced in sets. At all income levels, chests (of various sizes) were used to store linen and clothing; they also held the valuables of the wealthy. Such coffer had locks and doubled as seats. In the kitchen, chests served to store food and materials (bread, flour, meal, etc). With joiners’ techniques, chests became much lighter, so they increased in number ²².

In the early part of the seventeenth century, joiners and carpenters diverged further and each became more specialised. Their respective product ranges were identified in 1632, in a court case: joiners produced what might be termed “quality” work, mostly (but not entirely) domestic: bedsteads, chairs, stools, tables, forms, chests, cupboards, presses, panelling, doors, desks, shipwindows, church pews, etc. Carpenters made heavier pieces for commercial use, such as tables for taverns, inns, chandlers’ shops, drapers’ shops, merchants’ offices and the like; carpenters also made “walking stools” and “boarded bedsteads, nailed together” ²³.

Furniture continued to develop in style and grow in quantity and quality through the seventeenth century. To quote one specialist, there was “complexity and variety of production throughout the period”. In general (but particularly later in the century) plain joined furniture (“wainscot”) increased in quantity, fell in price, and so was purchased at all levels. Certainly by the early years, “[j]oined chairs... evidently were owned by all but the poorest sections...”. At middle and lower income levels, they were relatively few and kept for the household head and guests. Also at this time, the single chair (without arms) with stuffed seat and back, and then the plain wooden chair with recess for seat cushion, began to be produced. Chairs became lighter over the century, as more were produced, ie as production capacity increased, so that replacements (and additions) could be supplied. Joined stools and benches were still used widely, especially for dining. They were now mostly made in sets; often they matched the dining table as well. Three-legged joined stools were also made. All these items became lighter, ie larger quantities were produced. The use of benches and forms gradually declined over the century. Trestle tables were still produced but in better-off households they were relegated to the side. Settles

continued in use at the lower end of the scale. From the start of the century presses or “close” cupboards were produced in sufficiently large quantities to be found in most households, at all levels, but joined chests were still made, also in very large quantities. Small hanging cupboards were made in the first half of the century, for storing food ²⁴.

At the upper end of the scale, greater variety and new types of furniture appeared through the century, but again especially after 1660. In the early years, sets of single chairs and of upholstered chairs were produced (the latter included armchairs with open arms). Gate-leg tables with one or two hinged flaps and tables with one or two side flaps also appeared for the first time. A huge range of gate-leg tables was made after 1660, as also more new and specialised items, such as chests of drawers, candlestands, dressing mirrors, pier glasses and “scrutoirs” (small desks with fall fronts and drawers); bureaux came in at the very end. New materials were used and new methods developed: veneering, japanning, marquetry, lacquer work, gesso. These techniques required not joiners but cabinet makers, ie more specialised skills and tools. Thus these years saw “the rapid development of the cabinet maker’s craft... within a generation...” Partly because of the development of such “new and useful pieces”, there was “[a]n appreciable increase in domestic comfort” — at all levels: plain joined chests of drawers were also produced, in addition to the veneered types ²⁵.

We now turn to inventories. Specialist students point out that even in the wealthiest households, the range, variety and quantity of furniture were relatively restricted up to the later sixteenth century, when all three began increasing. Thus when mid sixteenth century inventories are compared with those made around the end of that century, the latter

“show a greater variety of pieces, particularly cupboards and the adoption of new ideas like the table with drawing leaves, and a much greater number of chairs and stools”.

But this range is still very narrow in comparison with what came later: “surprisingly few varieties of domestic furniture existed in England at the beginning of the [seventeenth] century, even in the richest houses” ²⁶. But thereafter, in comparison with the first part of the seventeenth century, there was a massive acceleration in the later part.

Reversing our previous procedure, we now begin at the top with the Lisle inventory of 1540. Even at this level, stools were widely used for seating; there are relatively few chairs, and this remained so until the later seventeenth century. Nine chairs are listed (included two covered in crimson velvet and one of joinery). There are 18 joined stools, 6 other stools (in the parlour), about

a dozen upholstered or covered stools, some two dozen cushions, and a number of tapestries. All the fabrics involved are luxurious: velvet, satin, cloth of gold, embroidery work ²⁷. In addition there are chests of various sizes (mostly holding clothes), coffer (including small “trussing” — travelling — types), cupboards, trestles, forms, “field” bedsteads, “ceiled” bedsteads (with canopies), a wicker screen and one press, together with feather beds, pillows, and other bedding. In 1552 and 1556, inventories were made respectively, of Lord Paget’s town house in St Clement Danes and his seat in Drayton (Middlesex). The furniture included trestles, forms, chests, cupboards, a joined cupboard, one press, framed tables, joined tables, 54 joined stools, nine other stools, four joined chairs, one turned chair, other chairs, and five covered in velvet and/or embroidery. Joined bedsteads are distinguished from “plain” ones. In 1556, the furniture of Loseley House (home of Sir William More) included a large framed table, three small joined tables, nine joined stools, three joined chairs, joined cupboards, a joined bed, chests, coffer and wall benches ²⁸.

Lord Lumley, in 1590, owned extremely large numbers of valuable wall hangings; Turkey, silk and velvet carpets and coverings (to go on furniture); more than one hundred cushions (silk, velvet, cloth of gold); and 76 upholstered chairs and 80 upholstered stools, using the same fabrics. But apart from this “[t]he essential wooden furniture by comparison showed small variety ...” There were 17 joined chairs, 175 stools, 20 forms, 75 tables, 52 cupboards; gilt, inlaid and wainscot bedsteads, plus pallet and “livery” beds. In 1649, a writer’s recommendations for a country gentleman’s residence contained much the same items, but now with significant additions. Cane chairs, wall paneling, paintings, flower pots, decorative statues and mirrors and wine coolers were now included. Side tables were an alternative to court cupboards. Large tables now came in various shapes: square with draw-leaves; oval with falling leaves; long; round. Chairs and stools were all joined; they could be covered in leather, cloth or needlework ²⁹.

Further down the scale, the sixteenth and seventeenth centuries continue to present a contrast. Thus in the Forest of Arden up to 1560 inventories contained only a

“few meagre items of household equipment and almost valueless forms, stools, trestles and table boards... but from the first decade of the seventeenth century [...] joined tables and benches, turned chairs and bedsteads [begin] to appear in local inventories”.

Between 1530-69 and 1610-49, the average value of hard furniture (in these inventories) rose almost 4.3 times (from 15 to 64 shillings); as a proportion of all household goods it increased from just under 9 to slightly over 18 percent. The largest percentage increases in value were in the two *lowest*

income groups; the smallest percentage expansion came at the highest income level. In other words the largest increases in production were of mass-consumption items ³⁰.

Moving now to individual inventories: in 1592, a Midlands tanner owned a framed table, five stools and a wainscot bench along with some painted cloths, all worth 10s. A woolman in Warwickshire, the same year, had two of the rooms in his house furnished with tables, stools and benches. In 1603 in a wealthy household, while the inventory still distinguished plain forms ("not of joiner's work") from joined forms, the latter were now made for servants' use as well. In 1613, a husbandman in Worcestershire owned a framed table, two chairs, a form, a fixed bench, a coffer and a press, although his grain stock came to just £2. A Lancashire farmer in 1617 left a "joynt presse", a cypress chest worth £5, three "great chests" worth £2, and a table and forms worth £1. In 1638 in Essex, a farmer left furniture worth £2 18s. in all, including a "great" and a "little" joined table, a "great" joined chair, 10 stools, a form, a settle with three boxes inside and a cupboard. Another Essex farmer in the same year, left domestic goods totalling £9 2s. 8d.; they included a table, 3 "little" tables, 2 joined stools, 4 chairs, 4 cushions, 2 forms, a "bench bord", and a cupboard ³¹.

In the 1660's in Cambridgeshire: an extremely prosperous farmer owned a long table with 18 leather chairs (his inventory was worth £546 12s. 2d.). Another well off farmer left an estate worth £412; he owned a number of leather chairs, framed chairs and joined stools (most were inherited). A blacksmith left six chairs, five chests and a bedstead. A husbandman's domestic goods, valued at £5 5s., included 4 chairs ³².

Among chapmen: in 1588, a chapman in Winslow (Bucks) owned a table, two forms, a bench, two stools, a cupboard and a chest. In 1596 in Linge (Norfolk) a chapman left three forms, a "little" chair and a "little woman's" chair, valued in total at 6s. 7d. or 14 percent of his household goods. A Lincolnshire chapman in 1613 owned three chairs, a joined stool, a table and two forms, all worth 6s. 8d., he also had a cupboard and two chests. A Lancashire chapman left, in 1680, a trunk, a "little" box, a chest and a "large" chest, together worth 6s. 4d. In 1692, a chapman in Lincolnshire left two hampers, two old tables, six old chairs and one form. In Canterbury in 1703, a chapman's inventory included a table, a dresser, a chest of drawers, a chest and various chairs around the house. The next year in Sittingbourne, a chapman had two chests of drawers, six cane chairs, six leather chairs, 12 other chairs, two tables, a joined stool, two mirrors and two kitchen tables. In 1707 a Canterbury chapman owned a chest of drawers worth £5, two small tables, a cupboard, a "drawing table",

another table, three joined stools, two mirrors, 4 chairs, a chest, a court cupboard, two old trunks and five old pictures³³.

Amongst rural labourers too, we find that furniture improved in quality over these two centuries:

“The furniture of early Tudor cottages was evidently rough carpentry work, of very small value, quite possibly constructed by the labourer himself: whereas by Charles I’s reign many a cottager possessed at least one article of joined furniture, properly constructed by a trained craftsman ... lending a touch of modest luxury to his home”.

In 1611, in the East Riding of Yorkshire, a labourer left £18 worth of domestic goods, including a cupboard, two chairs, two forms, a “little” stool, a “livery” table, six cushions and some chests. The following year a Hertfordshire labourer, very prosperous, left a wicker chair, two “little” chairs, a joined stool, three cushions, a cupboard, a form, a bench, a clothes press and sundry boxes and chests. In 1632, again in the East Riding, a labourer left a “little” table, a chair and a cupboard, amongst his domestic goods (worth in all £6 5s.). A Cumberland labourer left two chairs, three chests and two “stands and collers” in 1635. An in Cornwall in 1637, a labourer left a coffer, a form and a “table board”.

Finally, at the lowest income levels: in Norwich in 1584, a poor man left a table and chairs and two chests, amongst goods worth £5 19s. 3d. (including a cow). In 1638, a very poor man left goods worth just 25 s.: an old table, three old chairs, a form and an old cupboard³⁴.

Referring to the late sixteenth century, D.M. Palliser says, “The poorest households to figure in the inventories boasted only a few sticks of furniture such as benches, a trestle table and a bed”. Similarly, Joan Thirsk says, “Before 1550... houses contained the basic furniture, benches, a table, stools and beds...”³⁵. We may compare these “few sticks” of “basic furniture” with the “furniture” owned by the poorest rural labourers in South India in the mid twentieth century. For both seating and sleeping, they had only plain reed mats which were rolled up and stood in the corner when not in use. Woven palm leaf squares were also available for sitting on. A rope across a corner of the room was all that was needed to hang clothing over; the latter was stored in tiny tin trunks (together with any valuables). A couple of hollowed out alcoves in the mud walls of the hut served as shelves. By contrast, the “basic” wooden furniture owned by the poorest households in early modern England, came from trees in managed forests, the timber converted by sawyers using metal saws, into materials for the carpenter who used other metal tools to turn out such solid items as tables, benches and bedsteads. Additionally, therefore,

blacksmith, ironworker and charcoal-burner were involved, as well as carters with well-built carts pulled by grain-fed horses. Thus much investment was needed, in longish production chains, to produce the “few sticks” owned by these very poor households.

Domestic Metalware

We come now to the growth in the output of domestic metalware of all types: tableware, kitchen utensils, and such household items as locks, hinges, lamps, etc. The widest increase here was in pewter: it was produced in such large quantities that from being “an expensive semi-luxury commodity”,³⁶ it came to be found in even the poorest inventories.

At the beginning of the period, dishes and utensils were mostly wooden. Small wooden bowls (“mazers”) were used for drinking, slightly bigger ones for eating; wooden trenchers were also used. Food (such as milk, curds, cheese, bread) was stored in large bowls or wooden crocks. Washing bowls, pails, scoops, trays, etc., were all wooden. Spoons were mainly wood or horn but they could also be of tin or brass. Knives were mostly made in Sheffield, of steel; output had increased by the early seventeenth century to the point where knives cost 8d. a dozen. Cooking utensils (for the majority) were of iron or brass. As Carew summed up, for Cornish husbandmen of the mid sixteenth century: “... a mazer and a panne or two, comprised all their substance”³⁷.

But by the later sixteenth century, metal utensils had replaced, or were added to, wooden items. Pewter dishes, spoons and vessels increased vastly in number. Spoons of tin and brass were used more widely as the period progressed. Silver was also purchased further down the scale. Pewter dishes came in some nine styles, differing in size and/or weight. Specialised types were also made, eg custard, “spice” and pie plates; egg, pudding and “banquet” dishes, etc. William Harrison says pewter was “sold usually by the garnish, which doth contain twelve platters, twelve dishes, twelve saucers, ...”; they were “bought by the pound”. He observed that pewter plates were made deeper during his time, so that meat was kept warm and liquid foods consumed more conveniently — ie, quality improved as well. Referring to Essex in the early part of the century, he noted (with Carew) the predominance of wooden dishes:

“For so common were all sorts of treen stuff in old time that a man should hardly find four pieces of pewter (of which one was peradventure a salt) in a good farmer’s house ...”.

But the later years of the century saw a dramatic change: “The exchange of vessel, as of treen platters into pewter and wooden spoons into silver or tin”.

Such improvement included the precious metals and had travelled far down the scale:

“inferior artificers and many farmers, ... have for the most part learned also to garnish their cupboards with plate ...”.

The typical farmer now considered it normal to have bought

“a fair garnish of pewter on his cupboard, with so much more in odd vessel going about the house..., a silver salt, a bowl for wine (if not a whole nest), and a dozen of spoons to furnish up the suit”³⁸.

Inventories confirm Harrison’s observations. Thus Palliser’s summary:

“Very many testators well down the social scale ... owned chairs, feather beds, carpets, pewter ware and even silver. Among a large sample of 441 inventories, taken between 1532 and 1601, including many estates of £5 or less, 95 percent included pewter goods and two Oxfordshire estates worth under £1 included pewter. It is a striking case of a former luxury which had spread right down the social scale.”

And as Margaret Spufford observed of Cambridgeshire in the later seventeenth century: “Feather beds, pewter and napkins had percolated a long way down the social scale.” In 1669, a husbandman’s inventory worth £5 5s. contained two pewter dishes. In 1675, a husbandman had only £3 worth of barley, wheat and hay from his smallholding, but his inventory totalled £24 and included

“a feather bed, and brass and pewter worth £1 12s. 0d., including three kettles, a skillet, a warming pan, five pewter dishes, a basin and three porringers. The ‘luxury goods’ of a century before had reached the poor”³⁹.

In the Forest of Arden, the average value of tableware and kitchenware in inventories rose by just under 83 percent, between 1530-69 and 1610-49. The highest and lowest percentage increases were in the two lowest income groups, with the two higher income groups in between⁴⁰.

In various Oxfordshire inventories, both rural and urban from the years 1551-90, the average value of pewter and brass came to 22 shillings or just under 12 percent of the total. In south Worcestershire, in 1669-70, this value rose to 48s. or just over 8 percent of the total. In East London for the period 1661-64, these figures were 50s and somewhat over 10 percent respectively. Thus while the value of domestic metalware more than doubled, its relative importance declined somewhat. The addition of plate and jewellery produces a much more interesting picture. In Oxfordshire in the late sixteenth century, the average holding was worth just 8s or some 0.4 percent of the total. Thus pewter, brass, plate and jewellery together equalled 30s or still only just about

12 percent of the total. In south Worcestershire and East London in the later seventeenth century, however, things were very different. In the first region the four together came to 74s or nearly 13 percent of the total. In East London, plate and jewellery equalled the value of brass and pewter, so the total came to a substantial £5 or nearly 21 percent of the value of all household goods. In other words, as output increased, the proportion devoted to the precious metals rose dramatically: Harrison's observation of a century earlier still held true⁴¹.

Coming now to the specific items made in different metals, as listed in inventories from the period: certain of these items need a few clarifying comments.

1. *Hearth furniture.* As the quantity and quality of housing rose, individual rooms were separated off, with individual enclosed fireplaces (see further). These hearths required complementary metalware — eg tongs, shovel, rake, etc., — to help support the fire and so provide continuing heat. These complementary metal goods were now also produced in increasing quantities, *pari passu* with the growing number of enclosed hearths.

2. *Cooking* was done over the open fire, initially in the “hall” or most central room, later in the kitchen, as it was gradually separated. Thus kitchenware included items to help suspend a pot (or a piece of meat) over an open fire or to support a pot just above, — hence the pothooks, trivets, etc. in the following.

3. *The metals used* were iron, tin, pewter and brass; the last was the most expensive. Thus most items were of iron, tin or pewter. In addition to the last, output of another item which was a sixteenth century luxury, increased so much during the seventeenth century that it reached even ordinary folk. This was the warming pan. In the sixteenth century, it was found only in wealthy inventories; one was set down at 11sh. in 1590⁴². But by the late seventeenth century, warming pans occurred in chapmen's inventories; they were stocked in ordinary shops (see below).

Now to get some idea of the specific items made in different metals. We begin with two somewhat detailed inventories, one from a farmer in County Durham in 1586 and the other from Yorkshire in the early seventeenth century. In 1586 a well-off farmer left £4 19s. worth of tableware and kitchen utensils. Nearly 41 percent consisted of brass items, including four pans, three pots, three kettles, two chafing dishes, a mortar, three skimmers and two ladles. Nearly 13 percent was ironware, including a broiling iron, a trivet, a pestle, pothooks, a frying pan, a “little” dripping pan, two mincing knives, two cleavers, racks and spits. Fireside items were also iron: tongs, shovel, “crooks” (for raking ashes). Tin items came to just over 21 percent and pewter, just over 25 percent. The tinware included table and household items: a breadgrate, two

pottingers, a “livery” pot, two pint pots, a quart pot, six flower pots, a basin and ewer, three chamber pots. The tableware consisted of two salts, four trenchers and twelve spoons, all tin; and a pie plate, four platters and eight saucers, all pewter. He also had a pewter hand basin, and seven candlesticks, two tin and five of good quality brass. A press contained more pewter⁴³.

The early seventeenth century inventory came to £16 17s. 10d. Nearly 25 percent consisted of pewter (unspecified); brassware and a copper caldron made up just over 52 percent: including a chafing dish, mortars and pestles, pans, kettles, three pots, a “posnett” and a very large number of “old” pots. Ironware came to just over 23 percent: spits, pothooks, “crooks”, grid-iron, ladles, five chopping knives, two forks, a frying pan, five dripping pans, a skimmer⁴⁴.

In 1614, emigrants to Bermuda were advised to bring much the same list of metal goods: pots, kettles, dripping pans, trivets, spits, candlesticks, tankards, tongs, shovels; together with tinder boxes, lamps, locks, thimbles, shears and scissors. Wooden items were also recommended: pails, barrels, jars, bowls, trays⁴⁵.

In the chapmen’s inventories (met earlier): In 1588 a chapman of Winslow (Bucks) had a fireshovel, tongs, and irons and bellows, together with pothooks, a kettle, a salt, six platters and three candlesticks, all worth 12sh. 2d. or just under 22 percent of the total inventory. (The type of metal was not given.) A chapman of Linge (Norfolk) left domestic goods worth £2 6s. 7d. in 1596, most of which consisted of a 5oz silver cup and a stone pot ornamented with silver, together valued at £1 7s. 6d. In 1613, a Lincolnshire chapman left two candlesticks, two salts and “12 pieces of pewter” with a cupboard, all worth 16s. He also had cobirons, pothooks, spits, a dripping pan, a frying pan, a posnett, two pans, three kettles and two brass pots, all valued at £1 4s. The metalware came to a third of his inventory.

In 1691, in Randwick (Glos.) a chapman left a considerable range of metal goods, in a domestic inventory worth £14 12s. He had silver tasters worth 10s., pewter worth £3 1s. (21 percent of the total); brassware valued at £4 2s. (28 percent of the total); and other metal goods that came to £2 2s. (over 14 percent of the total value). His pewter included a pint pot, four tankards, 16 dishes, 18 plates, 18 porringers, eight candlesticks and two chamber pots. The brass goods consisted of a basin, a pan, three kettles, three large pots, four sconces and three candlesticks. The remaining metalware included frying pans, two skillets, a bell metal pot, andirons and a firegrate. In 1692, in Lincolnshire, a female chapman left domestic goods worth £2 12sh. including “some little brass and pewter”, a frying pan and “other utensils”. A Canterbury chapman in 1703 left household goods worth £18 3s.; they included

pots, skillets, a jack, spits, a kneading trough, a pewter warming pan, creepers [used in the kitchen to hold pots over the flame], tongs, a fire pan, unspecified earthenware and (mysteriously) two guns. He also had a silver tankard and two silver spoons, all worth £7. A chapman in Sittingbourne, much better off, had a domestic inventory worth £30 13s. 6d. in 1704. It included two fire shovels, tongs, creepers, a fender, coal racks, cobirons, spits, pothangers, pothooks, a chafing dish, a warming pan, a salamander [a closed pan put directly into the fire], a skillet, a trivet, two iron pots and two frying pans. He had three brass candlesticks and his pewter included six porringers, four saucers, 14 dishes and 12 plates. Finally, in 1707, another Canterbury chapman left domestic goods worth £18 2s., including tongs, bellows, andirons, creepers, firepans, a spit, a gridiron, a dripping pan, a warming pan and three iron pots. His brassware consisted of a saucepan, a skimmer, two skillets and a mortar and pestle. His pewter (worth just £1) consisted of three candlesticks, six porringers and “great and small dishes”. He also had eight earthen plates, six earthen dishes and a “vial in a case”.

The contents of a chapman’s shop in Chatham (inventoried in 1703) give an idea of the metal goods produced by the end of the seventeenth century. It contained pewter, brass, tin and iron items. The pewter consisted of spoons, dishes, pots, porringers and chamber pots, all of various sizes. There were brass warming pans and ladles; tin kettles, frying pans, pudding pans, pint and quart pots, funnels and lanterns; iron firepans and tongs. Older style goods were distinguished from those in the newer fashion ⁴⁶.

Lastly, at the lowest end of the scale: In Norwich, in 1584, a poor man left goods worth £5 19s. 3d., including pewter candlesticks. In 1618, a “poor lame man and almost blind”, left goods worth £2 6s. 8d. His clothing and bedding came to £1 6s. 8d. so all his other goods were worth just £1. These included three old kettles valued at 6s. 8d, leaving 13s. 4d. to cover everything else. But this included two little pewter dishes, three saucers and six trenchers (presumably tin); a “little gridiron”; six dishes and wooden platters and two earthen pots. By the early seventeenth century, metalware was produced in sufficient quantities to turn up even in such inventories ⁴⁷.

Other types of metal consumer goods were also produced in growing quantities during these two centuries. They included tinder boxes, locks of all kinds, bolts, hinges and candlesnuffers. Better-off households had firebacks: metal screens at the back of the fireplace to radiate heat back into the room. In the later sixteenth century, doorknockers were produced (before then, one beat on the door with a stick until someone came out to see what the awful noise was). In the seventeenth century, doorlock, hinges and other metalwork were all made to match, in wealthier households. Simple types of chandeliers were now made by the local blacksmith, ie this type of illumination now reached far

down the scale. Candles improved in quality, so candlestick design changed accordingly. In the early part of the century, whale-oil lamps were introduced. In the later part, wire firescreens began to be produced. Copper trenchers, wine coolers and new types of pewter tableware were also produced for the better-off⁴⁸.

Beyond the Basics

So far, we have examined the basic consumer goods — food, clothing, footwear, household linen, domestic metalware. We now come to **non-basic** goods and services, and **housing**. The early modern period saw a large increase in the mass availabilities of goods such as glassware and books that hitherto had firmly remained luxury goods. Leisure goods and services also rose substantially, while in housing this period is (still) known as the Great Rebuilding. In sum: not only had the range, qualities and quantities of ‘basic’ consumer goods all expanded significantly, non-basic goods were increasing in importance. So the overall range of first order goods was growing significantly.

Pottery

During the sixteenth century, pottery improved in quality and there was a larger variety. New types of decoration appeared. Specific types were made for apothecaries and the like; this continued in the seventeenth century. Tableware remained a luxury good; the better quality stoneware, including wine bottles, was imported from Germany. Good quality glass was also a luxury good; the best was, of course, imported. The great households had large quantities and many varieties of glassware. William Harrison said the wealthy preferred it; even the poorest, however, had some poor-quality glass. At the mass consumption level, green glass continued to be the norm; two or three kinds of drinking glasses were produced. Beer glasses were now common place. Small containers for preserves etc were also made. Small bottles were used for medicines and medical purposes. Larger bottles were covered with wickerwork or leather for protection; this practice continued in the next century.

The seventeenth century saw a substantial growth in types of pottery; variety of patterns, finishes and decorations; and range of techniques used. New shapes, colours and motifs were added. Some types of ornamentation used mass production methods — an indirect indication of the quantities made. Elaborate mugs were produced for special occasions. Display pieces were produced. Porcelain was now imported from China. It was a luxury good, but quantities and variety increased. Bottles were now produced for both beer and the new drink, mineral water. The *quantities* of glassware

increased substantially. Thus, even by the end of the sixteenth century, a special display and storage cupboard for glasses was widely found in yeomen's houses. Glassware turned up in inventories quite far down the social scale. In 1595, a chapman in Linge (Norfolk) owned four glasses worth 8d. A widow in Stratford left two Venetian glasses and five small green glasses in 1631. And in 1642, a Newcastle chapman had "great glasses" in his stock, valued at 8d. Glassmen and cratemen peddled glass and pottery round the villages, packing their wares in straw⁴⁹.

C.G.A. Clay summarises all these developments succinctly: "By 1700, labouring people" had such things as "coloured stockings, gloves, buckled shoes, linen neckerchieves...ribbon-trimmed hats...brass pots, iron frying pans, cutlery...glazed earthenware" which "their predecessors of the mid-sixteenth century" had never owned. And prosperous farmers now had:

"pots and pans of copper and brass; plates, drinking vessels and candlesticks of pewter; cutlery, glassware, table and bed linen, wall hangings and window curtains; cast iron firebacks; and, by the later seventeenth century, clocks and carpets..."⁵⁰.

Published Materials (Are Also Final Outputs)

As material resources increased, they were also used to provide literary sustenance on a mass scale, for the first time. From the early sixteenth century onwards, and escalating through the seventeenth, ultra-cheap publications — ballads, almanacs, chapbooks, pamphlets, broadsides, etc — became mass-consumption items. By at least the 1570's, if not earlier, chapmen carried them to all regions; they were stocked in grocers' and general shops and hawked by street-sellers. There was an "immense diversity of popular literature". Subjects included: etiquette, letter-writing, arithmetic, gardening, cookery, astrology, palmistry, dream-interpretation, humour, riddles, satire, historical fiction [extremely popular], other fiction, crime, courtship, religion, theology, rags-to-riches stories, DIY law, etc. The legal guides were for small craftsmen and husbandmen. The central characters of fiction were likewise drawn from these levels. All segments of the readership were already being catered for: stories were published in a range of lengths and prices.

Sales were substantial: some 300,000 to 400,000 almanacs in the 1660's. A single publisher in 1664 had 90,000 books in stock. Of his 10,000 bound books, 94% were priced at 6d or less, and more than one-third at 2½d or less. In the 1520's, an Oxford bookseller sold about 190 ballads per day at ½d each. A Lowestoft general shop had 79 books in stock, at an average price of just under 3½d each, in 1590. In the 1660's, chapbook prices ranged from 2½d

to 6d. Twenty years later, most cost between 2d and 3d — i.e. quantities had increased and prices had fallen. Ballads were a penny each. For comparison: in 1674, 59 out of 73 books in a “respectable” catalogue were priced at 1sh.6d or higher. Six books cost between 4d and 6d. Just two books were priced at 3d each.

Inventories generally listed items worth from one shilling upwards, so books, including chapbooks, would only appear when their total or individual value was at least that sum. But even at low income levels, the average value came to appreciably more. In Norwich, in the late sixteenth century, 20% of low-income inventories contained books, the average total being 7s.4d. A century later, this proportion fell to 16%, and the overall value also declined, to 4sh. But, from the slight evidence above, chapbook prices were declining. Some testators left “libraries” worth between £1 and £1 10s. Religious books were often specified. A musician left a Bible and a religious treatise, each valued at 10sh. A joiner had 13 “books” [non-religious] worth an average of 1sh.6d each. What appears to be a bookseller’s stock of 70 books came to an average of 4½d each. In the Forest of Arden in 1614, a labourer left “sertayne small bookes” worth 10s⁵¹.

Leisure Activities (Are Also Final Outputs)

Leisure activity also expanded and diversified — again, as resources rose, they were used to provide the material means needed for leisure pursuits. As religious ideas and practices changed, communal celebrations and festivities shifted to the alehouse, particularly on the traditional occasions. Traditional Sunday games also moved. Thus, as material resources increased, they became more specialised: specific fixed assets and circulating capital became available for leisure activities; clerical assets were used for religious purposes only. Thus, increased resources underpinned changed religious ideas.

Alehouse-keepers built bowling alleys and supplied bowls, balls and cudgels for games and contests. A whole new range of indoor games appeared: especially as cards were produced in quantity and so became cheaper. Other games included backgammon; Peter Clark lists some thirteen in all. Each of these had their own material requirements, eg, boards, counters, etc. *In toto*, throughout the country, the material resources involved would have been appreciable. Many games were copied from the social levels above: the growth in resources allowed the leisure pursuits of the leisured classes to become mass-consumption goods. Various types of gambling also appeared, to the horror of puritans and some magistrates. The alehouse was also an entertainment centre; both amateur and professional. It was the venue for professional

travelling entertainers — fiddlers, jugglers, dancers, singers, bear-keepers. All these lodged at the alehouse, where formerly they might have been put up by the local landowner. Again, with more resources came greater specialisation. But this is also one small example of a necessary change in attitude, which permitted wider exchange relations. Formerly, exchange had been largely local and semi-autarkic. Hence, the large landowner, as head of a face-to-face community, dealt with outsiders, who came from outside this local semi-closed exchange network. But, for exchange relations to open up, this distinction had to be replaced by an attitude which treated all comers equally. As people thus formed intricate and extended exchange relationships with people they could never meet, “social” and “economic” — ie *exchange* — relationships separated. Thus, the local “community” gradually dissolved into a far wider network and so this particular aspect of land-ownership also disappeared. Increased resources being the other side of this coin, people were now able to directly purchase the leisure services now being produced.

Thus, London already had a professional, permanent entertainment industry. Clowns, acrobats, fencers, puppeteers and the like found audiences continuously. Singers included both topical and traditional ballads in their performances. By the late sixteenth century, there were several “public” theatres, where the cheapest admission was just a penny. From the early seventeenth century, “private” theatres were built in and around Drury Lane; admission was 6d. All theatres were closed in the mid-seventeenth century. After 1660, plays moved to the streets and to taverns, where there were regular performances. The works included those of Shakespeare, of course, but also those by most of the well-known seventeenth century playwrights. Many had classical subjects. Thus, elements of “high” culture percolated into “popular” culture — ie once again as resources increased, the leisure activities of the “cultured” minority became those of the masses.

In Bristol, professional entertainment such as plays, tightrope-walking etc was mainly found during the two large fairs, in January and July. Otherwise, leisure pursuits included fishing, walking and shooting: craftsmen and shopkeepers owned fowling-pieces and similar guns ⁵².

The vocal and instrumental music of this period is mostly for individual performance or for relatively small forces — several stringed instruments. This reflects the types of capital goods available for musical purposes: the products of relatively short capital structures, as compared with what came later.

Housing (Is a Consumer Asset)

We come now to housing, the most significant durable “consumer” asset. Houses at this period were still *both* production *and* consumption assets. What was new was the *growing* importance of the latter, relative to the former: resources devoted to both were increasing *and* becoming more specialised. As we shall see, with increasing output, the volume of agricultural processing also grew. This processing was partly for sale, partly for home consumption, depending on the commodity and on circumstances. The result was greater specialisation of function: other, complementary capital outputs also increased so that the larger volume of production activities could be conducted in separate rooms. Separate storage also became possible. This meant, for the first time, rooms devoted principally or even solely to living and sleeping — ie consumption rather than production. All this now occurred in “permanent”, ie more capital-using, housing.

The spread of such housing began around the fifteenth century, but it accelerated in the late sixteenth and continued through into the early eighteenth century, in a series of waves. Within this overall development, rebuilding and modernisation proceeded at different rates and periods in different regions. There were overall peaks in the decades 1570-89 and 1620-39, while the final period of 1660-1739 saw a substantial rise even above these peaks⁵³.

Contemporaneous observers, writing in the late sixteenth century, are emphatic about the striking improvements since the earlier part of the century; but it is now clear that, as yet, these improvements are found in particular areas only. Still, these reports come from widely separated regions: the south of England (William Harrison), Cheshire (William Smith), Cornwall (Richard Carew). All agree that in the early sixteenth century, people had their fires on small open hearths in the centre of the room. Carew says there was only a hole to let the smoke out. He adds: houses had earthen walls and floors, low thatched roofs, and few internal partitions. Smith says people still lived like the Saxons, with their cattle in the same building. But now in all regions, houses had chimneys — this means enclosed brick or stone hearths, against a wall. Harrison and Carew both underline the new abundance of glass windows; Harrison says houses are now warmer and draught-proof, with wall-hangings of suitable types at all levels. Carew points to wooden flooring⁵⁴.

Significantly, a century later, an observer in Staffordshire is dismayed to still find conical turf-built cottages, which he compares to the housing in Tierra del Fuego. In Northumbria, a writer refers to “mean” cottages that have no windows and only one storey⁵⁵. These reactions from the late seventeenth century demonstrate that now even the most ordinary houses embodied more capital than before.

We begin with labourers. (Contemporaneously, they were not seen as a distinct group, occupationally or socially). Many put up their own houses. Everitt says the description of “the majority of landless labourers” as living in “a one-room hovel of dirt and sticks...is probably not far off the mark”. But contemporaneous observers saw a distinction between labourers’ housing and the sort of temporary hut that charcoal-burners and the very poorest built. One such basket-maker, “upon want ...of another house” lived in “a sorry cote...of sticks and turves” pitched in a rock cranny in Charnwood Forest in 1604. Labourers’ houses, on the other hand, were simply built, of local materials: mostly a wood frame infilled with clay, and thatched with straw, bracken or reeds. Labourers with some skills could plaster the clay over; and in particular areas, flint and clunch, cob, or stone and clay were used. Such houses needed renewal periodically; but craftsman-built houses were, of course, more permanent. Cottage-building, on the wastes and elsewhere, accelerated from the later sixteenth century onwards⁵⁶.

Up to 1550, most cottages had just one room. Then, in many cases, the room was divided horizontally or vertically, so by the early 17th century, single-storey cottages with one or two rooms were the most common type. By 1640, two rooms had become the norm, and by the later 17th century, there was usually a third “service” room for production purposes. Only the very poorest now lived in a single room. Rows of single-storey cottages with a room “chambered over” continued beyond this period; a detached version appeared after 1660. In some northern areas, one-room cottages were built into the early nineteenth century. Before 1640, they were open to the thatch roof, but had a fireplace. Cottages with two rooms plus fireplace were found in the West of England.

Cob cottages were still built in the Midlands, and also in Cumberland and the West Country, but they now had stone or brick foundations and weather-proof plaster. Two houses of clay and timber cost about £12 each to build, in Yorkshire in the 1660’s and on a Lincolnshire estate in 1684. The first had a clay chimney; the second was of two storeys, with a thatched roof and glazed windows. Carpenters constructed the building and the chambers (plural) so it probably had four rooms. Thatcher and glazier were also employed. In the north, in the late seventeenth century, large numbers of cottages were built in stone, not clay. Elsewhere, clay turned to more durable and capital-using brick after 1700.

Turning now to inventories: between 1560 and 1640, amongst labourers’ inventories from all regions in England, some 27 per cent specified the number of rooms. There is a pronounced shift in these inventories to 3 rooms or more (Table 8.1 — rooms were mentioned only to identify goods, so in other cases, we cannot assume fewer rooms).

Table 8.1 Percent Of Labourers’ Inventories Mentioning:		
	1560-1600	1630-40
2 rooms	44%	21%
3 rooms	28%	41%
4 + rooms	28%	38%

Source: Everitt, AHEW, Vol IV, p. 443.

Some inventories specifically mention a “service” room — buttery or milk-house — containing an impressive array of cheese- and butter-making equipment: vats, presses, racks, “steans”, churns, barrels, casks, firkins, skimmers, tubs, bowls, etc 57.

Above the labourer, there were farmers, small to large (husbandmen, yeomen, lesser gentry). We begin first with inventories and wills from Lincolnshire, covering all wealth groups. There is a dramatic rise in the proportion of inventories specifying the number of rooms, together with a rise in house size (Table 8.2).

Table 8.2 Lincolnshire Inventories and House Size (Percent to total)		
	1540 — %	1694 — %
Inventories mentioning rooms	35.2	95.2
1-3 rooms	21.6	35
4 + rooms	13.6	60.2

Source: Barley, “Farmhouses” pp. 293-94

From the Forest of Arden, come the inventories of mainly small to middling farmers. Again, there is a pronounced increase in size (Table 8.3). Between 1550-74 and 1625-49, the average house went from 2½ to 6½ rooms in size.

Table 8.3 Forest of Arden Inventories, House Size (Percent to total)		
	1530-69 — %	1625-49 — %
1-3 rooms	86	24
4 + rooms	14	76

Source: Barley, “Farmhouses” pp. 293-94

Carole Shammas has analysed inventories, both rural and urban, from Oxfordshire, South Worcestershire and East London, according to wealth. In the low-wealth group, the proportion of inventories specifying house size increased by over one-third; it remained steady in the upper income group. The size of house likewise rose appreciably more amongst those with less wealth (Table 8.4).

Table 8.4 Wealth and House Size, South of England (Percent to total)			
A) Low Wealth	Oxon, 1550-90 — %	S. Worcs 1669-70 — %	E. London 1663-64 — %
Inventories mentioning rooms	38.4	52.7	54.4
1-3 rooms	24.0	20.6	30.0
4+ rooms	14.4	32.1	24.4
B) Medium to High Wealth			
Inventories mentioning rooms	68.3	66.0	69.2
1-3 rooms	30.9	11.2	11.9
4+ rooms	37.4	54.8	57.3

Source: Shammas, Pre-industrial Consumer, Table 6.1

In these two centuries, medieval houses were modernised at first: the large single-storey hall was roofed over, with extra rooms above. Larger rooms were divided by solid partitions. Fireplace, chimney, staircase and glazed windows were added. Staircases, in particular, spread very rapidly. As more fireplaces were put in, a chimney stack was built. Then, more and more rooms were added: separate store rooms and more service rooms, for brewing, baking, and making cheese and butter. Multi-purpose rooms were thus gradually replaced by separate work and living/ sleeping rooms; separate kitchens appeared only in the later 17th century. New houses were built on this pattern. Brick and stone began to be used from about 1650 onwards. Kilnhouses, malthouses and extra barns were added in areas where they were needed. Thus, in the north-east Midlands, a two-room house gradually became one with four rooms and two storeys, with lofts to store grain and extra chambers and parlours.

In northern England, the changes were less extensive and came much later, but there were improvements nevertheless. Housing remained mostly single-storey, but fireplaces and chimneys were put in and more rooms added on.

Especially in the later seventeenth century, timber and clay were replaced by stone, further and further down the scale. In the north-west, the fireplace was enlarged to fill nearly one-third the room. An upper storey and stone staircase were added. Reconstruction was most extensive in the textile areas. And hundreds of houses in the Pennines can be dated to the period 1660-1700, from their use of stone.

Changes and improvements continued in both upland and lowland areas during the seventeenth century. To illustrate: farm house sizes and numbers of service rooms continued to grow in both Kent and Derbyshire. But Kent was building on an established base; in Derbyshire, the increases were more dramatic in *relative* terms. Derbyshire farmers also operated on a smaller scale (Table 8.5).

Table 8.5				
House Size and Service Rooms, Kent and Derbyshire				
(No. of inventories)				
	Kent		Derbyshire	
A. House Size	1640s	1690s	1640s	1690s
1-3 rooms	36	34	12	31
4+ rooms	10	25	1	14
B. Service Rooms				
1-2 rooms	28	23	7	25
3+ rooms	16	37	2	3

Source: Barley, AHEW, Vol I, pp. 664, 665

By now, all farms had at least one storeroom, which contained corn, malt or wool in Kent, cheese in Derbyshire ⁵⁸.

Amongst the lesser gentry, modernisation began earlier and houses became even larger, with separate kitchens, a larger number of distinct service rooms, and separate storage for various products: eg, cheese, apples, wool, hemp, wheat, oats, etc. Living-in workers had separate chambers or lofts. There were several chambers for the family, fireplaces in all (or most) living rooms and glazed windows. Living and sleeping accommodation began to be separated. The principal rooms had ornamental plasterwork on walls, ceilings and mantle-pieces, and wooden panelling to keep out draughts and damp.

In the later seventeenth century, more rooms were added; there was a far greater variety of designs and arrangement. Brick and stone were used from

the mid-seventeenth century onwards. Earlier in the period, walled gardens were added to the house, while farm buildings were separated. The latter now included barns, byre, stables, carthouse, etc ⁵⁹.

Thus, through these two centuries in England, we find at all social levels:- more houses, with more rooms; the spread of modernisation and improvement — more substantial in the case of gentry and farmers, but even northern cottagers got fireplaces and windows; and a gradual shift towards more permanent materials and construction. Among building materials, the quantity and quality of glass improved dramatically from the later sixteenth century onwards (see ch. 10).

Carole Shammas finds the criterion of the Great Rebuilding in a house with at least two storeys and four rooms, in timber, stone or brick. Such are the buildings “described in surveys of surviving houses”. She goes on: to build a house of this type in the later seventeenth century cost between £40 and £100. So “how far down the economic ladder” could the rebuilding go? — since cottagers and labourers had annual incomes of somewhere around £6 to £17 (according to Gregory King). She feels that such improved houses were probably confined to perhaps one-third of the rural population — yeomen and substantial farmers ⁶⁰.

The criterion used above is mechanistic and permits only a very narrow picture of housing developments in this period. As we have just seen, changes, improvements and additions spread very widely, both regionally and socially. The existing housing stock was gradually modified; new building was only a small part of the whole, and even here, various types of houses were constructed at all levels. In particular, this criterion cannot pick up the very significant changes occurring in the north.

In all these developments in housing, most historians see only a change in taste. Machin refers to “the medieval preference for impermanent buildings”. M.W. Barley says: Partly because of the larger volume of processing and “partly because of rise in standards,... families wished to have some rooms for family use not cluttered with churns, tubs and other utensils”. The north lagged behind other areas (he says) so long as it was “untouched by the new ideas of comfort and convenience which had flooded... the lowland zone...” W.G. Hoskins puts it lucidly:

“...the cause of the Great Rebuilding [is] the filtering down to the mass of the population... of a sense of privacy [formerly] enjoyed only by the upper classes. Privacy demands more rooms... to achieve all this in a house of moderate size, we have two floors instead of one”.

Specialised rooms “[represent] a withdrawal from the common life”. Such a withdrawal is “reflected even in farmhouses, in the increasing use of the chair instead of the bench”. Privacy gradually shifts down over time, from head of household to other members. Everyone eventually gets a chair. Then, on the upper floor, instead of the various rooms opening straight into one another, a corridor is built: each room is now separate ⁶¹.

Now, to achieve all these new ends, *additional* resources are needed. Permanent building materials, separate family rooms, comfort and convenience, privacy, two floors, many specialised rooms, individual chairs, a corridor — all require significantly *more* resources than before. Moreover, all these changes are found not just in one house, but in tens of thousands across the realm (eventually).

Thus: to make bricks requires brick-earth; labour and tools to dig it up; moulds; a kiln with firewood; expert firing. Similarly, appropriate tools and expertise are needed to dress stone and construct a building. Partitioning a house into smaller rooms on two floors requires quantities of wood, carpenters, and tools. Individual chairs for everyone add up to far more wood than one or two benches; besides needing the joiner’s expertise and tools, rather than the carpenter’s. A corridor requires an extra partition and space to spare, so it can be used only for passing to and fro. Furthermore, it pre-supposes that upper rooms are not also used for storage and work: ie a complete specialisation of function. Fireplaces require bricks or prepared stone, and chimneys of clay or bricks. Glazed windows need glaziers, window glass and wood frames. Thus, even labourers’ houses in due course came to require some craft expertise; and enlargements, of course, meant more labour, materials, and use of tools. And behind most of the above developments, lie a greater use of wood and wood-cutting labour and tools, plus more transport services: horses, carts, etc.

So, if we start from the direct supply of housing services and move back into the preceding stages of production, we find that more skilled labour and complementary physical investments are being used in these stages. The additional and improved outputs produced here flow into housing, so the latter now provides a much-improved flow of consumption services as well as better production facilities. It is *because* such *additional resources were produced* that what seems so obvious to historians — a change in taste — could *manifest* itself. Returning to Machin’s suggestion that medieval people preferred clay houses: this is rather like saying that people in the LDCs, in the late twentieth century, live in windowless mud huts because they *prefer* to. In fact, resources are not available for all housing to be made of permanent materials. This was also the situation in medieval England.

FOOTNOTES CHAPTER 8

1. Kerridge, *Textile Manufactures in Early Modern England* (Manchester 1985) pp.19-23, 35, 40-41, 45-56, 51-53, 80, 87-88, 120, 122, 125, etc.
2. Joan Thirsk, *Economic Policy and Projects* (Oxford: Clarendon Press 1978) p.106.
3. William Harrison, *The Description of England*, ed. Georges Edelen (1587; repr. Ithaca, NY: Cornell University Press 1968).
4. Quoted in W.G. Hoskins, "The rebuilding of rural England, 1570-1640", *Past and Present* no.4 (November 1953) p.45.
5. Margaret Spufford, *Contrasting Communities: English Villagers in the Sixteenth and Seventeenth Centuries* (Cambridge University Press 1974) p.143 (1589), p.142 (1591), pp.141-42 (1594).
6. Spufford, *The Great Reclothing: Petty Chapmen and their Wares* (London: Hambleton Press 1984), p.110; S.W. Wolsey and R.W.P. Luff, *Furniture in England: The Age of the Joiner* (London: Arthur Barker Ltd. 1968) p.9.
7. Skipp, *Crisis and Development: An Ecological Case Study of the Forest of Arden, 1570-1674* (Cambridge University Press), p.71.
8. Carole Shammas, *The Pre-Industrial Consumer in England and America* (Oxford: Clarendon Press 1990) Table 4.8 (linen prices); p.173 (linen in inventories); p.179 (household size not wealth).
9. Spufford, *Great Reclothing*, p.117.
10. Everitt, *AHEW, Vol.IV*, p.446 (1614); p.448 (1612); p.447 (1617).
11. Spufford, *Great Reclothing*, p.175 (1588); p.178 (1613); p.214 (1703); pp.216-217 (1704); p.167 (1707).
12. *Ibid*, pp.115-116 (Warks), p.116 (Cambs), p.115 (Salop).
13. *Ibid*, pp.114, 112-113 (based on 1696 guidebook).
14. Shammas, *Pre-Industrial Tables* 4.5, 4.6.
15. J.F. Pound, *Tudor and Stuart Norwich* (Chichester: Phillimore 1988) p.138
16. *ibid*, pp.137, 138.
17. Spufford, *Contrasting*, p.142 (1591), p.141 (1594), p.75 (1675); Wolsey and Luff, p.6 (1592 tanner); M.W. Barley, *AHEW, Vol.IV*, pp.751-52 (1613); Skipp, "Economic and Social Change in the Forest of Arden, 1530-1649" in J. Thirsk (ed) *Land, Church and People* (1970), p.109; Ralph Fastnedge, "Furniture" in Ralph Edwards et al, *The Stuart Period 1603-1714* (London: The Connoisseur 1957), p.34 (1638).
18. Everitt, *AHEW, Vol.IV*, p.456 (1611), p.447 (1617), pp.447-48 (1634), p.447 (1637), p.449 (living in servants).
19. Spufford, *Great Reclothing*, p.175 (1588), p.178 (1613), p. 153 (1680), p.190 (1691), pp. 213, 214 (1703), p.217 (1704), p.167 (1707).
20. John Hunt, "Furniture" in Ralph Edwards et al., *The Tudor Period, 1500-1603* (London: The Connoisseur 1956) pp.40-41; Fastnedge in Edwards et al, *Stuart Period*, p.36. For chairs, chests and other furniture, see below.
21. Wolsey and Luff, p.13, 66 (from carpenters to turners); pp.13, 15, 47-48 (joined furniture); Hunt in Edwards et al, *Tudor Period*, p.39 (turned chairs, stools).
22. Wolsey and Luff, p.43 (framed tables), pp.15, 73-74 (covered chairs), pp.36-37 (court cupboards), pp.65-66 (carpentry stool), p.27 (kitchen chests), p.31 (joined chests); Hunt in Edwards et al, *Tudor Period*, p.43 (framed tables), p.42 (stool sets), p.34 (chests); Fastnedge in Edwards et al, *Stuart Period*, p.34 (chests), p.35 (larger farmers).

23. Wolsey and Luff, pp.16-17 (1632 case); p.17 (quote).
24. Fastnedge in Edwards et al, *Stuart Period*, p.39 (quote, wainscot furniture), p.34 (quote, chairs), pp.35, 36, 37, 39; Wolsey and Luff, p.71 (single chair).
25. Fastnedge in Edwards et al, *Stuart Period*, pp.31, 35, 39-41, 43-45. Quotes from pp.45-56, 43-44; Wolsey and Luff, pp.70, 71, 34.
26. Wolsey and Luff, p.8 (quote); Fastnedge in Edwards et al, *Stuart Period*, p.32 (quote).
27. Byrne, *Lisle Letters*, Vol.6, App.E.
28. Wolsey and Luff, App.A; Hunt in Edwards et al, *Tudor Period*, pp.33-34.
29. Fastnedge in Edwards et al, *Stuart Period*, p.33 (quote), p.32.
30. Skipp, *Crisis*, p.63 (quote); Skipp, "Economic and social...", Table X.
31. Wolsey and Luff, pp. 6, 8-9, 32, 68; M.W. Barley in *AHEW, Vol.IV, 1500-1640*, pp.751-52; Fastnedge in Edwards et al, *Stuart Period*, p.34.
32. Spufford, *Contrasting*, pp.40, 41, 74-75.
33. Spufford, *Great Reclothing*, p.158 (1596), p.178 (1613), p.183 (1680), p.167 (1692), pp.213, 214 (1703), pp.216, 217 (1704), pp.167-68 (1707).
34. Previous para: Everitt, *AHEW, Vol IV, 1500-1640*, p.454 (quote), p.446 (1611), p.448 (1612), p.446 (1632, 1635), p.447 (1637); this para: Pound, *Norwich*, p.137.
35. Palliser, *The Age of Elizabeth 1547-1603* (2nd ed, Longman 1992), p.134; Thirsk, *Economic Policy*, p.106.
36. C.G.A. Clay, *Economic Expansion and Social Change* (C.U.P. 1984) Vol II, p.59.
37. Hunt in Edwards et al, *Tudor Period*, pp.44, 36 (spoons); G. Bernard Hughes, "Domestic Metalwork:" in Edwards et al, *Stuart Period*, p.115; quote from Carew: Hoskins, "The rebuilding...", p.45.
38. G. Bernard Hughes, "Domestic Metalwork" in Edwards et al, *Tudor Period*, p.98 (spoons), pp.95-96 (pewter sizes); Hughes in Edwards et al, *Stuart Period*, p.115. Quotes from William Harrison, *Description*, p.367 (garnish), p.201 (treen, exchange of vessel), p.200 (inferior), p.202 (fair garnish).
39. Palliser, *Age*, pp.134-35; Spufford, *Contrasting*, p.75.
40. Skipp, "Economic and social...", Table X.
41. Shammass, *Pre-Industrial*, Table 4.5.
42. Hughes in Edwards et al, *Tudor Period*, pp.92-93.
43. Hughes in Edwards et al, *Tudor Period*, p.96.
44. Hughes in Edwards et al, *Stuart Period*, pp.113-114.
45. Thirsk, *Economic Policy*, pp.49-50.
46. Spufford, *Great Reclothing*, pp.175-76 (1588), p.158 (1596), p.178 (1613), p.193 (1691), p.167 (1692), p.213 (1703), pp.216, 217 (1704), pp.167, 168 (1707); p.85 (Chatham, 1703).
47. Pound, *Norwich*, p.137.
48. Hughes in Edwards et al, *Tudor Period*, passim; also p.95 (doorknockers); Hughes in Edwards et al, *Stuart Period*, pp.111, 113-115.
49. The above material, on pottery and glassware, is based on: R.J. Charleston, "Pottery, Porcelain and Glass" in Ralph Edwards et al, *The Tudor Period, 1500-1603* (The Connoisseur, 1956) and in Ralph Edwards et al, *The Stuart Period, 1603-1714* (The Connoisseur, 1957). Special glass cupboard, Stratford widow: Wolsey and Luff, p. 42. Chapmen: Spufford, *Great Reclothing*, pp. 159, 189. Glassmen and cratemmen: Thirsk, *Economic Policy*, p. 123; also see Willan, *Inland*, p. 77.

50. Clay, *Economic Expansion* II, pp. 31 and 24.
51. The material on books: the main reference is, of course, Margaret Spufford, *Small Books and Pleasant Histories* (Methuen 1981) 1570s: pp. xvii, xix. Various sellers: Ch I, esp. pp. 125-26, also pp. 10-11. Subjects: pp. 136-37. Legal guides: pp. 60-61. Sales: pp. 100-101. 1520's: p. 14. Lowestoft: p. 125. Chapbook prices: p. 48. 1674 catalogue: p. 151. Inventories: p. 48. "Immense diversity...": Bernard Capp, "Popular Literature: in Barry Reay (ed) *Popular Culture in Seventeenth Century England* (Croom Helm 1985) p. 229. Central fictional characters: Capp, p. 204. All segments: Capp, p. 201. Norwich inventories: Pound, *Norwich*, p. 139. Also see: Jonathan Barry, "Popular Culture in Seventeenth Century Bristol", pp. 65-70 and Peter Burke, "Popular Culture in Seventeenth Century London", pp. 49-50; both in Reay (ed). Forest of Arden: Victor Skipp, *Crisis*, pp. 83-84.
52. Leisure activities: based on: Peter Clark, *The English Alehouse: A Social History, 1200-1830* (Longman 1983) pp 152-157; Peter Burke, "London" in Reay (ed), pp. 39-41; interaction of two cultures: pp. 32-34; Jonathan Barry, "Bristol" in Reay (ed) pp. 78-79 and p. 90, fn. 50.
53. R. Machin, "The Great Re-building: a reassessment", *Past and Present*, no. 77, 1977.
54. Harrison, *Description*, pp. 197, 200-201. Smith: Palliser, *Age of Elizabeth*, p. 129. Carew: W.G. Hoskins, "The rebuilding ...", p. 45.
55. Palliser, *Age*, p. 133.
56. Everitt quote: *AHEW*, Vol IV, p. 442. Basket-maker: quoted by Barley, *AHEW*, Vol IV, p. 752. For other points see Everitt, p. 445..
57. Labourers' housing: Alan Everitt, "Farm labourers", Ch. 7 in *AHEW*, Vol IV, pp. 442-448; Barley, *AHEW*, Vol IV, pp. 761-66; M.W. Barley, "Rural housing in England", Ch. 20 *AHEW*, Vol I, pp. 677-682; Hoskins, "Rebuilding", *P&P* no. 4, Nov. 1953, pp. 48-49. Yorkshire house, 1660's: Shammas, *Pre-Industrial* p. 160.
58. Yeomen and husbandmen: M.W. Barley, "Farmhouses and Cottages, 1550-1725", *Econ. Hist. Rev.*, sec. ser. VII, 1954-55, pp. 291-306; *idem*, *AHEW*, Vol IV, pp. 734-60; *idem*, *AHEW*, Vol V, pp. 591-600, 619-32; Shammas, *Pre-Industrial*, pp. 157-65; pp 62-64; Hoskins, "Rebuilding", *P&P* no. 4, Nov. 1953.
59. Lesser gentry: Barley, *AHEW*, Vol IV, pp. 710-24; *idem*, *AHEW*, Vol V, pp. 619-32.
60. Shammas, *Pre-Industrial*, pp. 159-60. Quote, p. 160. Also see p. 163 (criterion).
61. Machin, "Great Rebuilding", *P&P* 1977, p. 55; Barley, *AHEW*, Vol IV, p. 741 (clutter) p. 757 (new ideas); Hoskins, "Rebuilding", *P&P*, 1953, p. 54.

CHAPTER 9

The Distribution Stages

DISTRIBUTIVE FUNCTIONS were definitely and clearly performed in early modern England. The merchants and shopkeepers who provided the services performed other economic functions as well. But the distributive side of their activities was now becoming more clearly separated and growing in importance. Shopkeepers and merchants sold both wholesale and retail quantities; it is important to stress this. The two activities began separating only towards the very end of the period. Shopkeepers also made up retail quantities themselves — for each sale, or readymade for some goods. Distributive outlets consisted of periodic markets, fairs and shops. Their relative importance and role changed considerably over the period. Fairs gradually dropped or reduced their smaller sales, which went to markets and shops, and some fairs declined in consequence. By the later seventeenth century, many had become specialised venues mostly for wholesale and larger retail transactions. Most people continued to buy many of their consumption requirements at periodic markets. Rural sellers, in particular, also bought on market days. In addition, permanent shops were gradually established, mainly for non-perishable consumer goods. In the bigger cities and towns, they opened full-time, but in many smaller towns and villages, they were open only part-time during the sixteenth century. In the later seventeenth century, there is evidence that even towns and villages without markets had shops. Craftsmen retailed their own goods and also sold wholesale to merchants. At first, craftsmen followed their previous practice: on market days, they lowered a board at the front of their workshops. Then, as they produced more, they began opening more frequently and selling from a specialised area in front (the “shop”)¹.

Thus, at retail level, the sale of many perishables (dairy products, meat, fruit and vegetables) remained intermittent but regular: requirements were purchased on market days. Permanent shops were extraordinarily general and sold an entire range of non-perishables: ironmongery, cloth, spices, dried fruit, leather goods, soap, starch, candles, books, paper, etc. As the quantities of such goods increased, more shops were set up, both full-time and part-time. Many consumer goods were now produced or imported far more regularly. But with the quantities involved, it was still only possible to have intermittent wholesale transactions at fairs and the like. Thus, with the general growth in the quantities and range of consumer goods coming through from earlier stages of production, the distributive stage also expanded. More circulating capital was invested in this stage, with more labour; and more fixed capital was beginning to be invested as well.

Now, to put more historical flesh on these analytical bones: Carole Shammas feels that this distributive sector could cater to middle and upper-income groups only; labourers were very poorly served ². An examination of this assessment will help to bring out, firstly, some important aspects of distribution in this period. Secondly, it is especially necessary to see distribution in its context, to link it into the productive activities of the period (as we shall see).

Shammas points out that labourers had only a few shillings to spend, and most shops were not in the villages but in the market towns, which labourers had great difficulty in reaching. The average distance to such towns was 7 miles; they could be up to ten miles away; or twice that distance, in the north. Only a limited range of goods and services might be available, necessitating journeys to other towns. Most villages had “butchers, bakers, millers, brewers and maltsters” at whose “shops” labourers could get “food...for home preparation or ready to eat”. But clothing and craft goods were much more problematic altogether. Shammas refers to the diaries, journals, etc, of middle and upper-income farmers and landlords to reveal the “substantial expenditure of time and money” involved. People were engaged specifically to spin, dye, weave, bleach, knit and sew to order. Sewing-women, tailors and shoemakers were lodged while completing their jobs. One country gentleman had wool from his own sheep spun at home, then woven, fulled, dyed and finished, and made into a suit. Carpenters, coopers, sawyers, dish-throwers and their assistants were hired to fell trees on the estate and turn out beds, wooden dishes, vats, basins and other craft goods. They often lived in, until their jobs were finished (up to three weeks for some). Metal was bought and given to the smith for making pothooks, handles, etc ³.

Shammas feels that labourers found it very difficult to obtain “standard items of clothing” such as boots, a gown or “a broadcloth coat”. A good woolen suit “could cost £4-£5”, about the same value as the “furnishings in a labourer’s cottage”. Tailors and weavers were widespread, but craft goods and clothing required advance payment or credit. In two sets of late sixteenth century shopkeepers’ accounts, most credit customers had some social standing; very few credit transactions were as low as 2 shillings or less. Even cash could be a problem: between 1649 [*recte*] and 1672, farthings and halfpennies were withdrawn from circulation; they were replaced by shopkeepers’ tokens (some town governments also issued tokens) ⁴.

Shammas compares the availability of shops in small East Anglian market towns (with populations under 2,500) with rural “communities” (parishes) in the region. In market towns, the presence of distributive occupations ranged from 7.7 per cent (apothecaries) to 41.0 per cent (grocers) in the sixteenth century. In the period 1650-99, this range increased: it went from 16.2 (haberdasher) to 75.7 (grocer). The proportion of such towns with none of these distributive occupations fell from 25.6 to 8.1 per cent, over the same two periods: ie the availability of shops improved considerably. By contrast, the rural “communities” were very poorly served: distributive occupations were found in only 4.9 to 6.5 per cent of rural areas in the sixteenth century. This range went from 8.5 to 14.8 per cent in the years 1650-99. And in the Gloucester area, only 2 out of 72 villages had retailers in the late seventeenth century.

Shammas, therefore, wonders who bought the guides written for “country shopkeepers and pedlars” towards the end of the seventeenth century. She feels the writer who complained (in 1681) about the plethora of shops appears to have been seriously deluded ⁵.

We may now examine these contentions, to throw some light on the distributive network which developed in these two centuries. Firstly, labourers, as we saw, made from a quarter to a third of the population in many regions. As to the notion that labourers hardly visited market towns: In fact, most did so weekly — for both consumption and production purposes (see below). To begin with distance: as compared with the North, other regions are much more densely-settled (see Table 9.1). For some 50-85 per cent of the population in these regions, the upper limit of the market journey was 9½ miles, so the average would have been somewhat lower, especially in the East. (And even an average of 7 miles means some labourers are closer than that to a market).

Table 9.1 Percent of population: distance travelled to market (1500-1640)				
	1-5½ miles %	6-9½ miles %	(up to 9½ miles) %	20+ miles %
East	60	25	(85)	2
South	31	38	(69)	0
West	25	35	(60)	15
Midlands	36	14	(50)	21
North	17	13	(30)	50
England	39	26	(65)	15

Source: Everitt, AHEW, Vol IV, pp. 498, Table 12

Secondly, as regards the “food shops” which Shammas refers to: only one, perhaps two, out of the five mentioned supplied retail foodstuffs regularly. Maltsters dealt in malt, an input into brewing. Brewers manufactured beer, although they might occasionally sell retail. Millers converted their customers’ grain into flour and bakers mostly baked their customers’ bread, pies, etc, although millers might, on occasion, supply flour and bakers increasingly did provide baked foodstuffs. Only butchers sold retail foodstuffs; and all, especially the first three, *could* be part-time occupations.

For labourers and craftsmen, their main food was *grain*, usually barley, which they bought every week at their market town, or from travelling “meal-men” or “badgers”. Flour doesn’t always keep and it attracts insects, so the grain was ground or taken to the miller as required. Then, the bread and pies were baked — increasingly at the baker’s. (In twentieth century India, grain is still purchased and then milled as needed, even at upper-income levels). Because craftsmen and labourers bought grain, JP’s were anxious to make supplies of grain available during dearth — not prepared foodstuffs ⁶.

Labourers also visited market towns for purposes connected with production and distribution. Between 1560 and 1640, some 60 per cent of labourers who left inventories had one or more by-employments; the range was 46-78 per cent, according to region. For 52 per cent, their main by-employment was spinning or weaving, but many manufactured butter or cheese or raised poultry, as their main or subsidiary by-employment. In the period 1560-1600, some 62-87 per cent of labourers, in various regions, had cattle and 33-67 per cent had poultry. Between 1610 and 1640, these figures declined: the

range was 53-71 per cent for cattle and 16-39 per cent for poultry. In specific areas, many labourers made wooden objects (spoons, trenchers, taps, handles, etc) that were marketed outside these areas as well. All such by-employments necessitated regular trips to the market town. Thus, labourers' incomes could be somewhat higher than their wages alone would indicate; and labourers were closely connected with their market towns ⁷.

Clothing and Craft Goods

As mentioned, the diaries, household accounts, etc that Shammas uses, are those of the better off: wealthier farmers and middling landlords. These groups bought meat but also hired a butcher to do the job on the animals from their own home farms. They were substantial retail buyers at fairs. And so, instead of purchasing fabrics or smaller wooden items ready-made, they often preferred to bring craftsmen in and have the items made in quantity, from the resources of their own farms or estates. A parallel is found in British India: in many British Colonial households, the tailor made an annual or semi-annual stay, sewing an entire wardrobe in this time. But this certainly is not how the tens of millions of ordinary Indians got their tailoring done. Just so, in early modern England: for ordinary families, the craftsman-retailer provided goods from his workshop or made particular items to order. Shoemakers did so, as we saw earlier. Bowl-turners in East Anglia sold direct to customers and wholesale to merchants; the latter were *not* reselling to wealthy farmers and landowners. The same was true of other craftsmen: tailors made up the cloth their customers brought in. A Worcester pewterer had on hand pewter spoons, pots and salt-cellar, as also brass pots and kettles, in 1569. And so on ⁸.

Shammas refers to a broadcloth coat as a standard item and to woollen suits costing £4 to £5. But broadcloth, as we saw above, was an expensive fabric; one variety cost 9s. a yard in 1632. A Worcestershire clothier presented some to Elizabeth I, as the "finest cloth in the world". As noted previously, labourers and craftsmen wanted hard-wearing work-clothes of canvas, linen or mixed fabrics. A woollen suit was their best clothing and we have seen that there were many moderately-priced fabrics available...eg kersey sold at about 1/5 the price of broadcloth.

Shopkeepers and Credit

We saw earlier that shops were extremely heterogenous in this period; and that labourers did frequent market towns. Credit transactions with shopkeepers were, of course, only for those with sufficient income. But Shammas also says that many cash transactions were not entered in the books. These

transactions might well have included whatever items labourers bought. And shopkeepers' tokens were in use for some 23 years, not the entire period. — Shammas looks to the presence of some 6 distributive occupations in small East Anglian market towns — grocers, haberdashers, mercers, merchants, drapers and apothecaries. But, in fact, clothiers, hosiers, cordwainers, glovers and chandlers also sold retail; the last were starting to become general shopkeepers in the seventeenth century. Also, the four *non*-market towns in East Anglia, which Shammas omits, had 3 or 4 distributive trades present. But Wymondham, a “large” market town, had only two. Shammas points out that booksellers were only found in the four or five large towns. But many shops included a surprising range of books in their stock (above, p. 444 and below, p. 466); — and even pedlars carried books. The general point here is that distributive services were provided by other occupations and were available even outside market towns. More importantly, shopkeepers regularly supplied pedlars and chapmen. So, itinerant retail services extended outward from the fixed shops in many towns⁹.

Distribution in Rural East Anglia

The region had between 1,125 and 1,145 rural parishes in the early modern period (the totals have to be calculated from Patten's data, which gives these results). East Anglia is 3,538 square miles in area, so each rural parish was some 3 square miles on average; some were smaller and others larger, of course. This means the clientele of any tradesman came from several surrounding parishes. These rural areas had bakers, butchers, tailors, shoemakers, carpenters, and various distributive trades, both general and those associated with cloth and clothing. As Table 9.2 shows, their penetration of the rural areas increased substantially between the periods 1500-99 and 1650-99. Some very small places had retailers or distributive traders. But over these two periods, the rural proportion of the total population fell from about three-quarters to around two-thirds. And East Anglia had some 47 towns, well spread out, with markets and/or distributive trades. So virtually the entire population, not excepting labourers, was served by a distributive network. In addition, the region (as is well-known), was then still a major cloth producer, and some parts specialised in wood products. So, there were many opportunities for by-employment¹⁰.

Table 9.2 Retail and distributive services, East Anglia, rural parishes (Number)		
	1500-99	1650-99
General distributive trades	18	96
Cloth distributive trades	56	77
Professions and services	13	30
Bakers	17	56
Butchers	71	154
Tailors	172	300
Shoemakers	27	32
Carpenters	187	270
Brewers	3	16

Source: Patten, “Changing...,” p. 109 (Table I) p. 111 (Table II)

The 72 villages in the Gloucester region, of which only two had distributive trades, as Shammas points out: These villages were in Gloucester’s hinterland. This contained six market towns which had nine mercers, chandlers etc, and about 38 individuals in the food, drink, clothing and footwear trades. Both the food and drink, and the clothing and footwear trades, were further found in 20 villages each. Most of the towns and villages were less than ten miles from Gloucester, and were centres of textile production, which came second after agriculture. There were ample by-employments, in short. The point here, as with East Anglia, is that when considering labourers’ incomes, the possibility of by-employments has to be included ¹¹.

Shops

As mentioned previously, **shops** generally sold the entire gamut of non-perishables. In other words, while a distinct distributive stage was slowly separating out, there was not enough output as yet for further specialisation. In the sixteenth century, the stock in shops was extremely miscellaneous. In 1564, an Exeter merchant had canvas, linen and woollen cloth, shirts, buttons, thread, silk, dried fruit, spices, soap, playing cards, brown paper, parchment, nails, mustard mills, grindstones, and rat poison in his shop and warehouse. He also carried production goods: wax, alum, hops, woollen cards, and metals: lead, tin and brass. In Ipswich in 1586, a shopkeeper had in stock a variety of linen, woollen, silk and mixed fabrics, pins, points, laces, ribbons, caps, hats, spices, soap, oil, nails and shovels. He also had wax, pitch tar and flax, and he made baskets, skips and

winnowing-fans. Another shopkeeper there in the same period carried food-stuffs: butter, cheese, bacon, flour, oatmeal, all sorts of bread, eggs, apples and turnips, as well as tobacco, spices, vinegar, soap, starch, candles, ribbons, lace, inks and a variety of threads. Other shops were just a little less miscellaneous; their stock generally fell into three extremely broad categories: *1.* fabrics of all types and also accessories and sewing materials...ie draper's and mercer's wares and haberdashery; *2.* "groceries": dried fruit, spices, tobacco, sugar; and also starch, soap, and the like; *3.* books, paper, writing implements. By the early seventeenth century, this tripartite division was widespread, although the proportions, of course, varied greatly from shop to shop. Books — even in Kirkby Lonsdale — included ABC's, primers, and Latin authors.

In the seventeenth century, the range of particular items was extended in many shops, eg there were more spices, and more varieties of fabrics and accessories. New items were added: Greek grammars, lute-strings, glassware, pottery, medicines, gunpowder, shot, and even small tress for the garden. Medicines were widely stocked in many different shops: eg by a mercer in Charlbury in 1623 and by a Bristol bookseller in 1695; he also sold stationery.

Ironmongers, pewterers, braziers and smiths carried hardware. Chandlers made and sold candles but also carried ironmongery, haberdashery and "groceries". In the late seventeenth century, a Hereford saddler was clearly branching out: he made and sold saddles, whips, harness, and collars, but also had stirrups, dog chains, shoe buckles, fishhooks, nails, tobacco-boxes, pistols, holsters and brooms. A certain logic appears in the added range¹².

We have seen that distributive trades were found in non-market towns in East Anglia in these two centuries, and even in little places in the countryside. From near the end of the sixteenth century onwards, there is evidence that shops were being established in other places that lacked markets. Between 1590 and 1603, mercers, drapers, haberdashers, shoemakers, butchers and even a goldsmith were found in various smaller towns and larger villages in Lancashire. Two of these places had markets, but 18 had none. For the period 1649-72, shopkeepers' tokens unambiguously indicate the general spread of shops. Some 422 to 492 of the places where shopkeepers issued tokens had markets. But there were no markets in 330 to 400 of such places; many were very small indeed¹³.

In the course of these two centuries, not only did retail and distributive services expand geographically, the numbers involved increased, as did the range of such occupations. In the 1520's, the following trades were found in even a smaller market town like Oakham in Rutland: miller, butcher (3), grocer, tailor, draper, mercer, glover (2), shoemaker (3), pewterer (3), joiner,

turner, furbisher, barber (2), minstrel. There were several suppliers of the basic goods and services, of course, but metalware was already just as well-supplied, and better-quality furniture could be had, as well as entertainment. Another small market town nearby had haberdashers and wax-chandlers in addition. Chester, in 1553, had 18 butchers, 17 drapers, 9 mercers and 6 ironmongers. In Northampton, Leicester and Coventry up to 1540, the usual retail and distributive trades were found: bakers, millers, butchers, tailors, drapers, mercers, shoemakers, glovers. Coventry had cutlers and locksmiths as well. In East Anglian towns, during the sixteenth century, the range included all these *plus*: grocers, haberdashers, hosiers, cordwainers, ironmongers, chandlers, joiners, turners, upholsterers, innkeepers and booksellers. In the next century, these trades spread to more and more towns while gunsmiths, tobacconists and pipemakers were added. Norwich had 29 butchers, 150 grocers and 48 mercers in 1569. Between 1501 and 1525, there were 348 admissions into the freedom involving 29 retail and distributive occupations. By 1657-75, such admissions had risen to 835 in 54 different retail and service trades: both numbers and diversity were increased (Table 9.3 and Appendix). The newer occupations included gingerbread-maker, sugar-baker, soap-boiler, potter, chair-maker, chemist, watchmaker and gardener. Additionally, there were there all those who practiced the various trades without seeking admission. This last was an expanding group: especially as the seventeenth century progressed, the numbers of traders, craftsmen, etc, grew so large that the regulations on admission were ignored and became unenforceable.

Table 9.3				
Norwich, Admissions into the Freedom, 1501-1675:				
Consumer Goods and Services, Occupational Groupings				
	1501-25 (No. of...)		1651-75 (No. of...)	
	Admissions	Occupations	Admissions	Occupations
Food & drink	48	6	100	9
Clothing & footwear	110	6	371	9
Distributive trades	121	5	159	11
Metalware & pottery	9	4	46	6
Furniture & allied	28	2	77	7
Services	17	3	51	5
Miscellaneous	15	3	32	7
Total	348	29	835	54

Source: JF Pound, Tudor and Stuart Norwich, App. II.

Our last example is High Wycombe (Bucks): In the later seventeenth century, it had the standard panoply, as it had now become, of retail and distributive trades: bakers, butchers, fishmongers, grocers, tailors, glovers, shoemakers, ironmongers and carpenters. To these were added surgeons, musicians and...a dancing-master, no less ¹⁴.

Levels of Distribution

Labourers' by-employments were mentioned above. But at all levels, it was usual to follow more than one occupation or trade: many outputs had not yet risen to the level which made full specialisation possible. This last is found only in some instances. Thus, many farmers also provided carrying services, especially on market days, or pursued a craft, and many rural craftsmen followed both craft and agricultural activities. In larger towns, craftsmen and many shopkeepers were very nearly fully specialised, but in smaller towns clothiers, cloth-workers and shopkeepers had some relatively unspecialised agricultural sidelines. Some shopkeepers followed related craft or mercantile activities, while craftsmen might have two or even more lines of activity. Specialisation generally increased in the seventeenth century.

Thus, in Great Yarmouth in the sixteenth century, one individual combined the trades of turner and merchant with other activities, and there were barbers who also taught braiding and reading and mended fishing nets. In the later sixteenth century, some Manchester shopkeepers also kept pigs and cows. A linen-draper kept a heifer and two cows, dealt in flax, and leased a farm. Various Lancashire shopkeepers dealt in wool, in linen yarn and flax, and dyed and finished cloth. Leicester had tailors who were also involved in spinning, brewing, the production and sale of dairy products, and pig-keeping. It had a fishmonger-cum-grazier-cum gaoler (part-time); a vintner/wool-dealer; and a pewterer, most of whose investments were in a malting operation. In 1565 in Bedfordshire, a maltster had shops in three nearby towns. In many market towns throughout the country, the larger shopkeepers also had substantial agricultural assets — up to half the total. Conversely, many farmers and graziers kept relatively large retail shops in town. By the later seventeenth century, however, few shopkeepers followed other lines of activity. A Lichfield apothecary owned a cow and a pig, in 1655, and a Lancashire shopkeeper had two milking cows and a butter-churn in his inventory in 1679. But most inventories now carried mainly shop goods or other property, although some still contained pigs ¹⁵.

Moving up now to **merchants**: In the sixteenth century, many provincial merchants had a wide range of mercantile and non-mercantile interests,

and traded both domestically and abroad. In York, many produced malt as a side-occupation. In Exeter, a merchant invested also in farms, urban housing, a tinmill and a fulling-mill. Another restricted himself to the first two. A third dealt extensively in Spanish iron, besides selling a huge miscellany of goods from his shop. Yet another invested heavily in a range of trading ventures, both inland and overseas. Merchants in York, Hull, Newcastle and other provincial towns, won the right to join the Merchants Adventurers and trade overseas, even though they also kept retail shops. On a much smaller scale, a Nantwich shopkeeper invested some £217 in various goods, including cheese, lace, cloth and hemp, for trading in Ireland in 1618 ¹⁶.

The larger merchants (in the seventeenth century) also had a variety of mercantile and other investments and activities, both inland and overseas. They participated in coastal shipping, bringing provincial products to London and sending imports to provincial centres. The really large merchants, who became aldermen and mayors in provincial towns and cities, and members of the London livery companies, were mainly involved in internal trade and distribution. Such merchants included corn-dealers, millers, butchers, brewers, salt-dealers, grocers, vintners, stationers, drapers, mercers, ironmongers, clothiers, cloth-finishers, cattle-dealers, sugar-refiners, tobacco-dealers, inn-keepers, hostlers, and carters. At a further remove from consumption, there were tanners and dealers in coal and lead. Those (London) merchants with overseas interests generally spread their investments geographically in two or three regions: the West Indies, West Africa, the Levant, India. In the last case, they held East India stock, but were also involved in private trades including that in diamonds. Other interests included cloth, urban property, shipping, commercial loans, mortgages, insurance and government bonds. A tailor also had farms and houses. A Newcastle merchant dealt in coal and also invested in ships, houses, and leases. A printer/bookseller owned books, printing equipment, warehouses and leases. Merchants with only one line or region of activity were the exception. A clothier's sole assets were the cloth already sold and that held in his warehouse, while for two merchants, the Levant was their sole area of interest. Most wealthy London merchants had a country house with a few acres, and many had lands: but the latter were bought as investments, for the income they yielded. At another level, Gloucester merchants, and traders in its surrounding market towns, concentrated on urban property; very few held agricultural property ¹⁷.

Trade and Distribution: Three Examples

We now look briefly at the distributive and trade networks that radiated out from three centres: **York** from the sixteenth century to the early seventeenth

century, **Gloucester** in both the sixteenth and seventeenth centuries, and **Norwich** in the later seventeenth century. In all three cities, merchants provided distributive services not only in stages immediately next to final consumption, but also in stages further removed, as we shall see.

York and London merchants met regularly at Beverley and Howden fairs. York merchants went regularly to fairs all round their country; York itself had three annual fairs. (Many other cities, eg. Exeter and Bristol, also had regular fairs). In addition, York had four markets held on three days a week — two of these markets were general, the others were for malt and leather. The Cathedral close held another general market. Meat and cattle markets were also held regularly, as also markets for two types of regional cloth, and for pigs, seafish and freshwater fish.

As mentioned before, merchants throughout these two centuries kept retail shops and shopkeepers sold both wholesale and retail, as well as intermediate quantities to pedlars and chapmen. Merchants in provincial cities and larger towns supplied shops in smaller market towns and even some villages. So York in the later sixteenth century was *the* major distributive centre for the north of England. Its merchants brought in grain, peas, beans, salt, fish; clothing accessories such as ribbons, lace, points, buttons, etc; dried fruit, wine, candles, oil, soap, frying pans, paper and a host of other goods, including furniture and books. These were then resold throughout the North. The grain, peas and beans came mostly from Eastern England and the Midlands, but the grain included Baltic rye. Salt came from Newcastle and areas near it. The fish came from almost the entire east coast down to Suffolk, and also from Scotland, the Netherlands and Germany (as saltfish). London was the immediate source of many of the other commodities, but there were other suppliers as well: Norfolk provided starch and Essex window-glass; while dried fruit, soap, frying-pans, and paper came also from the Netherlands. Gascony, Spain and Germany supplied the wines. France supplied glass and books and furniture came from Flanders. Two Yorkshire districts supplied butter and stockings for consumption within York itself.

Moving back further from final consumption: York obtained hemp, copperas and iron from London and coal from Newcastle. York merchants also directly imported flax, hides, wax, tallow, wainscot, pitch and iron from the Baltic and hops from the Netherlands. Hides also came from the surrounding areas for York's own leather industry. Malt dealers came to York from across Yorkshire for their supplies. York pewter sold nationally and York goldsmiths dealt at the national fair in Stourbridge. Only two commodities were brought into York from different parts of the North for re-export: cloth and lead. Different types of cloth came from the various weaving districts in Yorkshire. York

weavers made bedcovers and wall-hangings. The lead came from the mining areas of both Yorkshire and Derbyshire. Both commodities went to ports in France, the Low Countries and the Baltic ¹⁸.

Gloucester and its surrounding market towns all held weekly markets. Gloucester was much smaller than York, of course, but its merchants — grocers, mercers, drapers, haberdashers, chandlers, vintners and later, booksellers — regularly supplied these smaller towns, where part-time and then full-time shops increased as the period progressed. The city's merchants sold retail in the city, of course; they obtained much of their stock in London, although some came through Bristol as well. Gloucester sent large quantities of goods upriver but also distributed them overland. In the early seventeenth century, some twelve country carriers came regularly to Gloucester to collect goods; the maximum radius was 15 miles. Two or more carriers went each week from Gloucester to London. Towards the end of the seventeenth century, merchants' supplies came from the continent and North America as well. In the late sixteenth century, oranges, raisins, oils and wines were already available in Gloucester (brought in from Bristol). By the late seventeenth century, there were chandlers and mercers in market towns in the region providing (among other things) woollen and linen cloth, groceries, tobacco, candles, ironmongery, wines and spirits.

Again moving further away from final consumption, Gloucester in these two centuries brought in cereals and malt from the fertile agricultural districts around and sent these commodities on to Bristol. From there, the grain went to Wales, the West Country, Ireland and the Mediterranean. In the early seventeenth century, the casting trade grew considerably ¹⁹.

Norwich had three fairs a year and, in the sixteenth century, markets on three days a week. In the seventeenth century, permanent shops began to be set up near the market, and the fairs gradually declined. In that century, Norwich distributed dried fruit, spices, cloth from other regions, ironmongery, books, etc, to other parts of Norfolk, bringing many of the goods from London. Shops were also found in rural parishes of East Anglia, as we have already seen. Norwich was a grain and cattle market as well — ie. its merchants also provided distributive services further removed from final consumption. Norfolk's agricultural outputs went through Norwich to London. Cattle were also brought in from Scotland for fattening near the city. London dealers were active in buying both corn and livestock ²⁰.

Analytically: in the course of these two centuries, there is a distinct and definite shift away from agricultural involvements for both shopkeepers and merchants. By the late seventeenth century, even the wealthiest London merchants

have no interest in becoming landed gentry, while shopkeepers with any live-stock or other agricultural activity are hardly found. There is now a very broad specialisation in distributive functions. That is, sufficient outputs are now coming forward to require such distributive investments to get these outputs to the final consumers. But such consumption goods are insufficient to permit specialisation to go further, whether by commodity, overseas region or stage of distribution. Merchants and shop-keepers are involved not only in wholesale and retail transactions closer to final consumption but also in distributive stages further removed, as with yarn and wool. Merchants also provide commercial finance and urban properties, both housing and workshops, and also engage in production activities, such as malting.

In all these cases, we have yet more instances of the same production unit (the merchant and his capital) producing two or more outputs or services that help to form very different links in the production chain leading to final consumption. Some of these outputs or services are utilised in stages closer to, and others in stages more remote from, the final stage. In every case, the question is still, the position of the output or service in the investment chain, relative to the final link — final consumption.

Wholesale — The Beginnings

A distinct and definite wholesale marketing network did develop during this period, mainly in agricultural commodities and cloth, but also in many craft goods. As we shall see, this network dealt not only in commodities closer to final consumption, such as corn, dairy products, fish, meat, etc, but also in goods in stages further removed. Malt and yarn, for example, were somewhat further from final consumption, while wool was yet more “distant”. Although the size of the transactions clearly indicate a wholesale trade, there was nevertheless no full specialisation as yet: many of the participants had more than one occupational interest.

Substantial quantities of agricultural commodities came through into the distribution stage, from previous stages of production. The other side of this coin was increased investment in distributive facilities, both wholesale and retail, and the development of an entirely new wholesale, interregional distributive network. A new type of travelling merchant grew up, as well as new mercantile customs and practices.

Market Towns

These two centuries saw market towns expanding, both physically and in the range of commodities traded, especially after 1570. Existing market

areas were used for specific goods, according to region: corn, malt, fish, meat, horses, etc. These areas were now expanded and new market sites were developed, eg for cattle in Liverpool. Additional commodities, such as wool, were now traded and new franchises sought accordingly. Every county had new market towns; many operated for a time before obtaining formal charters. Many of the main Lancashire towns were established in this period. Some market towns were re-founded, with additional shops and other facilities. In many towns, market houses were rebuilt and new market crosses were erected for the sale of particular products — cheese, butter, fish, hemp, etc. New shops or even an entire street were added in many towns; some individual shops were quite large. Even though some market towns disappeared, the total growth in all provincial centres taken together, exceeded that of London and Westminster²¹.

Previously, the quantities of goods traded on market days had been very much smaller and it was to these relatively smaller quantities that the existing methods of levying tolls and conducting market days had been adjusted. But the quantities now being traded were so huge, compared to previous periods, that these methods of collecting tolls were overwhelmed and rendered unworkable.

Thus, most towns had official beams at which goods were weighed; the tolls went to the town government. Only shopkeepers were allowed to have “private” balances. As quantities increased, so did these revenues. Goods weighed at “private” beams were liable to seizure and forfeiture, to the lord of the market or the Crown. But town beams were now swamped. For example at Doncaster, the four official weightsmen could not handle the huge quantities of wool traded, so the larger merchants had to be allowed to negotiate the amounts they would pay as toll. Further, it was alleged that these officials themselves traded largely in wool and tried to blackmail many smaller sellers. In the larger cloth towns, the quantities of wool and yarn were so great that private beams were used. In 1595 in Yeovil, a second cheese and butter beam was set up, but the ownership and right to tolls was then disputed. Private beams were established in a number of other towns to weigh the particular goods traded there; sometimes the different owners were in open conflict²².

Town officials found revenues increasing from the rental of stalls on market days. Burgesses of a town generally had the right to set up pens, stalls or covered counters in front of their houses on market days and let these out. These incomes grew substantially so many townsmen began simply assuming such rights.

Where town governments levied tolls, “foreigners” — who did not belong to the town — paid up to twice as much as townsmen, who might even pay nothing at all. Therefore, many traders from more and more towns claimed they were exempt from tolls in other towns where they traded regularly, or indeed throughout England. Some Welshmen refused to pay toll at border towns. Town officials and local townsmen naturally contested these claims in many instances.

Where tolls had fallen into desuetude, individuals and town governments obtained or renewed Crown charters in many cases, and attempted to collect these charges. Many such attempts foundered, however, as market-users simply refused to pay. Such refusals came not only from townsmen and country folk, but also from larger graziers, traders and the like, who had put up stalls without licence. The main basis was that such tolls had never been levied before. Beyond this, there were disputes over the rights to set up beams, stalls, pens, etc; over the tolls to be levied on livestock, and so on ²³.

In other respects, too, a “pitched” market gradually became untenable. Trading began and ended at set times, that allowed the most distant villagers to reach town and toll to be taken in kind from every sack of grain. Town officials inspected and stamped cloth and leather; they supervised markets in such goods as dairy products, fish and meat; they supplied or checked the balances, weights and measures used. The prices and qualities of bread, ale and beer were prescribed. But as quantities both of goods and traders rose, these official tolls and directives became unworkable. More and more retail trade, especially in non-perishables, moved into shops, as we saw earlier — i.e., there were continuing rather than periodic sales at retail level. Many markets also became more and more specialised, dealing in only one or a very few commodities. And beyond this, the quantities of agricultural commodities changing hands grew so large that periodic markets simply could not handle the flow; a distinct system of “private” — wholesale — trade developed (see further) ²⁴.

During the years 1500-1640, there were some 800 market towns in England and Wales. Market specialisation, however, was by commodity, and two or more specialised markets could be held in the same town at different times, as with cattle and sheep markets in the Midlands, or the grain, wool and cattle markets of Exeter. There were around 459 such specialised markets in this period. For clarity, we may arrange these into groups (number of markets in brackets): grain (133), malt (26), butter and cheese (12), fruit (6); fish (30+), poultry and wildfowl (21); cattle (92), sheep (32), pigs (14), horses (13); wool and yarn (30+), cloth (27+), linen (8), hemp (4); leather and products (11). Thus, these specialised markets all dealt in items relating directly or indirectly to mass consumption: food-stuffs, livestock, cloth and inputs, and leather goods. In other words, it

was such mass consumption commodities whose outputs had risen so enormously as to require separate specialised markets. Beyond this, there were other, more specific, such markets: in eels; caps; stockings; wooden taps, handles and spoons; farm implements. Even here the goods involved are for mass consumption purposes, direct or indirect. Some regional specialisation also appeared. In the East, its specialised markets dealt in: grain (46), livestock (30 — cattle, poultry, pigs, sheep), malt (15), fish (10), butter and cheese (4); while in the South, the specialisms were grain and cattle. The Midlands' specialised markets dealt predominantly in livestock (53 — cattle, sheep, horses, pigs), grain (19) and leather (6). In the West of England, wool, yarn and cloth markets were the most significant, followed by cattle (24), grain (17), butter and cheese (5), leather and gloves (3). In the North, the specialisms were grain (25), cattle (17), wool and yarn (9), and cloth (9) ²⁵.

Thus, the country was already divided broadly into grain, livestock and cloth producing areas. Grain went from East Anglia to the cloth regions in the North and West and to the manufacturing and livestock areas in the Midlands, with many of the latter being supplied through the northern corn markets. Livestock generally travelled to the cloth and manufacturing regions and also to the grain areas ²⁶. Thus, a transport network was the other side of *this* coin: these complementary investments will be examined below.

Fairs

Many fairs already existed, but they developed greatly in this period. They were held in market towns, but also in very small places with no other distinction. Stourbridge was the single major national fair. Hence, it was general: virtually the entire range of manufactured consumer goods was traded there. The commodities included domestic metalware, such as kettles, cutlery, frying-pans, jacks and pewter; and grindstones, featherbeds and glass. Mercers, haberdashers, drapers, potters, gunsmiths and jewellers were present. Smaller production goods were also traded: eg. baskets, skips, pails, hurdles, spokes, nails, shovels, and pack saddles. Otherwise, Stourbridge was a major outlet for wool and hops. The latter came from Kent, Essex and Suffolk to go to the North, the West of England and the east Midlands. Some hops were also traded at fairs in Kent, Surrey and Hampshire ²⁷.

Most fairs, however, specialised in one or a few items. The largest fairs dealt in livestock: cattle, sheep and horses. Those in the Midlands were entrepôts for all other regions. Substantial numbers of animals were involved, both in total and in individual transactions. Over 220 cattle were driven from the north-west and west to two fairs in Essex. At Maidstone, a small Kent landowner bought 50 head of northern cattle. At various sheep

fairs, the total numbers changing hands ranged from 3,800 to 30,000. There were smaller sheep and cattle fairs as well. The bulk of the cattle at all fairs, large and small, were sold in the surrounding areas. But fairs also served to transfer cattle by stages, from the livestock areas of the West and North to the grain areas of the South and East. Horse fairs specialised by type: cart-horses, riding horses, bloodstock. Nearly every county had a few fairs for draught-horses. In each region, some of the larger fairs also traded in domestic metal goods and farming implements. Smaller fairs dealt in pigs, poultry and wildfowl and fish. Other commodities with their own fairs, included cheese, woollen cloth, linen, and leather, shoes and gloves. — Again, it is the mass consumption goods that are traded in all these fairs: the quantities being produced are so large that specialised wholesale marketing facilities are needed.

Private Trade

Over and above these new distributive channels, an entirely new wholesale network developed — such were the quantities of agricultural and other outputs now arriving at this production stage. “Private” trade emerged from the “pitched” market. As production expanded, substantial farmers, millers, maltsters, brewers and other merchants continued their dealings at the inns around the market. Continued output growth impelled these “private” arrangements into an independent life, especially after 1570. New mercantile methods and practices led to the growth of an interregional trade network, which was well developed by the early seventeenth century, and covered the country by 1640. This network included carriers and packmen as well as dealers in various commodities such as wool, linen, etc. In other words, transport investments were integral to the trade network.

Traders and merchants now travelled regularly to deal directly with both suppliers and customers. Buyers were met wherever convenient. Agreements with farmers were concluded at their farms, or at warehouses or inns. Maltsters and brewers inspected and purchased standing crops. Timber was also bought standing. The quantities of wool at Doncaster market were so large, that some buyers accepted the seller’s word on weight. Transactions were now interlinked so that a local shortage of barley, for example, was transmuted into supply failures further down the chain²⁸.

Merchants worked in family partnerships and through factors in the other provincial towns; there were also independent factors. Merchants now needed staff to keep order books, correspondence, and accounts. Literacy and numeracy became even more essential at all levels, and especially

for the new clerks. Specialists developed, in particular items such as dye-stuffs and horses; these specialists were called on to settle disputes. Credit depended on personal standing and reputation. An Ipswich merchant changed both name and residence several times in the 1560's, but since Ipswich men always reported him on sight, he was still pursued by his creditors. With drovers and others travelling to all regions, there also now developed an interregional credit network. Here too local failure was now transmitted to other points ²⁹.

There were many contemporaneous complaints about the personal qualities of merchants and dealers ³⁰. Their greed, covetousness and acquisitive nature were all glaringly visible. Their adventure and entrepreneurship were far less visible, but the interregional trade network which was developing was altogether invisible. Such a network could not have been created consciously by the thousands of dealers who were, in any case, only intermediaries amongst individuals in different regions. Everyone helped to produce goods consumed in other regions, and everyone in their turn bought what everyone in other regions produced.

Local trade centred on the periodic markets in market towns; interregional and wholesale trade centred on inns. Practically all market towns and large villages had inns. There were over 1,600 inns, spread over 25 counties, in the late 1570's. Innkeepers often acted as brokers, bringing merchants and farmers together. Innkeepers also provided other facilities: for storage of goods, for holding sheep, and, on droving routes, sufficient pasturage nearby. — By the beginning of the seventeenth century, many inns had specialised in particular commodities: eg. malt, linen, wool, woad. Merchants, dyers, farmers, malt dealers, clothiers — all converged on such specialist inns from nearby centres and also from contiguous counties. One Somerset inn regularly held sales of wool and linen, its various rooms filled with merchants' packs and the travelling dealers themselves. Many innkeepers had related interests themselves: they dealt in corn or malt or invested in river boats for transporting goods ³¹.

Alan Everitt examined some 800 cases from Chancery and Requests, the bulk from the years 1570-1640. Two-thirds of these cases involved corn, sheep and wool and the same proportion came from the East and the Midlands together. But these cases clearly illustrate the rise and significance of non-local trade. As Table 9.4 shows, in all regions except the South, and for most of the major agricultural commodities except wood, the larger proportion of "private" transactions occurred across county or regional boundaries.

<div> Table 9.4 Non-local Trade (Percent of 800 cases: see text) </div>			
Region	Same County — %	Different County, Same Region — %	Different Region — %
East	36	45	19
South	62	21	17
West	46	35	19
Midlands	32	36	32
North	37	19	44
ALL ENGLAND	42	35	23
Commodity			
Corn	46	40	13
Cattle	41	30	29
Sheep	46	37	18
Wool	34	28	38
Wood	67	33	—
Miscellaneous	26	32	42

Source: Everitt, AHEW, Vol IV: Table 17, p. 550.

Taking particular examples: A Huntingdon farmer-factor bought wool from a Bedfordshire farmer, financing the transaction from a Wimbledon lender, and looked for a purchaser in Gloucestershire. A factor bought peas in Huntingdon for a Lincolnshire farmer, the goods to be delivered in Peterborough. Lancashire linenmen had customers in six other counties ³².

At a broader level: there was a continuous regional interchange of different *types* of foodstuffs. Thus, the different sorts of cheese and butter were traded — the differences depending partly on the type of feed (hay or grass). So too, various types of mutton and beef were exchanged, according to the kind of feed (grass, turnips or coleseed) and time of slaughter. Particular districts also specialised in lamb and veal. Livestock areas imported not only grain but also butter and cheese ³³.

The quantities involved in this wholesale trade network were substantial, even by the late sixteenth century: 340 sheep; 1,218 sheep worth £406; 2,460 sheep worth £2,820; 5,000 sheepskins; 200 tods of wool valued at £305; 5,090 fleeces worth £790; 6,000 coneyskins; the annual output of a rabbit warren; the entire crop of several orchards; £500 worth of malt; £300

of beer; thousands of chickens; 40 to 100 dozen stockings; a thousand quarters of malt; etc ³⁴.

The wholesale distribution of cloth also developed in this period. A great deal of wholesaling was done through various cloth fairs and at Stourbridge. Blackwell Hall in London was the country's largest single export centre, it also redistributed cloth within England. Sale by sample of textiles and hosiery was already practiced by the early sixteenth century and, in London, clothiers and merchants dealt by sample: the volume of cloth was so great it went to warehouses. Even so, several annexes were added to Blackwell Hall, which was rebuilt and then extended twice. Leadenhall was also used for cloth sales. Norfolk cloth was exempt from the 'aulnage' levied on other fabrics and it was traded in inns and warehouses. Cloth from other regions also began to bypass Blackwell Hall and this trade expanded considerably. London factors now developed, to whom country clothiers simply consigned their outputs, for sale to merchants. Factors, in turn, supplied dyestuffs and specialised raw materials to clothiers.

In provincial centres as well, the volume of cloth outgrew pitched markets and wholesale dealing moved into warehouses and inns, by the early seventeenth century. By the middle of the century, some wholesalers were themselves intermediaries, collecting various fabrics from clothiers for dispatch to London factors, who then sold on to merchants. Two such Lancashire wholesalers also dealt extensively in wool, buying it through their London factor, and also from provincial centres like Coventry and Leicester ³⁵.

Lastly, the wholesale trade in leather and gloves. "Leather-sellers" were already established in London by the late sixteenth century, supplying material to glovers. Previously, these wholesale dealers had been working craftsmen themselves. London merchants purchased leather and gloves in the West of England, from where glovers also sent wholesale quantities to London for resale throughout the country ³⁶.

The metalware trades produced both consumption and production goods, so their wholesale and retail network distributed both types of goods. We outline here how consumption items were distributed through this network ³⁷.

Sheffield factors sent cutlery — knives — wholesale to London agents who sold to country retailers and dealers. By the early seventeenth century, output had risen to the point where carriers travelled weekly to London and Sheffield factors now sold there themselves, to dealers from the country. Some Sheffield merchants also now resided in London. By the later seventeenth century, cutlery was sold extensively in the American colonies. The ironmasters of the Sheffield district sold frying pans to dealers and retailers in York, Newcastle,

other Northern towns, Manchester and London. In the later seventeenth century the export of frying pans rose considerably, through London merchants.

The wholesale ironmongers from the metalware areas of the West Midlands sold household items, such as locks, pots and pans, hearth furniture, hooks, hinges, irons, etc, to London wholesalers for on-sale to retailers in southern and eastern England. But by the early seventeenth century, the growth in output was such that Midland ironmongers also went themselves to London, to meet and supply country dealers there. The ironmongers had a warehouse in Leadenhall as City regulations required. But they also dealt elsewhere in the City with provincial merchants and retailers, and a West Bromwich factor kept a shop in Whitechapel — all *against* City regulations. From the early seventeenth century onwards, Midlands ironmongers began sending family members — sons, brothers, cousins, in-laws — to live in London and provide direct two-way contacts with wholesalers and retailers, from London and elsewhere. These family members sent back information on prices, to help their Midlands relatives settle the prices to be paid for metalware. By the middle of the seventeenth century, all these trading practices had become so well-established that City ordinances against them became unenforceable.

From the sixteenth century onwards Midlands ironmongers maintained regular commercial ties with retailers in the expanding, prosperous market towns of southern England — from East Anglia through to Oxford and then across to Bristol. Midlands merchants travelled regularly to market towns and fairs in East Anglia and the south-east, leaving goods with retailers and collecting payments owed. Some merchants brought back goods as well — eg, one returned to Dudley in 1644 with barrels of soap and hops. Birmingham merchants went regularly to East Anglia and King's Lynn merchants routinely visited Birmingham.

As metalware output grew during the seventeenth century, major provincial towns such as Birmingham and Bristol became distributive centres. By mid-century, Birmingham was the main town to which London wholesalers routinely sent their orders. There were no 'open' markets for metalwares in the West Midlands; all dealings were 'private', between ironmonger and purchaser.

In the late seventeenth century, Robert Foley, of the Foley iron family, became an ironmonger. He sent goods regularly to a Birmingham wholesaler. He had a warehouse and agent in Bristol and in London, and sold metalware in Southampton. Through his Bristol establishment he sold to numbers of West Country merchants and retailers. By now retail ironmongers were found in practically all English market towns; they bought from London and West

Midlands wholesalers. Retailers mostly sold other goods besides metalwares; they generally stocked small quantities of the latter. Their range was narrower than that of e.g. chandlers or mercers. In a Staffordshire market town not far from Birmingham, one ironmonger carried, in the 1670's, a range of kitchenwares, including a 'collender' and several 'sausage' pans; various types of locks; other household items such as lanterns and candlesticks; saddler's ironmongery; tools and equipment; leather goods, such as collars, reins, saddles, bellows; and other goods: hemp, flax, rope, cord, girth webbing; twill, haircloth; skips, hops and 'glue'.

APPENDIX

Norwich. Admissions into the Freedom, 1501-1675

Consumer Goods and Services, Individual Occupations

	No. of admissions	
	1501-25	1651-75
Food & Drink		
Baker	11	58
Mealseller	—	1
Miller	1	2
Butcher	20	27
Fishmonger	12	5
Cook	3	2
Gingerbread-maker	—	3
Sugar-baker	—	1
Vintner	1	1
TOTAL	48	100
Clothing & Footwear		
Tailor	67	192
Hosier	—	38
Pointmaker	4	1
Capper	2	—
Hatter	—	1
Glover	—	16
Cobbler	—	2
Shoemaker	16	—
Cordwainer	18	115
Translator	—	5
Patternmaker	3	1
TOTAL	110	371
Distributive Trades		
Merchant	—	22
Grocer	31	70
Draper	12	2
Woollendraper	—	11
Linendraper	—	10
Mercer	70	19
Haberdasher	1	7
Haberdasher of small wares	—	11
Chandler	—	2
Wax-chandler	7	1
Soapboiler	—	1
TOTAL	121	158

	No. of admissions	
	1501-25	1651-75
Metalware & Pottery		
Brazier	3	5
Pewterer	2	6
Hardwareman	2	—
Ironmonger	—	9
Cutler	—	10
Locksmith	2	14
Potter	—	2
TOTAL	9	46
Furniture & Allied		
Carpenter	27	46
Turner	—	11
Joiner	—	14
Chairmaker	—	1
Upholsterer	—	4
Trunkmaker	—	1
Painter	1	5
TOTAL	28	77
Services		
Barber	15	34
Apothecary	1	11
Chemist	—	2
Musician	—	2
Surgeon	1	2
TOTAL	17	51
Miscellaneous		
Saddler	9	11
Spurrier	2	—
Stationer	—	6
Goldsmith	4	7
Tobacco-pipe maker	—	3
Gunsmith	—	2
Watchmaker	—	1
Gardener	—	2
TOTAL	15	32
GRAND TOTAL	348	835

Source: JF Pound, Tudor and Stuart Norwich, App. II.

FOOTNOTES CHAPTER 9

1. T.S. Willan, *The Inland Trade* (Manchester U.P., 1976) pp 50-63, and Ch. 3; John Patten, "Changing occupational structures in the East Anglian countryside, 1500-1700" in H.S.A Fox and R.A. Butlin (eds) *Change in the Countryside* (London: Institute of British Geographers, 1978) pp. 108-112; *idem*, "Urban occupations in pre-industrial England," *Trans. Inst. Brit. Geographers*, new ser; 2 (1977) p. 304; P.J. Corfield, "A provincial capital in the late seventeenth century: the case of Norwich" in P. Clark (ed) *The Early Modern Town* (1976) pp 253-54; John Patten, *English Towns 1500-1700* () p. 165, 186.
2. Carole Shammas, *Pre-Industrial Consumer*, pp. 197-203, 211-214; 226-248.
3. Shammas, *Pre-industrial...*, pp. 197-202. Quote about food shops: p. 198. "substantial expenditure": p. 199.
4. Shammas, *Pre-industrial...*, "standard items", "broadcloth coat": p. 199. Woollen suit, "furnishings": p. 212. Advance payment: p. 197. Shopkeepers' accounts: pp. 243-46. Cash: pp. 198-99.
5. Shammas, *Pre-industrial...* shops: pp. 228, 229 (tables) Guides: p. 230.
6. Everitt, "Farm labourers", *AHEW, Vol IV*, pp. 418, 457.
7. Everitt, pp. 425-29, for by-employments, esp. Table 9 (p. 428) Labourers' livestock: Table 7 (p. 415)
8. These groups: Willan, pp. 70, 53 (butchers, fairs); craftsmen — retailers: Patten, "Changing...", p. 106; also see pp. 110-112 and 116; Worcester pewterer: Willan, p. 57. See also Richard Grassby, "The personal wealth of the business community in seventeenth century England", *Econ. Hist. Rev.* 23 (1970) pp. 222-23.
9. Broadcloth quote: Kerridge, *Textile Manufactures*, p. 21. Shammas, *Pre-industrial...*, "cash transactions", p. 243. Other distributive trades: Patten, "Changing..." p. 106; *English Towns*, pp. 153-54; Willan, pp. 79-80; Wymondham/non-market towns: *English Towns*, pp. 254, 283 (diagrams). Pedlard with books: Willan p. 78.
10. Patten's data: "Changing...", Tables I and II. Rural trades: *ibid*, p. 108; also very small places with trades. Rural proportion: Patten, *English Towns*, p. 286.
11. Gloucester material: Peter Ripley, "Village and town: occupations and wealth in the hinterland of Gloucester, 1660-1700", *Agric. Hist. Rev.*, 32 (1984), p. 172 (Table 1): market towns, pp. 170-71: distance from Gloucester.
12. Exeter merchant: W.G. Hoskins, "The Elizabethan merchants of Exeter", in P. Clark (ed) *The Early Modern Town* (1976) pp. 153-54; Ipswich: Patten, "Urban occupations...", pp. 304-305; stocks in sixteenth and seventeenth centuries: Willan, Chs. 2, 3; Medicines: Patten, "Urban...", p. 303; Chandlers/saddlers: Willan, p. 79.
13. Non-market towns in East Anglia: Patten, *English Towns*, pp. 254, 283; *idem*, "Changing...", p. 108; Lancashire, 1590-1603: Willan, p. 60. Tokens: pp. 88-89.
14. Oakham: Patten, *English Towns*, pp. 168-69; Chester..., Willan, p. 59; Northampton..., W.G. Hoskins, "English provincial towns in the early sixteenth century", in P. Clark (ed) *The Early Modern Town* (1976), Table 4.2 and p. 99; East Anglian towns: Patten, *English Towns*, pp. 254, 283; Norwich: Willan, p. 59; regulations in Norwich: Corfield, p. 241; High Wycombe: Patten, *English Towns*, p. 168.
15. Farmers: Patten, *English Towns*, p. 155; rural craftsmen: *idem*, "Changing...", p. 110; large/small towns: Willan, p. 64; Great Yarmouth: *English Towns*, pp. 152-53; Manchester/Lancashire: Willan, pp. 64, 63; Leicester: *English Towns*, pp. 152-53;

- seventeenth century: Willan p. 99; Beds. Maltster, market towns: Everitt, *AHEW*, Vol IV, pp. 549, 490.
16. York: D.M. Palliser, "York under the Tudors: the trading life of the Northern capital", in Alan Everitt (ed) *Perspectives in English Urban History* (1973), p. 48. Exeter: Hoskins, "Elizabethan...", pp. 153-54, 156-57; Merchants Adventurers, Nantwich shopkeeper: Willan, pp. 57, 81.
 17. Richard Grassby, "English merchant capitalism in the late seventeenth century", *Past and Present*, no. 46, Feb. 1970, pp. 96-97 (large merchants/ provincial examples); pp. 91-93 (London merchants); R.G. Lang, "Social origins and social aspirations of Jacobean London merchants", *Econ. Hist. Rev.*, 28 (1970) pp. 40-41, 45-47 (country houses, etc), Gloucester merchants: Ripley, pp. 177-78.
 18. Palliser, "York...", pp. 46-55, 57 (redistribution of consumer goods); pp. 51, 46-47 (other goods); p. 48 (malt dealers); p. 47 (pewter, goldsmiths). Starch: Thirsk, *Economic Policy*, p. 86, hides: L.A. Clarkson, "Leather crafts...", p. 33.
 19. Ripley, p. 177 (weekly markets); pp. 172, 173 (17th century material), stock from London/Bristol; carriers; sixteenth century material; cereals, malt, etc: Peter Clark, "'The Ramoth-Gilead of the Good:' Urban Change and Political Radicalism at Gloucester, 1540-1640", in Jonathan Barry, ed, *The Tudor and Stuart Town: A Reader, 1530-1688* (Longman, 1990) pp. 251, 257.
 20. Corfield, pp. 252-54.
 21. Everitt, *AHEW*, Vol IV, pp. 475-82; p. 484 (shops); p. 502 (market towns after 1570); p. 483 (restricted sites); pp. 479, 514, 542 (provincial growth vs London).
 22. Everitt, *op. cit.* pp. 482-83, 502, 503.
 23. Everitt, pp. 485, 506 (exempt from tolls), 487 (Welshmen), 482 (contested claims), pp. 502, 504 (tolls in desuetude).
 24. Everitt, p. 486 (market regulations), p. 506 (private trade).
 25. Everitt, pp. 491-96.
 26. Everitt, pp. 541 (Midlands — manufacturing), 551-52 (West and north), 493 (west), 499 (north), 546 (E. Anglia), 515 (interregional corn trade), 540, 542 (livestock).
 27. This paragraph and the ones following, on fairs, are based on Everitt, pp. 535-37, 540-41.
 28. Everitt, pp. 506 (inns), 543, 563 (after 1570), 558-59 (network), 562 (linen), 569 (farms...inns), 577 (local shortages).
 29. Everitt, pp. 553-54 (partnerships, clerks), 567 (literacy), 555-56 (specialists), 572 (Ipswich merchant), 567 (local credit failure).
 30. Everitt, pp. 568-69.
 31. Everitt, pp. 532 (inns), 561 (brokers), 560 (facilities), 561 (innkeeper's interests).
 32. Everitt, p. 562.
 33. Eric Kerridge, *Trade and Banking in Early Modern England* (Manchester U.P. 1988) pp. 23-24.
 34. Everitt, *op. cit.*, pp. 546, 548, 565, 554.
 35. These two paras on cloth distribution are based on: G.D. Ramsay, *The English Wool-len Industry, 1500-1750* (Macmillan 1982), pp. 32-33, 39-42; Kerridge, *Trade*, pp. 14-16, *idem*, *Textile Manufactures*, pp. 214-218; Willan, ch. 4.

36. L.A. Clarkson, "The Leather crafts in Tudor and Stuart England", *Agric. Hist. Rev.* 14 (1966) pp. 28, 29, *idem*, "The organisation of the English leather industry in the late sixteenth and seventeenth centuries", *Econ. Hist. Rev.* 13 (1960-61), p. 252.
37. The following paragraphs are based on: David Hey, *The Rural Metalworkers of the Sheffield Region* (Leicester: Leicester University Press 1972) pp. 37, 51, 52; *idem*, "The origins and early growth of the Hallamshire cutlery and allied trades", in John Chartres and David Hey (eds) *English Rural Society 1500-1800* (Cambridge: Cambridge University Press 1990) p. 357; Marie Rowlands, *Masters and Men in the West Midlands Metalware Trades Before the Industrial Revolution* (Manchester: Manchester University Press 1975) pp. 11-12, 87-88, 94-95; Appendix 4.

CHAPTER 10

The Production Stages

1. Agriculture

To help bring out the agricultural developments of the early modern period, we may begin with two rather different assessments. The first is by C.E. Challis: "... if population doubled between 1540 and 1660, while at the same time subsistence crises disappeared (without ... sustained imports of produce), something remarkable must have happened to agricultural output overall"¹.

The second comes from Mark Overton, who sees these two centuries as Malthusian: population growth hit its long-term ceiling of 5½ million or so. Since agricultural output could not rise, population stopped growing. One instance of this Malthusian check is the large extent to which permanent pasture was ploughed up (the next peak was after 1750). This practice "can ... be interpreted as a desperate attempt ... to cash in on reserves of nitrogen to produce as much grain as possible in the face of overwhelming demand". Once the short-term gains were achieved, yields fell as the soil became acidic. In the Midlands, there appears to have been some retreat in the later seventeenth century (says Overton). The nitrogenous capital thus being depleted, had been built up since the fourteenth century. Clover and turnips were grown in the seventeenth century but their real impact came only after 1750. Between the mid-sixteenth and mid-seventeenth century, there was, however, a "moderate rise in yields". The "most likely" explanation was "increased labour inputs". But labour productivity probably fell; it began rising from 1670 onwards. As fodder supplies improved, wool and mutton yields increased from the mid-seventeenth century — i.e. even before the improved breeds of the eighteenth century.

Overton continues: regional specialisation increased in the seventeenth century, as with dairying in Shropshire and Hertfordshire, and the “intensive mixed husbandry” of eastern Norfolk. — But, in the mid-nineteenth century, such specialisation was “more varied and . . . subtle” and marketing was “sophisticated”. — The London market fuelled interregional trade. National livestock marketing appeared by the seventeenth century, the cattle going to be fattened in the South. In the early seventeenth century, grain sold in local markets in small quantities; large trading does not seem to be usual. Most farmers continued to sell locally, but the interregional grain market also expanded, “especially in the seventeenth century”; much of the demand came from London².

As Overton sees it, in the sixteenth century some 80 percent of farmers produced for subsistence only: they raised food to feed just their households. Crop sales were made only to obtain those goods like salt and metalware that they could not supply themselves and to pay taxes and rent. The labour-supply curve bent backwards: people preferred leisure because of “the absence of ‘consumer goods’ . . .; there was little that extra income could be spent on”. From the sixteenth century, there was a “dramatic growth in the volume of market activity”. The latter rose more rapidly than population because the urban percentage and the rural non-agricultural percentage both rose. Taking both groups together, the joint percentage “at least doubled between the early sixteenth and the early eighteenth century”³.

This last is perhaps an appropriate point at which to examine the characteristics of agricultural activity in this period.

Table 10.1: English Population				
Part A: Total (millions)				
	1520	1656-67	1688-89	1699
	2.4	5.3	4.9	5.0
Part B: Urban and Rural Non-agricultural				
	Total (millions)	Urban %	Rural Non-Agricultural %	Total Non-Agricultural %
1520	2.40	6.7	18.8	25.5
1600	4.11	8.3	21.9	30.2
1700	5.06	17.0	28.5	45.5

Source: E.A. Wrigley, “Urban Growth and Agricultural Change” in R.I. Rotberg and T.K. Rabb (eds) *Population and Economy* (C.U.P. 1986), Tables 3,4.

As Part A of Table 10.1 shows, population in the seventeenth century fluctuated around 5 million, which is more than twice its number in the previous century. Yet real subsistence crises occurred in the sixteenth, not the seventeenth, century, as we saw earlier. Secondly, as Part B shows, even in 1520, about a quarter of the population was predominantly non-agricultural. By 1700, some 45 percent of the population was little involved in agriculture. This means they produced craft goods or provided services. They needed raw materials to produce such goods — and it was through the sale of craft goods that the non-agricultural population obtained their food in exchange. We have just seen the wide and growing range of manufactured consumer goods that became available in increasing quantities during this period, via an extensive distributive network which also handled agricultural commodities. And as we have seen, people were *not* living on the margin of subsistence! They ate not just barley and other grains, but a variety of other foodstuffs as well. Thus, agriculture produced a wide array of raw materials as well as a diversity of foodstuffs.

Overton refers to the ploughing up of permanent pasture, its use for corn for a few years, and its reversion to grass for periods ranging from one to twenty years. He calls this two-way switch ‘convertible husbandry’ and identifies it with Kerridge’s “up-and-down” husbandry⁴. Kerridge, however, describes a complex system which involved *a.* grassland management *and b.* various crop rotations, including industrial crops, such as dyestuffs, oilseeds, flax and hemp, in addition to legumes and different grains *c.* all adjusted to specific soil types. The methods were followed not just in the Midlands but in other regions as well. Kerridge stresses the outputs of both fodder and industrial crops as the key results of the system. Woad was certainly far more widely cultivated in these centuries.

Capital Combinations in Agriculture

For example, when pasture was first converted: depending on the soil, woad, other dyestuffs, liquorice, mustard, flax or hemp were amongst the most suitable as a first crop. Grains followed as a second or third. For the next three to four years, various crops were planted with one or two grain crops, followed by legumes, maslin or bigg, according to area. Oats was the last crop sown in some soils. Management was necessary to prevent over-ploughing and to produce suitable grass in the next stage. Grass formation might take up to two years; seed selection was important. The grass from such a system was highly nutritious. Reploughing of this grassland ploughed the natural fertiliser into the soil; thus raising crop outputs. And better nutrition improved livestock output, including that of wool. Dairying and pig-keeping were important complementary activities⁵.

Clearly the system outlined here requires considerable management and judgement in selecting the crop rotations and the timing of the switch from the cropping stage to the grass stage and vice versa. Management was also necessary to prevent the soil deteriorating, with moss growth and the like. Kerridge points out that the system itself took several years to establish.

A related practice was ley-farming. It was followed on common land and enclosed farms. In mixed farming areas, where the rotations were grain-legumes-fallow, grass leys were introduced. They could last up to ten years. Output certainly improved — there was better grazing and better crops. Oats or coleseed was generally the first crop. The practice was followed earlier in northern areas with poor soils, where leys lasted 7 to 10 years.

A wide variety of crop rotations was practised everywhere according to soil. The most widely cultivated crops were, of course, grains and legumes: wheat, rye, barley, peas and beans. There were many different varieties of each. The commonest industrial crops were hemp and flax. Both produced fibres and oil seeds. Other crops included coleseed, saffron, teasels, mustard, onions, liquorice and woad. The latter needed intensive cultivation which helped following crops, but grass had to be deferred for years. Saffron was good for a succeeding barley crop, while teasels were preparatory for wheat. Even small farmers might include these two crops in their rotations. Hop cultivation expanded, as we know. Weld and madder, both dyestuffs, were grown only in particular areas because they took two to three years to reach maturity, respectively. Coleseed was pressed for oil and the cake then fed to livestock ⁶.

Trade in seeds was widespread. Soil differences and differences in sowing and ripening characteristics led to such exchanges. Farmers also wished to maintain output by changing seeds. They were steeped in various mixtures to prevent disease ⁷.

Two new specialisms which appeared in the sixteenth century were fruit-growing and market-gardening (the latter towards the end). Particular counties specialised in fruit, around London and in the West and South-west. Large quantities of apples, pears and cherries were sold. Each had different varieties and particular areas specialised in particular fruits. Market-gardening first appeared around London, then spread around the South and West in the seventeenth century, especially in those areas with freeholders and weak manorial control. Coast and river transport was also important. By the mid seventeenth century, nurserymen had become a separate specialism. Some farmers also grew vegetables. Growing techniques were labour-intensive and the ground was well-cultivated. A wide range of specialist tools and specialised baskets were developed, the latter help to ensure safe transport and maintain quality.

Market-gardeners also supplied grass seeds by the late seventeenth century — vegetables were eaten largely at lower income levels, as a substitute for other foods ⁸.

Livestock were, of course, agricultural capital. The various breeds were adjusted to local conditions of feed and climate. There were three main types of cattle and many local varieties, and an even larger number of sheep varieties. Flocks were managed to produce mutton and lamb at various times; wool was a by-product. But wool types were specialised, eg. some went specifically for carpets. Livestock numbers rose substantially in this period. For example, Bowden estimates that between 1540-47 and 1700, the total sheep and lamb flock increased by some 28 percent, rising from 10.7 to 13.7 million. New types of both sheep and cattle were developed in this period, and the livestock trade extended throughout the country. Pigs were widely kept but were a Midland specialty. They fed in woodlands, but also on by-products: barley mash, whey, dregs of ale, etc. They were also given peas and beans. Poultry were kept on a large scale, almost only in East Anglia; geese were kept in some areas. They were fed buckwheat, carrots and turnips (the last two from the 1590's) and other grains and milk. Rabbit warrens were again a regional specialty ⁹.

Particular areas already specialised in rearing and others in fattening, both cattle and sheep. The last process might involve additional feeding with peas or coleseed. Such specialisation is an indication of the *quantities* involved, and the inter-regional nature of livestock production.

Fixed investments increased substantially in this period. Pastures and meadows were now more systematically managed and their grasses deliberately changed. To maintain and improve their output, meadows were changed into pasture, or ploughed twice, then sown with successive crops of peas or vetches, wheat, vetches and hayseed, then grazed, then re-converted into meadow. From the 1570's, pastures were ploughed and then used for crops or left to re-seed themselves. From the 1590's, the pasture was systematically sown with haydust and the desired mix of specific grass seeds. Individual pieces of land were managed individually, since the time taken for grass formation varied. These practices spread widely after 1650. Additionally, water-meadows were floated. This involved a system of channels through which river water flowed over the land. The soil was protected in winter, sediment laid down, and large quantities of good grazing became available early in the year. More animals could be kept through winter and earlier lambing was made possible. Later, a crop of hay was taken — up to four times larger than on dry meadows. Then, cattle were grazed. Sometimes, additional crops of hay were taken instead, if needed. Finally, large parts of the fens in eastern England were drained and prepared for farming. Coleseed, sheep, and horses were the main products ¹⁰.

We now come to **agricultural implements**. Thirsk lists some 15 used in arable farming, for preparing the land, sowing, reaping and threshing. There were four types of plough, according to soil type, with further local variations. Different crops were sown differently and there were specific harvesting implements and methods according to crop. In labourers' inventories, some sixty different types are mentioned, including specific tools for sifting grain and manuring the soil. There are also tools for hedging and for woodcraft, carts of various kinds for carrying corn, hay and fertilising materials, as well as shepherd's tools. There were also small pewter or wooden bottles for drink. These implements were made by the blacksmith or wheelwright, but they were also made in the West Midlands and sold by travelling merchants. The agricultural year was filled with specialised tasks performed in succession, and agricultural labourers were skilled in particular lines: they were ploughmen, threshers, reapers, cowmen, shepherds, etc ¹¹.

Investment Structures in Medieval and Early Modern England

We may obtain some perspective on these events by looking briefly at some aspects of medieval agriculture. In that period, most peasants produced grains for their own consumption, together with some legumes. Their horizon of farm management was limited to the next harvest or perhaps 2-3 years ahead, depending on the type of fallow system used. Agricultural implements were few, in number and type. Crop rotations, livestock, range of outputs were all very limited: coarse grains for human consumption were the dominant products. Exchange was largely confined to the manor and the village, and perhaps an annual fair. There was practically no inter-regional exchange. Each peasant family practiced far more autarky than seen anywhere in the sixteenth and seventeenth centuries. Concomitantly, the range of consumer goods was far more restricted in comparison with the quantities and varieties so widely available by the seventeenth century.

Farm management in the early modern period looked very far ahead, by comparison. Crop rotations; "up-and-down" husbandry; ley farming; pasture and meadow management: — in all cases, the entire cycle of inter-related changes had to be completed, to obtain the higher and more varied outputs these systems made possible. In some cases, the cycle might take 20 years. — In effect, resources were being shifted into stages further and further removed from final consumption. For example, with managed meadows: the transition from old to rejuvenated meadow took five years or more. During this period, it was necessary to implement the proper sequence of appropriate crops and grazing. While these operations provided human and livestock feed, they were also part of the processes needed to restore the meadow. Thus, the labour and

agricultural tools involved were also being used in stages further removed from final consumption (and some other, previously renewed meadow was providing the hay). In addition, the grass seeds had to be grown and collected. Finally, the additional and more nutritious hay, had to be mown and stored and fed to livestock in winter. Then they or their products, had to reach the stage of final consumption. This is a longish investment chain. — And each individual meadow had to be treated individually. This same general picture can be seen with “up-and-down” husbandry and ley-farming. — Nothing like this was known in the medieval period.

Crop rotations now involved more fodder and industrial crops. These outputs also went into stages further removed from final consumption: flax, for example, had to be prepared, spun and woven and the cloth then distributed. More and better feed meant more and better livestock, and more and better livestock products: wool, meat, hides, skins, butter, cheese. We have seen the implications of the existence of distinct fattening and rearing areas for livestock. — This phenomenon was unknown on this scale in the medieval period. — The emergence of distinct grain, livestock, dairying and craft areas was also seen earlier. The joint implications of all this, together with the range of crop rotations, and the growth of market gardening, is that grain outputs had risen sufficiently to permit greater output of *non*-grain products.

Overall, more and more agricultural products are now in the nature of goods-in-progress, reaching final consumption only with the help of additional resources, especially storage and transport services. And, finally, consistently with the farming systems that produced this situation: in the seventeenth century, there was more enclosure than in any other: some 24 percent of agricultural land was enclosed. At another level, monetisation grew in this period: more and more inventories contained ready money, and both William Harrison and Carew commented on the greater use of coin ^{11a}.

2. Beer

Beer was far superior to ale in quantity and price ¹². Ale was thick and heavy and deteriorated very soon. Common ale was 50% more expensive than ordinary beer. The latter was not only cheaper, it was more potent, more palatable, lighter, clearer, and it kept far longer. When their respective production processes are compared, it becomes clear that beer production requires “lengthier” processes: ie. the investment of more resources in stages further removed from the final product.

Both drinks required malt, grains and yeast. Ale needed less skill, fewer and cruder vessels, and less fuel — an open fire was adequate to heat the water

to pour over the mash. The process took much less time, including the final fermentation. Thus, in this stage, the production process was much shorter than with beer. And since the equipment and skills involved were rudimentary, their output in the preceding stages required the investment of far fewer resources, and far less specialised resources.

Beer-making was altogether more specialised. It needed more expertise and it also required a specialised input, hops. These, in turn, needed skill and special conditions. So they had to be transported from where they grew to other regions by water and road through a distributive network. Hops were, of course, only one of many goods passing through these facilities. Thus, we already note the additional and more specialised resources invested in preceding stages of production. Beer also needed more utensils and these, too, were much more specialised — eg. a double-bottomed mash boiler. As the ingredients had to be boiled at least twice for perhaps two hours, more fuel was needed, together with a closed furnace. Brewers began shifting to coal in the early sixteenth century. The resulting process was more efficient: more was extracted from the malt and fermentation was more complete. This, together with the hops, accounted for beer's superiority to the ale of the time. But the lengthier production process means more circulating capital in this stage. And the additional fuel, additional and more specialised equipment — their output requires the investment of more resources, and more specialised resources in preceding stages of production. This, in turn, means more output of wood and coal, increased metal output in stages further removed, additional transport, and so on....

Innkeepers and alehouse-keepers continued to brew during this period, but professional brewing also developed. Wholesale brewers spread through the lowland areas during the sixteenth century and then, in the next century, into the west and north. In the latter region, however, many alehouse-keepers still brewed for themselves. In the 1630's, there were 500 wholesale brewers in the south and Midlands, and only 24 in the north. Many brewers had other occupations — they were also farmers, maltsters, apothecaries, tailors, glovers, etc. But, by the late sixteenth century, large full-time breweries had appeared. There were 26 in London alone, brewing 6 times a week and producing more than 6,000 gallons each. — For perspective: many small alehouses sold 30-35 gallons a week. — In the 1630's, one London brewery sold £11,690 worth of beer per annum, from over 300 brewings. London beer was shipped to the provincial ports, even in the sixteenth century. Brewers provided credit, sometimes substantial, to retailers: such debts could be up to half their assets. Wholesale brewing assured continuity of supplies to the retailer — brewers even provided extra to cover spoiling and leakage.

Investment Chains in Beer

Clearly, the expansion of beer-making means increased investment — larger quantities of goods-in-process — in this stage of production. With professional wholesale brewing, and the growth of large, full-time breweries, the quantities of such investment become very substantial indeed: in the far greater quantities of inputs used, the brewery buildings and equipment, the transport to supply alehouses, and the credit, ie circulating capital, they received, to hold the additional stocks for consumption. These items in turn become available through expanded investments in preceding stages. To produce more hops, grain, malt, yeast, requires more agricultural investments and investment goods — seeds, fertiliser, ploughing, harvesting, etc. More utensils require expanded production of metalware and of metal in the previous stage. More fuel means increased output of coal — cheaper than wood from the early sixteenth century onwards. More bricks or timber are needed for buildings, and more horses, wagons, carts, boats, at all stages for transport. This, in turn, means an expansion in horse raising, and in wood and carpentry for the transport equipment, together with the relevant labour skills; and so on. As the quantities and qualities of goods further removed from final consumption increase, so does the final consumption itself, in due course.

In this period, there were two strengths of ale but three strengths of beer: strong, middle and small. The latter was consumed in many households and at the lowest income-levels. Thus, even the poorest obtained an improvement in their daily drink. A range of different beers began to be produced from the sixteenth century onwards; some were very strong. The stronger beers were matured for a year before consumption. — Note the additional investment here: in storage facilities and in circulating capital. — In the seventeenth century, different provincial varieties appeared; some were even sold in London. — Even here, additional investment is needed: in transport facilities to move the different varieties around. — Finally, the yeast and mash were sold after use, the latter fed pigs. Thus, these by-products became inputs into other stages closer to final consumption.

Poverty, Baking and Brewing

John Hatcher feels that commercial production of bread and beer was an index of poverty in this period:

“To some extent the rise of commercialised baking went hand-in-hand with commercialised brewing as the poor, especially in towns, increasingly lacked the facilities and the fuel to cook at home”¹³.

Does this mean that when bread and beer were purchased, they were *more* expensive than the homemade variety? — bearing in mind all the ingredients, utensils, oven, fuel, etc, that were needed in domestic production as well.

a. Commercial bakers and brewers used coal fuel — the quantities of which were increasing to the point where it was cheaper than wood fuel. So unit fuel costs were lower in commercial production. *b.* All the ingredients for bread were now available in sufficient quantities so that bakers produced on a larger scale than individual households. The *inference* is that unit costs were lower in commercial baking, i.e commercial production was — at a minimum — cheaper than home-baking. *c.* The various inputs for beer were now produced in such large quantities that brewers operated on a massive scale as compared with the output of ale from innkeepers and households. Moreover, as we have just seen, beer was far superior in quality to, and cheaper than, the home-brewed ale that innkeepers produced, for example. Again it seems clear that purchasers of beer, including the poor, got far better value for money.

So if the poor (and others) bought bread and beer, this cannot be treated as an index of their poverty: note that they now had something left over, because both items were cheaper than with domestic production. In other words, all the inputs, including ‘fixed’ investments, involved in the output of bread and beer, were now produced in sufficient quantities to make specialisation possible — i.e. to start moving them out of the domestic sphere. Unspecialised home production was being replaced by specialised commercial production.

That the poor (and others) found it too expensive to make certain items at home is so obvious it cannot be missed. Far less obvious are the increase in the production of the inputs needed to produce these items on a commercial scale, and thus the appearance and expansion of commercial bakers and brewers.

3. Cloth

Cloth production was the single most important and widespread craft activity in England, during this period ¹⁴. We have seen already that some 170 different varieties were available, not only woollen, linen, hemp and silk, but also mixed fabrics, combining linen and wool, or linen and hemp, etc.

Wool

We begin at the raw material stage. There were two very broad types of wool: short and long. Short wool came from “fallow” sheep, who were integrated into grain-farming. There were 8 such breeds; their wools generally had to be carded. Women did the carding. Long wool came from “pasture” sheep, of which there were 5 breeds. This wool was combed. No breed, however, produced wool all

of one type; fleeces were only predominantly “short” or “long”. Wool-combing required the use of two metal combs and a small charcoal furnace to heat the combs. The work was relatively unskilled and done by men. The method of combing varied with wool type. Pasture sheep produced up to 12 pounds of wool, whereas arable sheep might give up to 4 pounds; the former grew rapidly in numbers. In addition, there were hill sheep whose wool was extremely coarse and hairy. Fell-wool was also used, from mutton sheep.

Wool producers first sorted the wool into very broad grades; clothiers and, later, wholesalers then sorted again into narrower and more specific categories according to the part of the sheep from which the wool came. Each such type went into a specific final product. Women did the sorting, which was a key step because it affected the quality of the finished cloth. Wholesalers then blended the different types of wool to produce a wide range of varieties, allowing clothiers to select the precise blends needed for their cloths. Thus, wholesalers dealt in wool from many different regions and of many different types. Clothiers, wool-combers, yarn-masters likewise sorted and blended wool, reselling what they could not use and buying in additional blends and types. Producers of coarse cloths resold the finer varieties of wool and vice versa. Jobbers and brokers also appeared, supplying both wholesalers and clothiers. London became a great entrepot, especially for fallow wool. London factors who sold cloth also supplied clothiers with wool and other inputs, such as silk and linen yarn and cotton wool; the latter in the late seventeenth century. Fell wool from the mutton areas also passed through London, en route to the blanket-producing areas. The provincial centres sold raw wool and bought blended types. Thus, there was a wide interregional exchange of wool, according to the various types and varieties of cloth produced in different areas. In addition, good quality Spanish wool began to be imported in the sixteenth century.

Preparation and Spinning

The blended wool was then prepared by carding or combing, depending on type. Hairy hill wool was combed with the older type of large comb, also used in preparing flax. Certain kinds of wool were dyed at this stage (see below) but, otherwise, the next process was spinning. A spindle and distaff were used or a spinning wheel. Evenness was vital, again for the quality of the cloth. East Anglian spinsters used spindles; wheels were used in all other regions. Such wheels led to new spinning methods which could utilise weaker types of wool. Around 1550, a pedal, flyers and bobbins were incorporated into the wheel design; double wheels were also produced. Output increased because both of the spinner’s hands were now free to deal with the yarn. Flax

and hemp were also spun. A sort of spinning frame for linen, jersey and silk yarn seems to have been used in the early seventeenth century. There were scores of different types and grades of yarn, according to the type and quality of cloth. Payment was by weight, the rate varying with the fineness, the type of cloth to be produced, and whether the yarn was warp or weft.

In many areas, yarn-masters emerged, who maintained spinning houses, often widely dispersed. Spinners were paid piece-rates, and provided with combed wool and spinning wheels. But, where carding wool was used, cards were often also supplied and the wool prepared on site. A cartload a week could be dispatched to just one such house. Spinners often bought and carded wool themselves, then sold the yarn to clothiers at weekly markets, or else took wool and returned the yarn. Travelling yarnsmen also supplied wool and bought yarn in villages. Spinsters also worked at knitting, lace-making, fruit-picking, gardening and woad-making. Spinning was often done by the female members of clothiers', weavers', craftsmens' or labourers' households. In Suffolk and some other areas, the spinning was put out to farmers who dispersed the wool amongst their female relatives and servants.

Weaving

The next step was weaving. Horizontal looms, which were set up permanently in a shed or room, replaced vertical looms, which could be easily set aside. These looms were narrow; broad looms then came in. A single loom with a weaver and apprentice, produced as much as two narrow looms with a weaver each. But, the narrow type was necessary for more intricate work. Blanket looms were next; they were twice the width of broad looms. Two looms were also specific to a particular fabric: kersey and velours. The latter appeared in the mid-sixteenth century, as did complicated draw looms. These were twice the cost of pedal looms, but capable of highly intricate pattern-weaving. Setting the pattern was complex and required much skill; the operation after that, relatively simple. In the early seventeenth century, an improved engine-loom was developed. It wove several lengths of ribbon or lace at the same time and required skill to operate. By the late seventeenth century, its price had fallen and it was adapted to plain weaving.

The weaving process itself was organised variously. In some parts of Cheshire, the west Midlands and the west of England, a three-way partnership was set up amongst farmers, weavers and fullers, the latter two being part-time farmers themselves. Farmers supplied yarn to weavers, fullers finished the cloth, and the proceeds were split amongst the three. In upland areas, where coarse cloth was produced, farmer-weavers bought and prepared the wool and

undertook the spinning and weaving. Merchants in the valley towns then finished the cloth and sold it. In parts of the West Country too, weavers were part-time farmers; they brought yarn from spinsters or yarn-masters. Here there was much greater separation of wool-comber from yarn-master. Merchants again finished and sold the cloth. Weavers also rented looms; many owned a narrow loom, selling the cloth for themselves. Some contracted out the warp.

Many clothiers owned a fulling or a mosing mill (see below) and were also farmers. In the area around Leeds, clothiers dealt with all processes, except for some of the spinning and the fulling. During the seventeenth century, merchants sold cotton wool and linen yarn to weavers, buying back the fabric. From around mid-century, merchant-draperies provided warped yarns to weavers, then finished the cloth in their workshops or put out the various processes, before selling the output.

In certain areas, for certain types of cloth, clothiers supplied the yarn to weavers, and then had the cloth fulled before sale. Other clothiers put out both spinning and weaving, retaining only the wool supply and the finishing stages in their hands. Generally, the simpler fabrics were put out, but clothiers or master-weavers made the more complex fabrics in their own workshops, under their supervision. This was true of many different types from various areas — eg. dornicks, blankets and tapestry from the East of England, medleys and florentines in the West. For some fabrics, such as jerseys or some mixed textiles, the weaving became standardised, and these cloths were then put out. In many regions, clothiers might have one or two looms in their workshop and rent out a number of others. Depending on the area and fabric, some workshops might have up to 10 looms. Some clothiers collected the output of smaller clothiers to sell with their own.

East Anglia and Kent had a wide variety of conditions. Weaver-farmers kept a few cows and farmed a few acres. Some weavers here specialised in striking the weft into the warp. Norwich produced over 20 types of mixed fabrics with silk, and had specialists who worked with drawlooms. Linen bleaching was also specialised, and linen rose in importance relative to worsted. Some East Anglian wool-combers were also brewers and maltsters. Smaller wool-combers ran shops or market gardens or kept cows. And, in Kent, weavers were specialised, but clothiers were also farmers.

The Finishing Processes

After weaving, carded woollen cloths were fulled. This could be by foot, which was expensive, or at a fulling-mill run by water-power. Many types of

cloth had their nap raised and sheared. Mosing mills were developed for the first stage of raising the nap. Each mill did as much work as 8 hand workers but needed only a man and a boy. Certain types of fabric were calendared — pressed under rollers. In the mid-sixteenth century, hot-pressing with a charcoal-burning screw-press was developed. Most cloths were cold-pressed, however.

Mixed wools had to be dyed before spinning, as did wool in hard-water areas, as the cloth itself dyed unevenly in the circumstances. The wool was degreased with wood ash, supplied by specialist ash-burners (who also supplied soap-makers, linen-bleachers, etc). Otherwise, the unfinished cloth was dyed. Specialists were needed to dye a cloth blue, black or green. Otherwise, some 25-30 colours and shades could be achieved. Dyestuffs included woad, madder, weld, logwood, gumlac, copperas, steel powder, vitriol, potash, vinegar, lemon juice and verdigris were also used, mostly in combination with other materials. Many dyestuffs were imported. To make the colours fast, mordants were needed; these included alum, argols, bran-water and galls. Blue dyes required a copper vat; red dyes a pewter one. Up to the mid-sixteenth century, wood or charcoal heated the vats, then the cheaper mineral coal was used. A continuing supply of water was essential. Coventry and Norwich became finishing centres for cloths from a number of areas around.

Other Products

In addition to cloth, hosiery, ribbons and lace were widely produced. Knitting needles were wooden and knitting with four needles spread from the late sixteenth century onwards. Around 1589, a metal knitting frame was developed, with up to 360 needles. It came to be used in many Midlands towns, where hosiers rented out knitting frames. Master-knitters appeared after about 1650; they had workshops with several frames.

Some jersey hand-knitters also had cows, sheep and 10 acres of ground. Some knitters bought wool, others received yarn from merchants. Hosiery-making was a major industry in several areas. It spread to the north-west, the west and to Suffolk. East Anglian hosiers were also dyers, haberdashers, farmers, wool-combers and shopkeepers, sometimes combining three occupations.

Around 1600, a knitting frame for silk stockings was developed, then improved and extended to other items such as silk purses. Silk-knitting now spread to Derby and Nottingham. Many towns had silk-knitters producing clothing to order. Finally, small tabletop looms were used for making lace and ribbons by women, children and the infirm. The occupation was especially widespread in the south Midlands, the south of England and parts of the west.

Finally: practically all clothworkers, in all branches, supplied harvest labour.

Investment Chains in Cloth

Very substantial quantities of work-in-progress are found in these successive stages of production: wool, yarn, cloth on the loom and stocks awaiting distribution; and there are a very large number of different types of wool, yarn and cloth. The inputs from preceding stages of production include wool. The interregional wool trade was outlined earlier; some more detail is given here ¹⁵. From the early sixteenth century onwards, the wool trade both grew in size and became increasingly specialised. At first, small dealers who were often also farmers supplied the, mostly small, clothiers. But, as the wool supply expanded and regional varieties developed, the numbers of dealers increased even more and wool sorting became vital. Larger wholesalers — the Staplers — divided their time between London and particular counties. They bought various quantities, large and small, but sold wholesale. Glovers and other leather dealers now grew more important as they purchased larger quantities of sheepskins. The glovers of the central and east Midlands were amongst the larger wool dealers. In the seventeenth century, specialist fellmongers appeared; they also dealt in fleece wool. As wool types increased, clothiers became significant secondary dealers.

Wool growers generally sold their entire clip to a buyer or a partnership. Large sellers sold on credit, smaller ones for cash. Wool dealers gave credit to clothiers. Buyers often collected the wool in instalments, but sometimes removed it all shortly after purchase. From the dealer's warehouse, the wool went to the provincial market or to London for sale. The largest storage capacity was at Leadenhall in London; warehouses also sprang up in Southwark and Bermondsey. Private rooms were also rented for storage.

Again, there are very substantial quantities of goods-in-progress and other investments in this stage of production: not only stocks of wool in dealers' (and growers') warehouses, and in transit, but also the warehouses and storage facilities themselves, together with the transport investments. Other capital investments in cloth production — looms and other equipment — are likewise products of preceding investment stages. To begin with wool preparation: wool-cards had metal teeth on a leather-and-board backing, while wool-combs were metal and used fuel for heating. Expansion of wool supplies required increased quantities of both cards and combs, but, as pasture wool rose more rapidly, many more combs were needed. Thus, more metal, and also more leather and wood (for cards and charcoal fuel) were produced in preceding stages. Turning

to **other equipment**: spinning-wheels, spindles, looms, shuttles and spools — all required wood together with the skills of turners, wheelwrights and engravers. Wymondham, Norwich, Leicester and Tewkesbury were amongst the places producing spindles and spinning-wheels. Bobbins, spools and shuttles were made in London, Reading and in several towns in the South. Loom-making was widespread — eg. in Exeter, Canterbury, Colchester, London, etc. Loom parts were available ready-made — an indication of the quantities used. Master-weavers might make their own loom frames and buy other parts. Other equipment, such as fulling mills, were also wooden with some metal parts.

Wool-combs, finishing presses and knitting frames, were the work of metal-smiths. Combs were made in Leicester, Norwich and London; Leicester also made wooden knitting needles. Knitting frames were produced in Nottingham and London; the latter had over a hundred needle makers in 1635. Midlands towns also produced knitting-frames.

These investments in workshops, materials, tools and labour skills were all necessary to provide and sustain increased cloth production in the next succeeding stage.

Turners, as we saw earlier, also produced furniture. Employment of their skills, workshops and materials in this stage, further removed from final production, means a further addition to the flow of final outputs. We also have here another instance of capital goods (and skills) that are utilisable in more than one stage of production, ie that can contribute to more than one link in the chain of investments.

4. Leather

The production of leather and leather goods ¹⁶ was obviously more prominent in the livestock areas, such as the West of England, the Midlands and parts of Lincolnshire and Suffolk, and in meat-consuming centres like London and Norwich. But, leatherworkers were naturally found in practically all regions, and in most provincial centres, leatherworking was significant. Thus, Stamford, Reading, York, Beverley, Kendal, Durham, Nottingham, Leicester, Northampton, Bristol, Gloucester and Exeter, among others, contained large numbers of leatherworkers. Most areas had a tanning industry and produced heavy leather goods. But there was also growing regional specialisation. We have seen that the West of England specialised in light products — gloves, bags, purses, belts — for national sale. Imports from Ireland added to the output of light leather here. Parts of Suffolk produced good quality tanned leather, sent to London for manufacture. Northampton leather too went there. In turn, hides and skins from London went to Reading and to Hull, to supplement

local supplies. Rawhides also went to Faversham, and north-east Kent, with finished leather returning to London. In London in the early seventeenth century, there were well over 6,000 leather craftsmen of all types. Bermondsey and Southwark alone had some 80 tanneries.

Two types of leather were produced: heavy and light. The first was used for such hard-wearing items as shoes, horse collars, leather jackets, pails, bellows, saddles and harness: i.e for both consumer goods and production inputs. The second went into light items already mentioned. Tanning heavy leather required skills and judgement. The hides were prepared, then soaked in pits: first in lime, then in various nameless substances, then in ever-stronger oak-bark solutions. This last took from six months to two years. Judgement was needed in deciding on transfers from one stage to the next. Oak-bark was obtained from specialist suppliers — tanners or woodworkers. The “crust” leather went to the currier who added oils and finished the leather to requirements. This was also skilled work. Curriers generally dealt in leather. The last stage was shoemaking or the production of other heavy goods. As finishing covered up defects, these workers generally bought the “crust” leather from the tanner and then passed it on to the currier. Each of these three stages was fully specialised, ie they were never combined (there were no currier-shoemakers, for example). Light leather production was much shorter: it took a few weeks. The hides were smoked, then “dressed” in oil or “tawed” in a paste of alum, salt, etc. In all cases, the value of the goods-in-process — the hides being tanned, the light leather, and the finished goods awaiting sale — exceeded the value of tools or buildings and pits.

In Suffolk and the West of England, the leatherworkers were agriculturists as well. The production of light goods was often a by-employment, which gave additional income to the poorest, especially in the West and the north. There were also master-glovers with their own workshops and workmen. They used the leather themselves, sold some to part-time workers and sent some to London.

Capital Combinations and Investment Chains in Leather

Clearly the supply of hides and skins depended on the size of the livestock herd: as quantities grew, so did the supplies of rawhides. Their conversion into leather and leather goods required the addition of other complementary inputs. Oak-bark depended on the cutting-down of trees for other purposes: for fuel or for woodworking. With the expansion of agriculture and of transport services, there was certainly a demand for harness, saddles and horse collars. So too, expansion of metalworking would mean a demand for bellows. The

leatherworking tools needed for all these outputs, would come from the metal-smith, with the metalworking industries supplying the main inputs. Regional specialisation required transport facilities.

Thus, leather industries were tied into the growth of production in other areas; and leather products went both into final consumption (footwear, clothing) and into production processes much further removed (harness, bellows). The size of the stocks of leather goods — from hides in vats and smoking-sheds, to completed products — is a pre-condition for the output of leather products. A continuing flow of the latter requires a continuing replenishment of the former.

5. Salt

Salt was used for both industrial and consumption purposes¹⁷. Fine salt for the table and for dairying came from the Cheshire and Worcestershire brine springs. This was an old-established industry, working on a small scale. Coarser grades of salt were imported, up to a little after 1550, from nearby regions on the western coast of France and from Spain; in both areas it was produced through solar evaporation. Coarser salt was an “input into scores of industries”¹⁸. These types were used, *inter alia*, in preserving fish and meat, curing leather, and for other industrial purposes. The prices of such imported grades of salt rose steeply from mid-century as a result of various political activities in France. Subsequently a new, technically advanced industry developed very rapidly in England, and then a much smaller one in Scotland.

This new industry used much more capital with significant economies of scale. Substantial buildings were erected with channels to bring in seawater which had to be boiled, as natural evaporation was not feasible (except in Lymington — see below). Cheap fuel made large-scale operations possible — mineral coal was used in special furnaces, along with numbers of large, expensive iron pans. These quickly deteriorated when they were not in use, so they had to be replaced frequently. Other inputs were blood and eggwhite, added to create chemical reactions. Saltworks of this type employed up to a hundred or more workers, but fuel costs came to over half the total.

The usage of salt for all purposes tripled in England between 1550 and 1700. Salt production expanded steadily from the end of the sixteenth century, near the North-eastern coalfields. Total output almost doubled from around 7,650 tons in 1605 to around 14,800 tons or so in 1644, while the number of pans rose by approximately 21 percent — that is, output per pan rose by 60 percent, from 50 tons of salt in 1605 to 80 tons in 1644. In the North-east in the late sixteenth century, there were an estimated 125 pans. This number rose to

153 in 1605, and then to around 180-190 working pans in 1644, plus another 20 or so in Northumberland. In South Shields, the numbers were put at 121 in 1667 and 143 in 1696, but their capacity was even larger. Salt pans were also established at various points around the coast where coal was handy. The brine springs in Cheshire and Worcestershire continued, of course; here too producers switched to coal fuel in the later seventeenth century, even though it had to be carried over long distances. Because the springs were so saline, much smaller quantities of coal were burned per ton of salt produced. Finally, salt was produced through evaporation at Lymington, on the Hampshire coast. A really sunny summer might mean some 3,000 tons, but a bad summer meant practically no output at all. Scottish production in the late seventeenth century is now estimated at less than 6,000 tons.

Gloucester was an important centre for distributing salt throughout this period; Liverpool became so in the later seventeenth century. Salt went from the three major producing areas *via* the coastal trade to the fishing ports, e.g. Bristol and those in the South-west; the butter ports; and, of course, London. The other, smaller, coastal pans mostly supplied the surrounding areas.

During the later seventeenth century, many saltworks were damaged in the Civil War. The French salt industry revived and imports from Scotland increased to some extent, as costs, including wages, were lower. Many English saltworks closed down; the fine salt from Worcestershire and Cheshire rose as a proportion of English output. The output of fine salt itself increased, of course, paralleling the growth in butter and cheese production and the rise in population.

Investment Chains and Salt

In salt production it is clear that large quantities of inputs had to come in from previous stages of production — i.e. outputs there had to expand: iron pans; coal; fire-bricks or stone for the furnaces; bricks or stone for the buildings and the channels. Coal had to be supplied almost continuously; iron pans frequently. The buildings, furnaces and sea-channels needed repairs, maintenance and eventual replacement. To do all this, more labour, tools, equipment and materials had to be used in earlier stages of production. Iron pans needed iron, skilled labour, tools, coal fuel, furnaces and workshops; coal required labour and equipment; bricks had to have brick-earth, kilns, coal fuel, labour; — and so on.

After the salt was produced, it had then to be transported and distributed to industrial users and to consumers. Amongst the former: after the salt was utilised to preserve fish and meat, these foodstuffs in turn had to be transported

and distributed to final consumers, especially in the inland areas; — the preserving was mostly done in coastal regions. Another instance: salt went into the production of light leather, which was turned into such items as gloves, belts, purses, bags, clothing, etc. Output from the West of England, as noted earlier, was sold in other regions. Elsewhere, the light leather goods were then sold directly to consumers. Thus salt was utilised as part of various capital combinations at various stages in the production processes leading to various final goods.

C.G.A. Clay says that in salt-making the replacement of wood by coal certainly *looks* as if producers were trying “to maintain their profits by switching to a cheaper alternative”. But the circumstances of the changeover demonstrate that the reality is otherwise:

“the adoption of coal involved the creation of an entirely new industry producing a quite different product from the old small scale wood burning one, and aimed at capturing markets formerly satisfied by imports”¹⁹.

Did entrepreneurs aim at *losses* then, when they set up their large new salt-works? — Precisely *because* circumstances *do* change, the search for profits and the avoidance of losses have to be constant and universal.

6. Starch

Starch was a complementary consumer good — used for clothing and for household fabrics²⁰. Many of the newer varieties of textiles *had* to be starched. One small indication of the scale of purchase: in 1638 a housewife in Hereford bought starch in 12lb packs.

Production of starch required a shed or workhouse, easily put up in a garden or yard, together with tubs, special draining troughs, barrels, trowels, a baker’s oven, a stove, a small furnace, bricks; and wheat, rock alum, pump water, clear water, and, of course, labour. The entire process took more than a month, and involved two separate steepings of the ingredients; five separate rinsings; two drainings; two separate ‘cold’ dryings — once on cold bricks; two separate ‘hot’ dryings, with oven and stove; and an intervening stage in which the starch was cut from tubs with sharp trowels. As with other industries, charcoal or wood fuel was first used, then it was replaced with mineral coal, by the early seventeenth century.

Starch making was an urban occupation, pursued in towns in the wheat-growing areas, and also in the outer suburbs of London. It was a sizeable industry — even government officials felt, by the late sixteenth century, that it employed too many people to stop production altogether in those periods

when wheat production declined. By the beginning of the seventeenth century, there were already very large producers — the “better sort of starch-maker” — as well as innumerable smaller suppliers, many of whom were financed by separate — and substantial — investors.

The very largest producers, at the apex of the industry, were found in London, King’s Lynn and Norwich. Bristol and Gloucester were major centres, and there were also substantial numbers of starch-makers in Wisbech, Ely, Peterborough, Oxford and Northampton; Newcastle and Berwick had much smaller numbers. There are some indirect indicators of the quantities produced: Sometime in the seventeenth century, forty horse-loads of starch were sent every week from Norfolk to Nottinghamshire, Staffordshire, Lincolnshire and Yorkshire; Norwich specifically was said to supply Staffordshire and Yorkshire regularly. Between 1594 and 1601 it was conjectured that 600 cwt of starch was sold weekly in London. In 1612 it was estimated that one starch house used 1500 quarters of wheat in less than a year; other starch-makers were said to use 40-50 quarters per week. In 1621, one Thameside starch-maker kept 200 pigs on the waste bran. Another was forbidden to produce for 23 weeks and so his pigs starved.

As mentioned, the number of producers was large enough to draw the attention of government officials. In 1607, a proclamation declared that magistrates should license starch-makers; in 1608, permission was given to use imported damaged wheat; in 1610 a proclamation complained that inferior persons were using starch — i.e, far down the social scale, people were starching at least their collars; in 1610 domestic manufacture was forbidden, despite the numbers employed, but in 1619, illicit manufacturers were licensed — an indication of the (lack of) success of the prohibition. Another proclamation in 1610 also complained that local officials were lax in enforcing licenses — a further indication of the scale of the industry and its importance in specific areas.

Investment Chains in Starch

The quantities of starch produced regularly are another confirmation of the level of wheat output: sufficient was produced to make it possible to produce starch on this scale. Official complaints about the low social level of people using starch is another indicator that enough wheat was available on a routine basis to make a habit of this small improvement in their clothing. Apart from wheat and fuel (mentioned above), starch making required various utensils — wooden and clay; small trowels, and bricks, as well as a shack. So preceding links in the investment chain involved carpenters, wood, potters and clay, as also the necessary tools; carpenters and potters would produce items for this

industry as well as for other industries, besides consumer items for direct use. Again, labour, tools and raw materials are utilised to produce goods used in more than one stage of production.

7. Soap; Candles

In the early sixteenth century much soap ²¹ was made in the rural household, from tallow and ashes. Good quality soap was made commercially in Bristol from imported fish and whale oil; London and Westminster were other centres for soap production. The best soap continued to be imported from Castile, where olive oil was used in its manufacture; and an attempt was made to produce similar “hard, white soap” in England in the 1560s.

As the production of its inputs rose in England, soap output expanded. Soap was made from various combinations of ashes, potash, flax-seed oil, other types of seed oils, and pig fat. Its manufacture involved the handling of large volumes of liquids, which required large vats or other vessels, and specifically-built or adapted premises. At first, charcoal was used as fuel for soap-boiling; then, as quantities increased, mineral coal was used exclusively.

Investment Chains in Soap-boiling

The production processes that preceded soap-boiling included the manufacture of vats and vessels and the erection of special buildings or adaptation of existing structures. The other such processes depended on other inputs, of course. Thus oilseeds were crushed in mills to extract the oils; mill-making and the growth of oilseeds preceded this process. Potash was made by soaking vegetable ashes in water, then boiling the mix in iron pots until the liquid evaporated, leaving an insoluble residue, which was passed onto soap-boilers. Specialists ashburners supplied potash and other ashes. Bacon fat was rendered. Thus fuel and utensils were also needed in producing potash and pig fat; so charcoal-burning and then coal-mining and their preceding investment chains linked into both soap-boiling and the production of at least two of the inputs used. Metalware production and its preceding investment chains were similarly linked in. — Here we may note again how vital it is to see *where* in the investment chain the various investment goods and capital combinations are used, as Menger and Hayek both underline.

Soap was produced commercially wherever its inputs were available, of course. It was also sent to other regions from the bacon-producing areas in the south-west, west and north of England, and from Suffolk; it was transported with the bacon. In 1631, soap-making was ‘patented’; soap-boilers had to be ‘licensed’. This led to an uproar in London and Bristol; the Bristol soap-boilers

continued their agitation for the rest of the decade. Soap and starch yielded substantial revenues to the Crown until parliament abolished monopolies and then introduced an — unpopular — excise tax on a range of mass consumption commodities in 1643.

Candles were made and sold in this period by chandlers, who used coal fuel to boil up the tallow. (They also sold tallow and coal, amongst all their other items)²². Thus this production stage used tallow, utensils, a furnace or stove, and coal. The tallow was rendered, which in turn required utensils and fuel. Thus the metalworking and fuel industries provided inputs at two stages in the process, and the investment chains producing metal utensils, coal and wood fuel, all linked into the production of candles.

8. Glass

Glassmaking²³ demonstrates a clear and distinct, virtually dramatic, improvement in quantity and quality between the earlier sixteenth century and the rest of the period. Up to around 1567, there were a very few part-time glassmakers in the Sussex Weald and in parts of Staffordshire, where the necessary inputs could be obtained in combination: wood fuel, sand, potash, clay for crucibles. These part-time producers were also farmers, and archaeological and other evidence shows that their — part-time, less specialised — outputs were of relatively poor quality: the glass had variations in colour, weathered easily, contained numerous impurities and imperfections and there was much waste in the production process. But from the later sixteenth century onwards, the various inputs needed to rebuild and newly build houses were produced in larger and larger quantities, so there was scope for more and more glass to be used. An increase in the quantity and quality of window glass enabled newer architectural designs to be realised, with many more windows than before. In addition, some 15 to 16 furnaces producing green glass for drinking vessels and apothecaries' wares operated in the sixteenth century.

Improvements in glass output came after 1567, when an Antwerp merchant and his Flemish, Norman, and Venetian associates were awarded a 'patent' from the City of London for the manufacture of window glass in Sussex and crystal glass in London. — This was a 'patent of monopoly' (see below). — Highly skilled craftsmen were recruited from Flanders, Lorraine and Venice and by 1580 the Weald contained numerous independent producers from Lorraine as well, who simply ignored the 'patent'.

The archaeological evidence demonstrates that the outputs of these full-time, specialist, highly skilled producers were clear and transparent, free of impurities, consistent in quality, easily worked, and there was far less waste.

Full-time specialisation meant better selection of raw materials and of the waste glass which was re-used. Furnaces were much better designed with a change in construction: additional wings where the preparatory stages were carried out. Thus these furnaces required additional stone and clay (for roofing). Overall, more output of better quality was obtained from a given quantity of fuel. In the lower Thames area, the price of window glass declined by 23 percent between 1511-20 and 1611-20; while in Oxford and Reading prices rose by 22 percent, and in Cambridge and the surrounding areas, prices rose by 17 percent, between 1501-10 and 1611-20. By 1591, all window glass was made domestically; by the later 1620s, all bottles; by 1635, all drinking glasses and mirrors.

Expansion and improvement in glass-making occurred, of course, *pari passu* with the growth of all the *other* house-building inputs. Between the late sixteenth and the early seventeenth century, cheaper and better glass was produced throughout the South and the Midlands. Thus from the late 1580s onwards glaziers are found, for example, in Leicester and in smaller Midland towns, serving fairly wide areas. Between 1580 and 1620, in Yorkshire and Nottinghamshire, glaziers spread from the few larger to the many smaller towns. Archaeological evidence and parish registers show that glass-making spread through north Yorkshire from 1580 to 1600; it was found in Lancashire by 1600 and through north-east Cheshire between 1603 and 1644.

Thus the use of window glass became more and more widespread. By the beginning of the seventeenth century, output had increased to the point where glazed windows were commonplace in the South and the Midlands: in all regions they reached far down the socio-economic scale — smaller gentry and farmers, even in the north, installed glass windows.

Fuel in Glass Production

Glassmaking employed exactly the same type of wood fuel, in the form of billets, which was used domestically and in a range of other industries. Some landowners built glassworks to utilise timber which was otherwise unsaleable. Where wood was purchased, the cost of a year's fuel exceeded that of the furnace; next after fuel came the wages of skilled craftsmen. As domestic use and that of other industries expanded, the cost of wood fuel grew substantially. Between the 1530s and the 1640s, the price of wood rose 500 percent. The Wealden industry relied on beech, which was becoming even scarcer. Around the beginning of the seventeenth century, a new type of clay crucible was developed which allowed cheaper mineral coal to be used. These furnaces were much larger, costing several hundred pounds to erect, from the mid-seventeenth century onwards. Technical problems also had to be overcome: wood

fuel provided pure wood ash, but the bought ash was contaminated. From the 1620s onwards, glassmaking expanded near the coal areas of Staffordshire, the North-east, and other regions where cheaper coal fuel was available.

Production Chains in Glassmaking

Thus to expand and improve the output of glass, more inputs were used from preceding stages of production: more stone and clay for furnaces; clay for crucibles; coal; sand; potash; etc. To produce larger quantities of these inputs in these earlier stages, more tools, equipment, materials and labour, both skilled and unskilled, were employed and utilised there.

Glassmaking and Other Monopolies

With regard to the change from wood to coal in glassmaking, the effects of the ‘monopoly’ patent of 1614 have to be separated out. A ‘monopoly’ meant the grantees paid a lump sum to the Crown or made payments during the life of the grant. They recouped themselves — and more — from ‘licensing’ fines imposed on other producers or by closing them down. In effect, this was a method of indirect taxation which evaded Parliament, tapped into the expanding economic activity of the period, and gave the tax-collecting producers — the ‘monopolists’ — a substantial additional income either from the taxes collected or from removing competitors.

In 1614 a patent was issued which gave the ‘monopolist’ the exclusive right to manufacture glass. This patent also banned glass imports and the use of all other fuels except coal. Sir Robert Mansell of the Salters’ Company eventually obtained the patent in January of 1615. It took some time before the proper techniques were developed and cheaper coal in fact became usable. Mansell was only successful when he transferred the glassworks to Newcastle-upon-Tyne, near the coalfields.

Not all wood-burning glassworks faced rising costs at this time — e.g. one landowner sought exemption because his timber had no other use. But for all other glassworks, the writing was on the wall; coal was already replacing wood fuel in a range of industries where fuel was heavily used and the switch was possible: “in the production of lime, bricks, . . . , soap, starch, alum and copperas, in malting and brewing, in dyeing”, in sugar-refining and salt-making. It took Mansell just short of four years to close down the Wealden glass industry in December 1618, and it was only around 1625 or so — some *ten* years after he started operations — that the industry became confined to coal-fired glassworks only. Mansell had issued licenses for some nine (known) glass-works. Glass prices remained steady between 1600 and 1650, i.e. both before and after

the patent. This indicates that by 1615 wood-burning glassworks were already being squeezed between rising costs and constant prices, and the squeeze continued thereafter. In other words, during the decade when the coal-burning monopolist was exercising coercion (see below) against wood-using glass manufacturers, the latter were already caught in a closing vice — rising costs of wood fuel and steady glass prices.

C.G.A. Clay says that in glassmaking the change from wood to coal “certainly give[s] the appearance of attempts by producers to maintain their profits by switching to a cheaper alternative”. But (he says) the reality is different: when the actual circumstances are examined, this change occurred “not in response to economic logic, but because of state intervention [...] the old wood burning industry was destroyed not by competition but suppressed by legal sanctions”. Thus the “Wealden glass industry, which had...been for a while the country’s largest producer, was completely destroyed..., as a result of state intervention”. Clay states that the glassmaking monopoly was awarded “essentially for fiscal reasons”. However (he says) it was amongst those monopolies that “were... granted for sound economic reasons”; the “manufacture of [...] window glass [was] in some measure owing to the encouragement [that] entrepreneurs received from their monopoly grants”. — Clay distinguishes such grants from monopolies of “goods in general use” — these monopolies were only a means of raising revenues; they “provided no...stimulus to economic activity”²⁴.

Now with “products already in general use”, the operation and effects of the monopoly grant are glaringly obvious: the grantee collected far larger sums than he paid the exchequer for the ‘patent of monopoly’ or else he obtained his additional gains by closing down his competitors. In glassmaking the situation was exactly identical — indeed, the monopoly was “essentially...fiscal...”. But here a further, specific, circumstance formed part of the patent: the use of wood fuel, which happened to be technically outmoded, was banned, because the monopolist used coal — which happened to be technically advanced; only coal fuel was permitted. No such circumstance existed — by definition — with “goods in general use”²⁵. So in these instances the effects of the monopoly could hit the observer right in the eye: the monopolists flourished by burdening their competitors or removing them altogether. But in glassmaking it just so happened that the monopolists used coal while their competitors used wood fuel. So the monopoly coincided with this technical change. *However*: the grant of monopoly could neither cause nor remove the high and rising costs of wood nor the cheapness of coal. A new clay crucible eventually allowed cheaper coal to be used in glassmaking. Thus the monopoly gave the grantees additional unneeded gains, beyond their eventual legitimate returns from using coal.

This underlines the point that the operation of the monopoly is quite distinct and separate from the specific circumstances of the monopolised industry. In *all* such industries ‘state intervention’ obtained tax revenues, while helping monopolists to gain a greater income, either by taxing their competitors or shutting them down. In order to comprehend the effects of a monopoly grant we have to identify and separate *both* this outcome of a ‘patent of monopoly’ *and* the particular circumstances of the individual case. The two sets of influences do not come with neat labels tied round their necks. It is necessary to recognise explicitly that *two* distinct factors *do* operate simultaneously in the one situation. In glassmaking — exactly as in *any* ‘monopolised’ industry — the monopolists received *unnecessary* returns from their monopoly. Because they happened to use coal fuel, the monopoly patent reserved glassmaking to coal fuel only. Thus the monopolists were able to give the appearance of promoting advanced technology and removing old-fashioned wood fuel. In fact, of course, the monopolists were simply attempting to *close down* their competitors. Thus Clay focuses on surface appearances and says — in effect — that taxation stimulated this economic activity. But in the taxation of “basic necessities”²⁶, there could be no such technical fig leaf. So he is quite clear that these taxes raised revenue only.

9. Lime

Lime was obtained through the burning of chalk or limestone²⁷. Its output increased substantially, especially in the seventeenth century; it was used in the construction of brick or stone buildings, and also as fertiliser. Up to about 1560, lime was not much utilised in agriculture, but its use began growing thereafter; it accelerated after 1590. Lime was used almost universally in areas with acidic soil in the seventeenth century.

Lime was produced mainly in densely-settled agricultural areas and near towns; most had one or two kilns. Lime was also transported from producing areas, which had specialist lime-burners, to those farming areas that lacked kilns. Lime-kilns very early began using coal and so their size increased for technical reasons. The largest kilns approached those of the iron industry by the later seventeenth century and required nearly as much investment: Thousands of lime-kilns had been erected by then, especially in regions with both coal and limestone and near water transport. Most kilns were small and many were only set up temporarily by farmers. But others were massive and permanent: in north-west Kent, in outer London, near Newcastle and a few large towns.

In lime-burning as in other products, we find an increase in inputs from earlier stages of production: increased mining of limestone and chalk, as also more fire-bricks and stone for the larger coal-burning furnaces, and the greater number of furnaces of all sizes.

10. Metalwares

A wide range of metal goods were produced by the late sixteenth century; this range expanded further through the seventeenth century. Metalsmiths produced both consumption and production items. The following are collected from the inventories of a retail ironmonger in a Staffordshire market town and a wholesale dealer from the West Midlands, both from the later seventeenth century²⁸.

a: Household goods: Frying pans; dripping pans, with and without handles; 'sause' pans; 'little tin pans'; tin pots; other types of pots and pans; 'tin covers'; forks; tin dredgers; colanders; tin measures — pint and quart; mortars; chafing dishes; broiling plates; other dishes and plates; washing bowls; 'smoothing' irons; 'box' irons; warming pans; fire shovels and tongs; fire-ends; candlesticks; lanterns — tin and other types; hooks; hinges — six types; locks — nine types, one type could be varnished or unvarnished; latches and catches; springs; dog chains.

b: Harness and stock: Spurs, stirrups; horseshoes; curry combs, mane combs; bits, snaffles; buckles; horse-bells, sheep-bells.

c: Tools and equipment: Scythes; sickles; billhooks; shovels; whipsaws; 'framing' saws; files; punches; blades; hammers; anvils; nails; chains; iron rings.

Some 75 different items were stocked in the wholesaler's warehouse in Exeter; his London warehouse was a little more specialised, it contained large stocks of more than nineteen items.

Production of the various types of metalware was already specialised and localised at the beginning of the sixteenth century; it became increasingly so over the early modern period. Sheffield and certain of its adjacent parishes in south Yorkshire and north Derbyshire specialised in cutlery. Other parishes in 'Hallamshire' produced nails, scythes and sickles (the last two in north Derbyshire). The West Midlands — parishes in south Staffordshire, north Worcestershire and west Warwickshire — produced a variety of household and production goods; eg, locks, pots and pans, plates, bowls, hinges, hooks; bits, stirrups, snaffles, buckles; scythes and nails.

Cutlery for mass consumption was made in and around **Sheffield** ²⁹, as just mentioned. The parishes concerned fell into the estates of the Earls of Shrewsbury; they were known collectively as ‘Hallamshire’. Right through the period, Sheffield township made better-quality items; rural parishes made cheaper products. In 1672, nearly two-thirds of all metalworkers were found in these rural areas. London cutlers produced luxury items. Cutlers’ marks began to be registered from at least the early sixteenth century with the Earl of Shrewsbury’s court. In 1578, the Sheffield area had some 60 registered cutlers’ marks, of which 39 belonged to knife-makers and 17 to ‘craftsmen’. In 1617, the registered total had risen just over three times, to 182 — an indication of the growth in output.

By the 1580s, chapmen carried Sheffield knives across the realm; they now had a national reputation. Cheap multipurpose household knives were largely produced, as also paring-, carving-, and pocket-knives. The handles were mostly bone and wood; horn and brass were not much used until the seventeenth century, when their use increased. Up to the late seventeenth century, forks and spoons were kitchen items, then, as output increased, they moved to the dining-table.

From the 1570s to late in the seventeenth century, London cutlers, who were mainly immigrants, produced all the highest-quality, most expensive knives. These were decorated with silver and panelled; their handles were of agate, amber, ivory, and bone; these too were highly decorated and elaborately made. By 1625, Sheffield cutlers also produced such high-quality items rivalling those of London; Sheffield cutlers illegally copied London marks to ensure sales. Thus in 1616, one cutler already had a quantity of ‘oliphant’ — i.e. ivory — in stock for handles. With top-quality knives, the officials of the Cutlers’ Company required that only the precious metals be used in their handles — the base metals were forbidden: i.e. much cheaper imitations were already being made in sufficiently large numbers to call forth this regulation.

In the late seventeenth century, cutlers began producing buttons as well, made of brass, horn, or a base alloy. This soon became a separate craft: ie, output rose to this level.

Capital Combinations in Making Cutlery

Sixteenth-century wills and other sources tell us that: cutlers worked in a brick or stone smithy with a hearth; it was set up in the backyard. Their tools and equipment included large bellows; tongs, hammers and vices; a large anvil on a stone base for forging the metal; a small anvil for rivetting; wooden benches; a ‘glazier frame’ with foot treadle for polishing the blade; buckets,

pans, and a stone water trough. — Thus leatherworkers, wood workers, blacksmiths and stonemasons, as also perhaps brick-makers, with their respective tools, equipment, inputs, sheds, smithies and kilns, all worked in previous stages of production to provide the tools, equipment, etc, that cutlers used.

Cutlers obtained iron and steel on credit from ironmongers, and rented a grinding wheel periodically as needed. Iron was made from local ores; the Earl of Shrewsbury established a blast furnace in the 1570s. But even at the beginning of the sixteenth century, the better quality metal was imported, from Spain, through London merchants. In the seventeenth century, German and Swedish iron and steel were imported; they went to even the smaller cutlers in the remoter villages. The ironmongers also supplied brass for handles; butchers provided bone and horn; and woodcutters the specific types of wood utilised in making knife handles.

In the Sheffield area, the appropriate capital combinations could make use of certain natural features that enabled excellent cutting edges to be produced. The local sandstone was ideally suited to grinding and the rivers and streams fell rapidly from the hills, providing the swift water power needed. Most of the suitable watercourses in the district had a number of dams for powering tilt hammers, forges, grinding wheels and mills. In 1549, two cutlers employed a labourer to erect a substantial dam with the necessary water-channels, etc, large and small water-wheels and a wheel-house. The whole construction required the timber from around a dozen trees. The water-wheels powered the smaller grinding wheels via leather belting; there were wooden seats for the grinders. In 1637, at least 400-500 master workmen utilised the Earl of Shrewsbury's grinding wheels.

Right through the period, cutlers, both urban and rural, combined craft-work and agriculture, but cutlers in Sheffield were more dependent on metalware production than rural cutlers. In the sixteenth century, most metalworkers had smallholdings and kept livestock: cattle, sheep, horses. In 1539, a cutler purchased some meadowland and a small amount of arable. Others left farm leases, husbandry implements, ploughs and wains, along with their craft tools. Those urban cutlers who were landless kept pigs. Some larger livestock farmers also produced cutlery (and other metalwares). In 1611, such cutlers left houses, barns, stables, respectable acreages of meadow and pasture, woodland, smithies and kilns. In the years 1692-1703, some 28-71% of the total value of cutlers' goods still consisted of farming items.

However, a survey of Sheffield township found that even in 1616, most craftsmen were *not* involved in any agricultural activity — i.e. they were fully

specialised. Only some of these urban metalworkers continued with part-time pastoral husbandry.

Production Chains in Cutlery

Thus although cutlery production had increased considerably, this still only made it feasible for most cutlers in Sheffield township alone to have cutlery production as their main occupation. For other cutlers — the majority — agriculture still remained important in the early modern period. Cutlery output rose in the sixteenth and seventeenth centuries because the flows of products — inputs for cutlery — increased from previous stages of production. As we just saw above, these larger quantities of inputs — the necessary capital combinations — came from putting together, in the appropriate quantities and proportions, the appropriate products from stonemasons, brick-makers, blacksmiths, woodworkers, leatherworkers, with their tools, equipment, capital investments, and other inputs. — Once again, the key analytical question is *where* any investment good stands in relation to the final product(s) it helps to turn out. Thus the leather being produced to make bellows for cutlery production is, in effect, being utilised in an investment stage further from final consumption than the leather being produced for packsaddles to help carry the cutlery from London dealers to country retailers.

In addition to the production activities above, iron production in Hallamshire and Germany, and iron and steel production in southern Sweden, also linked into cutlery output in the Sheffield region. The tools, equipment, ‘fixed’ investments, iron ores, charcoal, mineral coal, other inputs, labour, etc, used in these activities, as also the equipment, labour, etc, used in previous stages of production to mine the ores and provide the fuels, all helped to produce cutlery in Hallamshire, in the next stage of production. — Of course, German iron, and Swedish iron and steel, also linked into investment chains in northern, central and western Europe. — Packhorses and ships — and men — moved the iron and steel from their various producers in Germany and Sweden to importers in London; packhorses and men then took the iron and steel to ironmongers in Sheffield. Packhorses and men took the bar and forge iron from the ironworks of Hallamshire to Sheffield factors. Local cutlers in south Yorkshire purchased iron directly from the ironworkers there; this still occurred at the end of the seventeenth century. Sheffield factors took in the finished cutlery from the township and surrounding parishes and had it transported to London wholesalers. Thus ironmongers actually operated in two separate stages of cutlery production.

Production of Metalware in the West Midlands

The West Midlands metalware districts ³⁰ produced a range of household and investment goods; production of some was already localised in specific towns and parishes. Ironmongers collected the finished goods from craftsmen and stored them in warehouses for despatch to London wholesalers. In the late seventeenth century, London agents reported the prices at which they could sell metal goods. When prices fell, ironmongers sometimes could not obtain certain goods, e.g. nails, from craftsmen — i.e. supplies fell.

Initially, wagon services from the West Midlands joined those that ran from further north to London. Then, as metalware outputs increased, two more link routes developed. Production continued to rise through the seventeenth century so wagon services began running from all the major Midlands towns direct to London; some services eventually ran three times a week. A road network now radiated out from Birmingham to other towns in the West Midlands, as also to London and the South-east.

In the course of the seventeenth century, metalware was shipped initially from Bewdley down the Severn to Bristol. Then, as output rose, it was also shipped through Gloucester. From both ports the goods went to the port towns of Devon and Somerset; South Wales was added in the late seventeenth century. Long term commercial links naturally developed amongst ironmongers, river-warehousemen and riverboatmen; all were family businesses.

Between the 1560s and the 1660s, population rose some 2½-3 times in and around Birmingham. Within this period, between the 1580s and beginning of the seventeenth century, immigration rose substantially, from other areas into the West Midlands. Population density increased as metalworkers' cottages filled up the wastelands and commons. Market towns were turned into centres of metalware production and trade. In the course of the seventeenth century, Birmingham added buckles, buttons, steel toys, and guns to its other products. By the 1690s, the first four outweighed all other metal products.

Now to the various types of metalware produced in the West Midlands:

'Whirlers' used a vertical spindle to make **plates, dishes and washbowls**.

Braziers and coppersmiths were found in small numbers in Walsall and Wolverhampton. They produced **pots and pans, candlesticks, warming pans, chamber pots, etc.** These goods were sold to country retailers and to London wholesalers.

Coppersmiths and braziers used charcoal in their furnaces, which were smaller than those used by other metalworkers. Their products were made of brass, copper and tin, and from metal scrap. The goods were cast in moulds,

and wooden handles were added where necessary. Many of the items were 'tinned' — i.e. they had a tin lining or were covered with a very thin layer of tin. This prevented rust and also kept a metallic taste from tainting the food. — Copper vessels *must* be lined with tin to prevent verdigris from forming and poisoning the food. — Vessels to be fully covered with tin were cleaned with whey, heated, and dipped in molten tin with a yellow resin to 'fix' the layer. Brass vessels that had to be lined were heated and sprinkled with sal ammoniac. Then a rod of tin was drawn across the inner surfaces. Smaller items were heated in earthen pots; then sal ammoniac and tin were shaken inside them. Black resin and a tin rod were used to line the inner surfaces of copper utensils. For protection, goods ready for sale were buried in powdered lime or some other mixture.

Locksmiths made a huge variety of brass and iron **locks** — padlocks, bar locks, 'horse' locks, and locks for doors, chests, cupboards, gates, etc. They were sold in bags of a hundred to ironmongers and then to London wholesalers. Master locksmiths made the more elaborate and expensive varieties. Thus locks were amongst the components of the capital combinations that produced housing and certain kinds of storage furniture.

Like most metalworkers, lockmakers usually owned small pieces of land under a variety of tenures; they were usually small pastoral farmers, with some cows and sheep. But by 1648, there were no agricultural lands in Walsall borough — only houses, gardens and yards. There is very little evidence of farming activity in Wolverhampton in 1666. These indications point to virtually full-time specialisation — i.e. sufficiently high outputs to make part-time husbandry unnecessary, by the earlier part of the seventeenth century. This in turn means that more inputs — tools, equipment, metals, workshops, etc — came in from earlier stages of production.

Lorimers and bucklesmiths turned out **saddlers' ironmongery** — spurs, stirrups, bits, snaffles, buckles, etc. These items were made of copper, brass or iron; they too were tinned. Walsall produced these goods on a mass scale; they were sold throughout the country. With the substantial quantities produced, each item involved a number of specialists who made the various parts. Spurs required four specialists; there were also different types: for ladies, gentlemen, workhorses, etc. Snaffles came in seven varieties, with six kinds of bits and ends. Different craftsmen made saddle circles, saddle bars and saddle plates. There were 25 different sorts of buckles; 12 kinds were non-specialised, but specialists made 13 types: for pack-saddles, hackney saddles, etc.

During the sixteenth century lorimers provided harvest labour. Then, as inputs into their crafts began rising, from earlier production stages, they were

able to devote more and more time to their craft. By the beginning of the seventeenth century, they had become full-time specialists. Lorimers and buckle-smiths contributed to the capital combinations that produced transport services. These last were, of course, general-purpose capital inputs used in all stages of production, i.e. as part of innumerable capital combinations in virtually every link of almost every investment chain. Thus transport services expanded *pari passu* with the other components of these capital combinations, and outputs of saddler's ironmongery grew as part of the supply of transport services.

An extensive **credit** network operated amongst West Midlands metalworkers. Loans were made both informally and formally; the latter on bonds or 'specialties', in accordance with the legal guidelines found in the cheapest chapbooks. This last gives an indication of the extent of such credit transactions in this period: the quantum of saving had risen sufficiently to require simple legal instruments. But there was still direct contact between saver and investor.

By the late seventeenth century, most metalworkers in the region lived in two-storey houses with 4-5 rooms. Kitchens were separate, but the other rooms were still multi-purpose — e.g. they all contained one or two beds.

Goods Made in Both Metalworking Regions

Metalworkers in both the Sheffield area and the West Midlands made nails, scythes, sickles, axes, hoes, etc. Except for nails, these goods required larger scale operations. As they contributed to agricultural production in the main, they were distributed separately from other metal goods.

Nailmaking was a seasonal and a rural occupation in both regions. In Hallamshire the nailmaking areas were distinct from those that made cutlery, although some cutlers also made nails. Some 100 out of 600 smithies in the Sheffield region produced nails in 1672. As with scythes, north Derbyshire nails were sold mainly in northern market towns while the West Midlands nails went principally to the south Midlands and the south of England. Substantial quantities were distributed through London ironmongers as well.

Nailmakers kept a few cattle, sheep and pigs. They also provided harvest labour — factors found it difficult to get supplies of nails during harvest-time. 25 different kinds of nails were produced; there were some 3 or 4 specialised types used in shipbuilding. Thus nails were *amongst* the large range of inputs that together produced the Great Rebuilding as also more and larger ships. From the early sixteenth century, nails were described by the number per pound of iron; these names are still current.

Nailmaking was relatively unskilled. Nailers had small workshops with 4-6 workmen. Each hearth had 4 workers. Workshops were multiplied rather than enlarged, to increase output. Nails were made by heating an iron rod in a coal or coke fire, kept going with hand-bellows; these could be hired if necessary. The rod was cut over a cutting edge fixed to an anvil. The nail end was then pointed and its top hammered.

Much iron went into the making of nails. Iron was obtained on credit from wholesalers who also paid the nailers when the finished goods were handed in.

Capital Combinations and Investment Chains in Metalware

All metalworkers used a very similar range of tools, with certain variations according to product, of course. Here, I examine those capital combinations used to produce the goods listed so far. I look below at scythes and other agricultural implements as their distribution and production arrangements differed from those of other metal goods. All capital combinations, of course, enabled the associated skills and techniques to be utilised.

All metalworkers had stocks of particular types of iron according to the goods they made. They used mineral coal, which they dug out themselves; the coppersmiths and braziers, mentioned above, continued to use charcoal. Metalworkers used hammer, tongs, and a stone or cast-iron anvil; they had brick hearths with a chimney and a pair of bellows. Nailers had an iron plate with a pipe from bellows to fire, with a chain and crosspiece to operate it. To wet the coals and thus improve the heat, they had a water trough on hand. Locksmiths used a double bellows, as also punches, shears, stamps, 'scovens', 'bolsters' to hold up tools, 'bickorns', and wood benches. They also had stocks of brass. Lorimers' tools were a little more valuable; they used, additionally, a tinning pan and files; they had stocks of brass, copper and tin. Braziers and coppersmiths also had stock of brass, copper, and tin rods; wood for handles; tinning pans, clay moulds, earthen pots, resins, etc.

It is clear that producing all these different capital combinations, requires that tools, equipment, skills, workshops, fuel, iron, etc, be utilised in previous stages of production, stages that lead into the production of metalware. Thus a variety of craft skills, equipment, wood, stone, leather, clay, iron, coal, brick earth, kilns, hearths, etc, were utilised first to produce and then to maintain and replace, metalworkers' tools and equipment, hearths, benches, anvils, bellows, troughs, pots, moulds, etc, etc. That is, all these capital combinations were utilised in 'earlier' stages of production, further from final consumption, as also in 'later' stages closer to consumption. As outputs rose in the earlier stages, they flowed into the later stages; thus enabling various metalworkers to work full-time at their craft, as had been noted.

Agricultural Implements

By the late sixteenth century, **scythe-making** had become localised in Norton parish in north Derbyshire and was no longer practised in surrounding parishes. In the West Midlands it was concentrated in a group of five adjacent parishes — three in north Worcestershire and two in south-west Staffordshire. In short, specialisation had already progressed quite far. All these areas were, of course, next to the metalworking districts, but they were far more agricultural than the latter. Scythemakers were generally substantial farmers as well, raising both livestock and crops.

All scythemakers combined wholesaling and producing. They travelled to market towns and fairs and sold directly to chapmen and other retailers, leaving stocks and collecting payments later. In other words, the quantities produced could not support a separate set of wholesalers. Scythes were sold in particular agricultural districts, unlike other types of metalware which were utilised in all areas: domestic metal goods were bought in all districts and horses were found practically everywhere, since transport is a general-purpose capital good. The quantities produced of these kinds of metalware were so large that specialised wholesalers could and did develop.

Norton scythemakers covered fairs and market towns in north-eastern England, Scotland, and the West of England. In the late seventeenth century, one large farmer-miller-scythe producer left stocks or was owed money, in many of the major market towns of the north-east: Wakefield, Beverley, York, Newcastle, Morpeth, amongst others. Norton scythe producers operated on a very large scale and worked throughout the year. The bigger smiths rented out tools, equipment and hearths to workmen, especially in the seventeenth century; they maintained stocks of iron, steel, grindstones, 'seacoal' [mineral coal] and charcoal. Tools and wheels were also rented out to scythe-grinders. The scythemaker-farmer-miller already mentioned, owned smithies and a grinding wheel (this last north of Sheffield) and employed several workmen.

Scythemakers in the West Midlands sold their goods to retailers in the South Midlands and the south of England, again visiting fairs and market towns regularly. Their products were also shipped through Bristol. In the autumn, they laid in stocks of iron and steel and worked on the scythes through the winter and early spring. When the rivers and streams were in full spate, in March and April, the blades were sent for grinding. Sales were made in late spring and summer, in preparation for the harvest. Scythemakers generally had larger workshops than other metalworkers, with large stocks of finished and unfinished scythes on hand. Scythe-producers in this region bought bar iron directly from the ironmasters; they obtained Flemish and German steel

from London importers or their Midlands agents. English steel was of very poor quality and so much cheaper; but *not* preferred. Other metalworkers, in contrast, bought iron, steel, and other metals from the same wholesalers who later bought the finished products.

As mentioned, scythemakers kept largish stocks on hand. The producer already referred to had a total of 6 ‘packs’ plus 520 more scythes, awaiting grinding or with agents in various northern market towns. Two scythemakers in north Worcestershire had 650 and 480 scythes, respectively, in their workshops in 1541 and 1594. A Norton smith left 1200 scythes in 1574; another left 1900 in 1632; others had available quantities ranging from 253 (in 1634) to 108 (in 1640) and 600 (in 1647). Whether the scythes were produced in north Derbyshire or in the West Midlands, prices were the same. Prices seem to have risen very slightly during the latter part of the sixteenth century; they remained steady for at least the first half of the seventeenth. Most scythes appear to have cost from 1sh.6d. to 1sh.8d. in the sixteenth century, and around 1sh.9d. in the seventeenth, when they ranged from 1sh.4d. to 2sh.6d. each. By the 1640s, five different types of scythe were mentioned: ‘Scottish’, ‘Holderness’, ‘long’, and two further types. Clearly scythes were developed for specific crops and conditions and to meet regional preferences.

Scythemaking was a complex operation requiring considerable skill and experience, both to get the right proportion, weight and balance in the scythe and to grind the blade. The production process began with high quality steel sandwiched between two pieces of wrought iron. This was held in the — mineral coal — fire with long-handled tongs and then forged, by hand or using a tilt-hammer. The forged metal was then cut sideways into two scythes, again by hand or by means of a tilt-hammer. The scythes were hardened, tempered, and passed on to the grinders who used water-powered blade mills; these were built on fast-running streams and rivers. The tools, equipment, hearths, iron and steel, fuel and workshops used in producing scythes were hardly different from those used for other types of metalware, except that workshops were bigger and operations on a larger scale, and there might be some variations in the tools. In 1647, one scythe producer left behind two pairs of bellows, two coal racks, two anvils, two pairs of steel tongs, and 12 other pairs of tongs, amongst other tools and equipment, and stocks of fuel. Some items — e.g. tilt-hammers — were specific to scythe production. These embodied more capital inputs: water channels, buildings, and the hammers themselves. And exactly as with other types of metalware, all these capital combinations were able to make use of certain natural features of the districts where scythes were made.

The inputs into scythemaking from previous production stages were the same as for other metal goods: tools and equipment; iron, steel and fuel for the

scythes and, in earlier stages, to make the tools and equipment; bricks or stone for the hearths; stone or iron anvils; timber for the buildings — workshops; housing for tilt-hammers; blade mills, etc. Labour, tools and equipment, and other inputs, such as fuel, brick-earth, etc, were used in these earlier stages to turn out the tools, equipment, buildings, iron, steel, fuel, etc, utilised to produce scythes. Again, these growing outputs from earlier stages were the rising inputs that made possible an expanding flow of scythes, from the larger-scale operations of scythemakers.

Sickles were made just beyond the boundary of Norton parish; they were produced together with **shears**. Both were a localised specialism, as with scythes. Producers of sickles and shears followed a variety of other occupations — mixed farming; a combination of farming and alehouse-keeping; farming and tanning; etc. In 1597, a sicklesmith had on hand 348 sickles valued at approximately 1½d. each, and 115 shears worth 4d. each, together with a small amount of steel. He was also running a medium-sized farm. In 1612, a sicklesmith left cattle, sheep, pigs, horses; 19 acres of standing crops — wheat, barley, rye, peas; grain and oats in store; 20 sickles and 4,160 shears all worth £50; three hearths, two pairs of bellows, tools, grindstones, etc, valued at £8; and £3 worth of iron and steel.

Finally, **axes**, **hatchets**, **billhooks** and **hoes** were also made in the same districts in north Derbyshire and the West Midlands that produced scythes, shears and sickles. In the late 1660s, one large farmer-producer in Norton had on hand 2,309 axes at around 10½d. each; 1,470 large hoes and 2,448 small hoes at 8d. and 4d. each, respectively.

Supply of Iron to Metalworkers

As mentioned earlier, ironmongers supplied metalworkers with the various types of iron required³¹. In the late 1690s, in the Sheffield area, the local mills and forges sold practically all their outputs within the region. Cutlery factors and scythemakers bought bar and forge iron; ‘nailchapmen’ bought rod iron. ‘Wiredrawers’ from Barnsley bought wire. In the years 1696-1700, the Rotherham mill of the ‘Spencer Syndicate’ — a group of Quaker ironmasters — sold some 94 percent of its rod, by value, to local buyers. Some 6 percent of its rod (by value) went to purchasers from large towns were outside the region — Gainsborough, York, Whitby and Newcastle.

In the West Midlands: ironmongers bought bar and rod iron from a number of mills and forges in the area. There were a large number of small independent ironmasters, with forges and/or slitting mills, but the Foley family were the most prominent producers. They sold bar iron from their Stour

Valley forges and Bewdley Warehouse, and rod iron from the slitting mills they had situated strategically throughout the region. In the years 1669-74, their mill at West Bromwich sold 330 tons of rod on average *per annum*, to 20 'wholesale' chapmen and 70 tons to 60 'petty' chapmen. In the late 1690s and at the beginning of the next century, their mill at Rugeley in Staffordshire sold, on average, some 600 tons of rod iron a year; two-thirds went to 10 percent of their customers. Half the output of rod iron from the four mills the Foleys had in the Stour Valley, went to 10 percent of the buyers. These mills too produced an average of about 600 tons per year. The Bewdley Warehouse and Stour Valley forges sold bar iron — an average of 140 tons and 148 tons respectively, *per annum*. The buyers were ironmongers, scythemakers and a few locksmiths. The ten largest buyers — just under 4 percent of all customers — together took nearly 47 tons *per annum*, or a third of the total sold, on average, from the Bewdley warehouse. Scythemakers purchased about 15 percent of the total; two scythemakers bought over 8½ and 10 tons each, on average, *per annum*.

Clearly these figures come nowhere near the total quantities of iron used in the West Midlands metalware industries. But unfortunately there are no records for all the remaining independent forges and slitting mills. These figures do illustrate, however, the very wide range in scale of ironmongers' operations. Thus individual purchases at the West Bromwich mill ranged from an average of 16.5 to 1.17 tons *per annum*. At the Bewdley Warehouse, they went from 4.67 to 0.38 tons yearly on average. In short: a few ironmongers and nailchapmen operated on a relatively large scale, compared with the very large numbers of much smaller ironmongers.

Especially in the seventeenth century, ironmongers settled their debts to ironmasters at regional fairs — Stourbridge and, in particular, the two fairs at Bristol. — Birmingham also became a settlement centre; by the late sixteenth century it was already a centre for price information. Ironmasters or their clerks travelled regularly to collect monies owing. Ironmongers referred to the amounts they expected to collect in London, when making terms to pay. Much payment was in cash, although bills of exchange were already in use by the early seventeenth century. Cash was carried by wagoners, the shippers on the Severn, and in person by ironmongers' or ironmasters' agents and servants. Ironmasters also collected substantial sums in London, from deposits that ironmongers made with London goldsmiths and bankers. Ironmasters sent orders to their London agents or clerks to collect these monies.

11. Legal Change

Legal activity of necessity expanded concomitantly with the vast growth in exchange activities; and so the legal transformation in this period was just as far-reaching. The use of simple legal instruments rose substantially; far more

transactions, well down the social scale, were now concluded with a formal legal document. As already mentioned, DIY legal manuals were amongst the cheapest chapbooks; many of the latter also included forms of bonds for various trades, — the metalware trades have been referred to.

Some late sixteenth century wills from Cambridgeshire give lists of debts owed to and by the testator, mostly for very small sums ³². Late seventeenth century inventories include bonds held for a range of sums, from the extremely modest to the relatively substantial. Retired men and spinsters, in particular, lent their savings against bonds. Sometime in the 1660s, a husbandman left an estate which, apart from some clothes and clothes-chest, consisted solely of bills and bonds; the total was £21 6sh 8d. In 1662, a testator left an estate of £12 8sh 6d, less than most labourers. He lived in a one-room shack and his clothes, household goods and ready money together came to a mere 8sh 6d. But he had 12sh 10d lent out against bonds. In 1666 a 'labourer' left more than £77 worth of bonds owed to him, and only the poorest goods otherwise. In 1669 a 'yeoman' left some sheep, eleven hives of bees, and a few pairs of sheets; everything else consisted of bonds and bills. In the same year a spinster's estate contained only two types of assets: some clothing and £40 worth of bonds. At the other extreme, a fellmonger left £154 worth of bonds. Between 1576 and 1700, 10 out of 31 (surviving) inventories from Chippenham included money bonds.

The Legal Profession: The Two Branches

The legal profession expanded dramatically. Although there were already two distinct branches, there was still a common functional area where they overlapped; this area was just beginning to diminish as barristers and attorneys began to pull further apart. We begin with the **upper branch**: Only a minority of those admitted into the inns of court ever prepared seriously for the bar; and only a minority of those called to the bar ever practised. Despite this, the numbers of practising and non-practising barristers grew substantially. Figures have to be reconstructed and are available only for some periods. Admissions into the four inns of court went from 214 in the *four* years 1521-24 to 1,119 in the years 1647-50. Relatively complete listings for calls to the bar are available only from the late sixteenth century onwards. Calls to the bar went from 383 in the *decade* 1580-89 to 515 in the ten years 1630-39; they peaked at 714 in 1660-69 and fell to 475 in the last decade of the seventeenth century. The *practising* bar, then as now, was smaller: it went from an estimated 80-90 barristers in 1560 at Westminster, to around 440 in 1638 ³³.

The **lower branch** — attorneys and solicitors — numbered an estimated 340-380 in 1560, attached to either King's Bench or Common Pleas. In 1640,

this total came to around 1,750. As they virtually all lived in the provinces, this gives an indication of the rise of professional lawyers throughout the country. Numbers rose particularly in those areas where outputs were expanding the most. Thus Warwickshire had perhaps two attorneys in 1560; by 1640, there were 30. In the early seventeenth century, eighteen attorneys were found there, of whom ten operated in the 18 miles between Birmingham and Coventry — i.e. just that area with the greatest expansion in metalware and iron production³⁴.

Litigation and Litigants

Between 1560 and 1640, the number of civil cases brought before the two major central courts rose nearly 5½ times. Many cases were both started and heard in Westminster; but large numbers were heard on circuit, at *nisi prius*. King's Bench almost doubled its proportion, from just under 15 to just over 28 percent, but Common Pleas retained the bulk of cases throughout. 'Debt' cases in King's Bench rose most dramatically — from 19 percent to 80 percent of its (civil) total. Such cases had always been the staple of Common Pleas, but even here the proportion went from 67 to 88 percent. Thus by 1640 the overwhelming bulk of cases were brought under this 'form of action' (I discuss changes in legal doctrine and procedure below).

The total number of litigants rose by some 70 percent between 1560 and 1640 (Table 10.4). Overall, those who styled themselves 'esquire' or 'gentleman', or had a knighthood or title, formed less than 26 percent of total litigants in 1560; this proportion rose to 30 percent in 1640. Correspondingly, the proportion of litigants from below these strata, was just under 75 percent in 1560 and almost 71 percent in 1640. Moreover, by 1640 an increasing percentage of plaintiffs were of lower social standing than defendants — i.e. more and more often, those of lower social rank were bringing their social superiors before the courts (Table 10.4). In 1560, 28 percent of plaintiffs and 25 percent of defendants were set down as 'gentleman' and above. But in 1640, while those who claimed the status of 'gentleman' and above formed 24 percent of plaintiffs, they came to 35 percent of defendants. Correspondingly, 76 percent of plaintiffs came from lower ranks, but only 65 percent of defendants did so. It is clear that a larger percentage of litigation now involved defendants of higher social standing while plaintiffs came from lower ranks.

Now: amongst groups of **higher** standing, those using the style 'gentleman' or 'esquire' formed the overwhelming proportion of the total — 91 percent. Between 1560 and 1640, their numbers more than doubled. Next came those with knighthoods — somewhat over 8 percent of the total; their numbers rose by 98 percent. The numbers of those below these two ranks rose by 60 percent³⁵.

This is one indicator, amongst others, of social mobility. Substantially more people could now appropriately assume the designation of ‘gentleman’/‘esquire’. As this was a matter of general attribution, *not* formal bestowal, it is a clear marker of upward movement. Also, more landowners could now aspire to, and obtain, knighthoods — a more formal index of status.

A complementary indicator of upward mobility is the grant of arms. In the fifteenth century, it became necessary to allow grants of arms to ‘eminent men’. As two senior heralds of the College of Arms put it:

“The records of grants to men of note from the late fifteenth century onwards are strong evidence of social mobility in England. They support the traditional theory that the upper layers of English society were easily accessible to self-made men...”³⁶.

Between the early sixteenth century and the later 1630s, some 2,280-2,580 grants were made; a further 178-278 were made in the 1690s. In the sixteenth century there were complaints that “Armes and Creastes” were being granted “to base and unworthy persons” or to “vile persons” and that such grants were being made for “private gaine”³⁷ — ie the senior herald in question was selling them. Like sumptuary legislation, these complaints and the accusation are clear evidence that more and more people were newly entering higher social groupings, ie such groupings were becoming more permeable, and the social structure was becoming looser and more flexible.

Table 10.2						
Classification of Cases in King’s Bench and Common Pleas, 1560 and 1640 ^{a 38}						
	1560			1640		
	KB	CP	Total (%)	KB	CP	Total (%)
‘Debt’	148	3,013	3,161 (60.0)	6,487	18,150	24,637 (85.7)
‘Trespass’	430	719	1,149 (22.0)	406	619	1,025 (3.6)
‘Actions on the case’	148	90	238 (4.5)	1,054	1,031	2,085 (7.3)
All others	55	675	730 (13.8)	162	825	987 (3.4)
Total	781	4,497	5,278	8,109	20,625	28,734
(% to Tot)	(14.8%)	(85.2%)	[100]	(28.2%)	(71.8%)	[544.4]

Source: Brooks, Pettyfoggers, Table 4.5, p. 69

^a Cases were classified by their ‘form of action’ — ie the ‘form’ under which they are brought. This is *not* of course their substantive content.

Table 10.3 Social Status of Litigants, 1560 and 1640			
	Total Litigants	'Gentleman' and above	Below 'gentleman'
1560	2,235	25.5%	74.6%
1640	3,799	30.0%	70.0%

Source: Brooks, Pettyfoggers, Appendix, pp. 281, 283

Table 10.4 Social Status of Plaintiffs and Defendants, 1560 and 1640			
		Plaintiff	Defendant
1560	'Gentleman' and above	27.7%	24.8%
	Below 'gentleman'	72.3%	75.2%
	Total ^a	685	1,041
1640	'Gentleman' and above	24.2%	34.6%
	Below 'gentleman'	75.8%	65.4%
	Total	1,703	2,096

Source: Brooks, Pettyfoggers, Appendix, pp. 281, 283

^a The overall figure for 1560 (Table 10.3) includes 509 litigants whose positions as plaintiff or defendant is not clear.

Courts: Personnel and Fees

Up to the early nineteenth century, litigants' fees made up the bulk of judicial incomes, and the whole of the effective incomes of court officials. Hardly a handful of the latter received purely nominal salaries; the overwhelming majority received none whatsoever. All, therefore, relied on fees, and so everyone, including the justices, depended on litigants *electing* to use their courts.

Hence the non-professional recipients of the tiny number of Crown appointments were able to sell or lease the offices; and Chief Justices too could sell the offices in their gift ³⁹.

The situation is succinctly and clearly characterised by Prof. J.H. Baker:

“The clerical offices in the Chief Justice’s patronage were a form of property from which the income was proportional to the business; and it was a material, but proper, concern of both officers and their

patron to ensure that the court provided the best justice that could be devised.... It was not an abuse for them, any more than for other lawyers, to turn learning, ingenuity and industry to honest profit"⁴⁰.

Judges' salaries were often in arrears. From the thirteenth century to 1440, they were virtually always in arrears. In 1440, these salaries were charged to the customs duties collected in London. But in 1443, very large sums still had to be received. In the early 1530s, however, it seems that these payments were on time. In 1539, the salaries were paid from the 'first fruits and tenths'. Systematic records are not traced of these payments. But by the mid-1740s, salaries were once more in arrears, now by several months⁴¹.

In the later fifteenth century, the Chief Justice of King's Bench received £160 pa, together with a little over £8 10sh commutation for livery, plus a tun of wine at Christmas. The puisne justices were given £100 a year and the same commutation payment. In Common Pleas, at the end of the fifteenth century, judicial salaries were made up of three components: *i.* a basic salary, unchanged since the reign of Edward I (1272-1307), *ii.* an additional grant, made since 1347 and increased twice since then *iii.* a bi-annual gift of robes, commuted into a money payment. The three together came to £142 0sh 1¼d for the Chief Justice and £108 13sh 5¼d for the puisne justices.

The bulk of judicial incomes came from fees and, of course, the lands that justices owned. Chief Justices sold certain court positions, eg those of the first and third prothonotary in Common Pleas. In 1522, the income of the Chief Justice of Common Pleas was assessed for the subsidy at £433-6-8; ie his official salary was just under a third of his total income. Two puisne justices were assessed at £333-6-8 each and the third justice at £240⁴². Thus for the two puisne justices as well, their official salaries comprised less than one-third of their total income, while for the remaining justice, his salary equalled a little over 45 percent of his overall income. For all justices of Common Pleas, fees and their lands provided between 55 and just over 67 percent of their incomes, in the early sixteenth century.

In 1624, the salaries of Chief Justices were raised to £250 pa, and those of puisne justices to £200. In 1627, Sir James Whitelocke, JKB, had a net income of £974 — ie, his salary was just over 20 percent of the total; nearly 80 percent came from fees and land. September 1645 saw a substantial rise in judicial salaries: Chief Justices now received £1,250 pa and other justices £1,000. In 1674 the Chief Justiceship of Common Pleas was said to be worth £4,000 pa — ie, fees and the sale of positions provided 69 percent of the income from the office; the salary, only 31 percent. At the beginning of the eighteenth century, puisne justices were paid between £1,100 and £1,400 annually. After 1714,

these figures were raised to £1,600-£1,900. In 1714, Parker CJKB said the Chief Justiceship of King's Bench was worth more than the Lord Chancellor's office; the latter's income was then in excess of £8,000 annually. Parker CJ also said that the office of Chief Justice of Common Pleas brought in twice as much as that of King's Bench ⁴³. It follows that the CJCP received over £16,000 pa — i.e his total income from fees and sale of offices was more than seven times his salary. — All these figures are of course the other side of the vast increase in litigation and lawyers that we saw earlier; this, in turn, being one outcome of the vast growth in exchanges and exchange activities in these two centuries.

At the end of the fifteenth century, only three officials of the Court of Common Pleas received nominal salaries: the Custos Brevium was paid £6-3-4, the Clerk of the Warrants and Estreats was given £10 and the Keeper of the Hana-per received £4 pa. Clearly they lived in fact from litigants' fees. In addition, there were some thirty other officials, of whom the Chief Justice appointed twenty-eight. These officials in turn appointed under-clerks, deputies, etc, as their work expanded. Fees were the sole source of income for everyone here. On the civil side of King's Bench, the Chief Justice appointed all its officials; all depended on fees alone. It had a total of eighteen officials, including two under-clerks. Offices in the gift of the Crown — all in Common Pleas — were bestowed on courtiers or favourites, who sold or leased the appointments. The Chief Justices of both benches sold the offices in their gift; the holders also did the same, when occasion arose. In a number of cases, however, the positions were held for long periods of time. The Chief Prothonotaries of Common Pleas became experts on procedure, consulted even by the justices ⁴⁴.

Moreover, court officials (of both courts) were often connected by marriage, family or county ties; sometimes justices were part of this network. Thus, to take the well-known Roopers and *some* of their ramifications: John Rooper and his son William between them held the Chief Clerkship of King's Bench for some 70 years (John, from 1498 to 1524; William, from 1518 to 1568). John Rooper married Jane, the daughter of Sir John Fyneaux, CJKB 1495-1525; John's daughter, Helen, married Sir Edward Mountague, CJKB 1539-45. Two of the main clerical appointments in King's Bench went to John Rooper's Kentish neighbours. William Rooper married Margaret, Sir Thomas More's daughter, and through her was connected to Richard Heywode, who joined Rooper as Chief Clerk of King's Bench from 1548 to 1568. Heywode's daughter Joan married Christopher Stubbe, filazer of Common Pleas, the son of Edward Stubbe, Chief Prothonotary of the same Court from 1518 to 1533. Moreover, all the men named, with the exception of the two justices, belonged to Lincoln's Inn. Thus professional ties were followed

and paralleled by personal ones. As it happened, most of the far-reaching and radical changes in King's Bench procedure and therefore in the scope of its cases, occurred under Fyneaux and Mountague, ie under the aegis of combined professional and personal links, — which may well have made for smoother transitions than otherwise. Similar family dynasties and networks were found amongst officials of other courts⁴⁵. Given the small size of the population at the time, these interconnections are almost inevitable.

Decline of Borough and Local Courts

A variety of local courts continued from the medieval and late-medieval periods into the sixteenth and seventeenth centuries, of course⁴⁶. But when litigants went to their solicitors the latter could not just pick any court at random to bring the complaint. The type of dispute mostly determined the 'form of action'; but the dispute might fit under more than one form — in which case the 'best' form had to be selected. These two in turn mostly determined the court, but where there was a choice, attorneys had to assess the 'best' forum for their clients' cases. Alternatively or additionally, attorneys might feel that a particular court provided the best chances for a specific case, and so adjust the shape of the case to fit, if possible.

In the early modern period as we saw, the enormous increase in litigation went overwhelmingly to the central courts. Prof C.W. Brooks points to the widening of exchange relationships, and this was probably the single most important reason for recourse to the courts at Westminster. As we have just seen with the metalware industries, dealers and producers from the Sheffield and West Midlands regions sold their goods across the country: eg, scythe-makers travelled to East Anglia and to market towns in the north of England; merchants from East Anglia bought metal goods in Birmingham; Robert Foley of Stourbridge sold through his warehouse in Exeter to retailers throughout the West Country; Midlands ironmongers sold through their London agents to domestic and overseas markets, etc. In chapter 9 we noted the growth of agricultural wholesaling across regional boundaries, with cases going to Chancery in consequence. We also saw that linen and peas were sold across several counties; Wimbledon lenders financed transactions elsewhere; livestock were widely traded amongst regions.

Borough, manorial and other local courts had developed under the kinds of conditions found in the medieval period, when exchange was overwhelmingly local. Consequently they could only hear cases where at least one of the parties was under their local jurisdiction and where the entire transaction was completed within this local jurisdictional area. For example, even in the early

fifteenth century, London merchants had to be routinely given permission to use the central courts because “the matter and cause of action arose outside the city”, or the defendant, although a London ‘citizen’, “had withdrawn from the city”; in one instance, he “had fled the city” 47. By the mid-fifteenth century, such permission was no longer needed, as so many transactions now took place across or beyond the City’s boundaries. In the sixteenth and seventeenth centuries, it was even more true, right across the country, that the vast bulk of the exchanges being made simply could not be contained within the old medieval categories, although of course many still fitted in. Prof. Brooks sums up the situation nicely:

“...in an economy where wool from Suffolk might be made into cloth in Wiltshire, where coal from Newcastle came...by sea to London, where cheese and dairy products from Warwickshire went down-river to Bristol, the services of courts restricted to narrow geographical limits were bound to be less satisfactory...than those whose authority stretched through the realm” 48.

In the context of wider interregional and national exchange relationships, we may note that a particular borough custom dating from the medieval period, set up a specific obstacle to the use of borough courts where it continued to be practised; this was the custom of ‘foreign-bought and foreign-sold’. In ‘corporate’ towns — those with a royal charter — this custom forbade ‘foreign’ merchants — those from other towns — from trading amongst themselves; they could only trade with members of the town’s guilds. Thus in 1658, Robert Foley, the Stourbridge ironmonger, deposited goods in a storehouse in Bristol, leaving his servant in charge. A Salisbury ironmonger came to Bristol to buy nails and horseshoes from Foley, and some bags that he selected at the storehouse were sent to his inn. There he awaited Foley’s arrival from Stourbridge. Before this happened, however, Bristol town officials confiscated the goods because they were ‘foreign-bought and foreign-sold’ 49: neither Foley nor the Salisbury dealer were ‘citizens’ of Bristol, and so it was illegal for them to deal with each other within the borough limits. And as we saw above, the dealings in London between the agents of Midlands ironmongers and ironmongers from other towns were against City regulations. But here such transactions had become so numerous and constant that the regulations had to be disused. Clearly, however, any dispute amongst ‘foreign’ traders over transactions they had undertaken with each other could hardly be taken to the borough court; they would *have* to go to Westminster.

Prof Brooks points to the particular regions in which crafts and industries expanded in the early modern period. Such expansion lay outside boroughs — in suburbs, villages, and rural areas; again the West Midlands are a major

instance. In these areas, manorial organization was weak, so there were few manor courts. Consequently the inhabitants had to take their disputes to Westminster. Professor Brooks points further to the dissolution of the monasteries. Substantial areas that had formed single jurisdictional units were broken up into discrete farming units amongst a number of landlords. Here again the only courts now available were at Westminster⁵⁰.

Amongst local courts we may note that the county courts had become small debt courts in the later fourteenth century, dealing only with disputes involving sums less than forty shillings. This limit also applied to such other local courts as were still operative, eg certain hundred and manor courts. By the early sixteenth century, the rise in money values pushed more and more cases above this limit, which meant they *had* to go to the central courts.

It should be noted that especially in the course of the fifteenth and sixteenth centuries, barristers and attorneys had gradually taken over as recorders and town clerks of boroughs, while many attorneys became stewards of manors. This meant that proceedings in these courts and therefore also in surviving piepowder, market and fair courts, came closer to the procedures of the central courts. Indeed, similar developments had occurred in many manorial courts in the fourteenth century. Now in the medieval and late medieval periods, cases were transferred from all these courts to Westminster (these developments are outside the scope of this study). But at the end of the fifteenth and in the early sixteenth centuries, King's Bench allowed such transfers for apparently trivial reasons, although more substantial grounds were also used — eg the failure to hear one party properly⁵¹. That in many local courts, the procedures were now more like those of the central courts, *may* have made it easier to discover reasons for transfer. In any case, transferred disputes were only some amongst the expanding numbers in the central courts. — And finally, as King's Bench developed remedies for failure to fulfil oral or unsealed agreements, the number of such cases brought to ecclesiastical courts declined, until by the mid-sixteenth century there were none⁵².

Competition for Jurisdiction?

W.R. Cornish and Geoffrey Clark hold that competition amongst courts meant that royal justices sought to extend their jurisdiction as much as possible:

“Even before [the Victorian] reforms, the common law courts... sought to exert some ultimate control over the...local courts. So long as the prime motivation for this lay in competition for jurisdiction, the judges had been willing enough to remove cases wholesale [into] their

own courts. Writs existed, for example, by which a party could have a case in an ancient county or manorial court removed to Westminster; Blackstone blamed the decay of these courts on this very possibility. But as the judges became concerned with their authority, rather than the amount of business before them, forms of intervention were fostered, in which judgements given below were scrutinised for errors of law or procedure”⁵³.

Some comments are in order; these will help to clarify the chronology and the nature of procedural developments in the early modern period.

a. In the fourteenth century, when, as an unexpected result of certain procedural changes, large numbers of cases were transferred to Westminster, the forty shilling limit was introduced precisely to *restrict* such transfers. It was only because the value of money fell, more and more cases *had* to go to Westminster.

b. As just noted, the expansion in exchange relationships across the country led to the vast expansion of business in the central courts. Local jurisdictions declined because their legal make-up could not accommodate these new types of transactions. This *growing* business had therefore to be divided up *amongst the central courts*, including here the conciliar courts. Chancery expanded partly because it too had taken mercantile and other cases in the fourteenth and fifteenth centuries and now continued to do so; and partly because it offered equitable remedies that complemented common law proceedings. And, as Prof. J.H. Baker emphasises, “The principal competitors were not the judges or officers themselves, but the litigants and their lawyers, shopping for the most advantageous forum”⁵⁴.

c. In the fourteenth and fifteenth centuries, merchants certainly took cases from borough and other courts to the central courts. King’s Bench thus simply opened this door wider — but this transfer from the local courts occurred routinely and well *before* the general expansion in litigation. And it is notorious that it was through offering new remedies that King’s Bench increased its share of this rising volume of business: its justices were thereby “forced to think the legally unthinkable more often”⁵⁵.

d. In sum: there are reasons why justices cannot simply be treated as puppeteers, and lawyers and litigants as puppets; and why the series of varied and separate legal changes that occurred over some three to four centuries cannot be collapsed and homogenised through this device. Rather, as we have just seen, a complex range of influences interacted in the legal developments of the early modern period — developments that included both continuities with, and radical departures from, previous lines of change.

Informal Methods of Settling Disputes

Formal court proceedings were surrounded by an extremely wide penumbra of informal methods of resolving differences. From the later thirteenth century onwards, arbitration was widely used at every social level, for all types of disputes — property, commercial, personal, so that it is impossible to list the resulting references found in the literature. In the early modern period, vicars were often involved; one built up a large practice near Sheffield. Landowners, relatives and neighbours also acted as informal mediators or arbitrators⁵⁶.

Both ecclesiastical and common law courts used informal methods to resolve cases. As J.A. Sharpe sums up for the former: “the system of ecclesiastical justice in Tudor and Stuart England allowed every chance for a more or less amicable settlement to be reached between litigants”. The common law and manorial courts had used such methods since the late thirteenth century, at all levels of society. Arbitration remained an integral part of the court process throughout the early modern period. W.J. Jones, in his study of the sixteenth century Chancery, summarises: “Arbitration... was common to all Tudor and early Stuart civil jurisdictions”. We may mention a single instance: the complex land dispute between the Lisles and Sir Edward Seymour went from the Chancellor to arbitration in the 1530s⁵⁷.

The sixteenth century Chancery, in particular, relied heavily on informal methods of settling disputes. At least as many Chancery cases were settled informally, as formally in court. Chancery records “teem with arbitrations, compositions and awards”, made by court officials, “lawyers, judges and outside parties” — the latter included JPs and other landowners. In fact, Chancery *preferred* arbitration, the court saying explicitly in many cases that it was the best way of settling the dispute. Arbitrators’ awards were automatically approved; they carried the same weight and status as court judgements. Awards were supported even when they clashed with previous court orders⁵⁸.

On the Western Circuit, in 1629-48, practically all orders relating to private disputes involve ‘referrals’ to JPs, other landowners large and small, clergymen, a bishop, etc, for informal settlement outside court. If the first attempt failed, other individuals might be appointed, on occasion, to hear and ‘end’ the case. Many disputes were sent to arbitration. Court cases already started were ordered to be stopped in favour of the arbitration. Individuals who did not abide by awards or informal settlements were fined⁵⁹.

Formal agreements between individuals also incorporated informal methods of settling any disputes. Many specified that any differences were to go before arbitrators. How was this accomplished? — For some 500 years, between the fourteenth and the nineteenth centuries, a very wide range of

agreements were concluded through the instrument of the conditional bond with penalty ⁶⁰. The parties involved executed two bonds: in one bond, one party agreed to pay the other a certain sum by a specific date *unless* a particular condition was *first* fulfilled: eg, conveyance of some land or other property, construction of a house, transfer of certain goods, etc. The other party, in the other bond, agreed to pay a specific sum of money *before* a given date or else pay an even larger sum — usually double — as penalty. In an arbitration bond, both parties agreed to submit any dispute to arbitrators and to abide by their award or pay a penalty. The bonds themselves were the basis of any formal court case, rather than the underlying agreement or arbitration.

As in the wider world, so in the mercantile one: arbitration continued to be used as it had been in the medieval and late medieval period. Chancery in the sixteenth century routinely appointed merchant arbitrators in commercial or trade disputes, especially where technical points were involved: "...in cases of account and mercantile affairs, such persons as...London aldermen or native *and foreign* merchants [were] appointed" [*italics added*]. Chancery officials felt that only merchants should examine mercantile accounts, in particular ⁶¹; it may be noted that this attitude goes back to the later thirteenth century.

Merchants continued to use arbitration bonds right through the seventeenth century. In the 1685 edition of *Lex Mercatoria*, Gerard Malynes states that arbitration is the usual method of settling mercantile disputes:

"The...ordinarie course to end the questions and controversies arising between Merchants, is by way of Arbitrement, when both parties do make choice of honest men to end their causes, which is voluntary and in their own power...".

He sets out the procedure and requirements for such arbitrations: The two merchants first executed the standard reciprocal arbitration bonds, agreeing to accept the award under penalty. If one party failed to perform a lawfully-made award, the other party could sue for the penalty. The agreement had to set out the points at issue; the number of arbitrators; whether they could appoint an umpire, should they disagree; and the time-limit for the award. The latter had to meet certain conditions or it was void: the award had to be in writing within the time-limit specified; it had to deal with all the points listed but *not* other issues; there had to be a reciprocal act between the parties — eg, delivery of acquittances; the award could not involve anything illegal, and it had to be consistent with any existing court judgements. Malynes says this last point

"is of very great consequence, to bind the actions of men to the obedience of the Law, where-unto such reverence is due, that Decrees, Judgements, and Sentences of Judicial Courts of Record are always of a higher nature than Arbitrators Awards" ⁶².

The overall position is well summed up by an anonymous lawyer writing in 1694:

“arbitrement is much esteemed and greatly favoured by our Common Law; the end thereof being to compose Differences between Parties by the Judgement of honest Men; and to prevent the great Trouble and frequent Expense of Law-Suits”⁶³.

A leading civil lawyer, referring to both canon and common law, put it more succinctly: “many times, things which otherwise can have no speedy end by law, are compounded by Arbitrement”⁶⁴.

This widespread and consistent use of informal methods of settling disputes, by people generally and therefore by the courts, meant that in a substantial number of cases, formal court procedures merely accepted the outcome of informal settlements made outside the courts. Thus in fact many disputes were resolved in line with general ideas of ‘justice’. As JPs were substantial local landowners, they were in a position to utilise local opinion and knowledge of the facts. Thus the disputes that reached the stage of actual court proceedings were the more serious and substantial ones, that required a professional assessment of the rules involved in relation to the facts.

Coke, Arbitration and the ‘Law Merchant’

Many legal authors and historians hold that the common law courts severely undermined the use of arbitration from the early seventeenth century onwards. As Cornish and Clark put it:

“...the common law courts of the early modern period, in their hunger for jurisdiction, seem to have adopted [an]...antagonistic view. As they did...with the lesser courts, they might insist that a dispute be moved into their court. In the case of arbitration this was achieved by allowing one party who had submitted to arbitration nevertheless to bring a common law suit at any time before the arbitrator made his award”⁶⁵.

In a footnote they add: “Vynior’s case 8 Co. Rep. 796 8lb came to be treated as the basic authority for this rule”⁶⁶. — The libertarians too posit this destruction of competition by the State; this picture has been largely elaborated by Prof. Bruce Benson. Consideration of both the libertarian standpoint and that quoted above will help to clarify some key points.

The libertarian framework consists in depicting a libertarian America; commercial arbitrators are part of this depiction:- In a libertarian America, they settle all commercial disputes. Compliance with their settlements is voluntary, since the sanctions are all non-coercive — boycotts, blacklisting and

other unfavourable publicity, expulsion from trade associations, denial of further access to arbitration, loss of reputation, loss of business and long-term commercial relationships, etc. This situation will replace that found in late twentieth-century America: where tax-funded judges rely on police coercion to enforce their judgements. Prof. Benson adds a supplementary libertarian narrative, in which tax-funded officials suppress their private competitors: In 1606 or 1609 (says Benson) one “Lord” Edward Coke reviewed a case which had been privately arbitrated and ruled, “tho’ one may be bound to...arbitrament”, nevertheless it was inherent in its nature that one could “countermand the arbitrator”. Thus Coke denied (says Benson) that the “Law Merchant” was a distinct body of law; rather it was “part of the law of this realm”⁶⁷. This meant that merchants had to submit to common law courts and procedures: “royal” courts could “reverse private courts”. The common law courts now rejected the underpinnings of the “Law Merchant”⁶⁸; and so “a new constitutional order was coercively imposed...to displace the constitutional order of the Law Merchant”⁶⁹. Thus “the informal speedy institutions that merchants had developed disappeared for well over two centuries”⁷⁰. — I have here only sketched the outlines of the libertarian account; as will become clear, it is only a pointer to the real theme: how commercial arbitrators would settle disputes in a libertarian America.

Setting aside the task of portraying a libertarian America, let us ask a couple of *historians’* questions: What did Sir Edward Coke actually decide and say? What were the facts of the case mentioned and what, if anything, happened afterwards? These questions relate to specific historical happenings, a part of a specific historical context. And here, as in so many cases, historical facts are prosaic, not apocalyptic.

a. Vinyor’s case — the name is spelt variously — was decided in 1609. In the *Reports*⁷¹, the subject of the arbitration and the occupations of the litigants are *not* clear. The case was brought under the standard arbitration bond, described above. After the arbitrator had begun his work, Wylde (the defendant) *withdrew his consent to the arbitration*, so the arbitrator had to stop. Then Vinyor (the plaintiff) sued for the penalty under the standard terms of the bond. Since the defendant had plainly refused the arbitration, Coke ordered that the penalty be paid: ie, he *upheld* the standard terms of the arbitration bond: *no* door was opened greedily for additional business. And arbitrations continued, as we saw, right through the seventeenth century; Malynes stated that mercantile arbitrations were the normal way of settling mercantile disputes; and both civilian and common lawyers treated arbitration as routine. In short: there was *continuity* in this field. — The expansion and development of arbitration in later centuries is beyond the scope of this study.

b. Coke recognised explicitly that many different kinds of law existed at the time in England: “There be divers lawes within the realme of England”. Among these he listed: the common law; “the law of nature”; statute law; “customs reasonable” — ie, the customs and practices of particular districts and occupations; ecclesiastical or canon law; civil law — practised in the ecclesiastical courts and the Admiralty court; forest law; the “lawes and customs” of the Channel Islands and the Stannaries; and *lex mercatoria*, the law merchant⁷².

Coke specifically treats mercantile customs as a distinct body of law; he says that amongst merchants, partnership disputes are to be settled “*per legem mercatorium*”⁷³. Agreements made overseas “may be sued here in England, in what place the plaintife will”. Thus the agreement “may be alledged” to have been made in a place called “Bordeaux-in-France”, in Islington in the county of Middlesex; the defendant is not permitted to challenge “whether there be such a place in *Islington* or no”⁷⁴. In other words, the *substance* of the dispute was to be brought before the court; the place where the agreement had been made was essentially irrelevant. Coke states that when a mercantile partnership has to be wound up because one partner has died, his affairs are to be dealt with *not* according to common law, but

“*per legem mercatorium*, which (as hath been said) is part of the lawes of this realm, for the advancement and continuance of commerce and trade, which is *pro bono publico*...”⁷⁵.

Thus Coke says clearly that mercantile activities are to be handled according to mercantile custom; he identifies the development of these activities with the general good. The Law Merchant (he says) facilitates commerce and trade; it is counted amongst the laws [*plural*] found in the realm. In accepting and utilising mercantile custom, it can be shown that Coke simply carried on with the practices followed in the central courts since the later thirteenth century. But this again lies outside this study.

A Very Brief Sampling of Other Legal Changes

It has been known for some time that in the years from the end of the fifteenth to the mid-sixteenth century, the common law was completely transformed: its “rate of development, distortion and innovation was so accelerated” that there was a “rebirth of the common law”. This “regeneration” made it “capable of adapting, without further radical alteration, to the needs of many generations of Englishmen, not to mention the new world and an empire”⁷⁶.

The most fundamental change of the earlier part of this period was the new range of remedies developed in King’s Bench. These remedies covered an

enormous range of circumstances. Cases could be brought there by ‘bill’; it was not necessary to purchase a writ from Chancery. It was the attorneys themselves who essentially devised bills, which permitted more facts to be brought into the legal limelight ⁷⁷. This new procedure undermined the older legal ‘actions’; it needed a new articulation of legal principles — ie the principles people were now acting on, in the agreements being disputed:

“The comfortable certainty of that old world ended when the special declarations in case, with their myriad permutations of facts, began to throw up endless questions of law that had never been posed before. The new questions required new, more precise formulations of shadowy medieval notions...” ⁷⁸.

Between 1498 and 1549, some 40 new types of action appear in King’s Bench records. The commercial cases now cover, *inter alia*, loans, bills of exchange, partnerships, factors, charterparties, marine insurance, etc ⁷⁹. Thus from the early sixteenth century onwards, King’s Bench became a predominantly commercial court, on its civil side, and this continued through the seventeenth century: “sessions at the Guildhall...in the 1540s already had the strong mercantile bias which typified the seventeenth century King’s Bench” ⁸⁰.

Procedures were also easier in King’s Bench; but of the cases started, only a minority ever proceeded further. Most cases were in fact settled outside court, through arbitration. A successful arbitration prevented the case from being proceeded with; this last had been true since the later fourteenth century. The arbitrators were very often legal men — barristers, serjeants, sometimes even the justices themselves ⁸¹.

The **land law** continued to deal with the break-up of the old status-system of the manor. During the later medieval periods, ‘lord’ and ‘tenant’ had transmuted into a contractual relationship between two free parties — landlord and tenant. Legal security was now developed for both leasehold and ‘copyhold’ tenants. ‘Ejectment’ became the main method of obtaining such security for copyholders, who were the older villein ‘tenants’ transformed. Thus a legal basis developed for the short-term economic interest in the land, that of the farmer-tenant; the long-term interest, that of the landlord, was secured increasingly through ‘covenants’ in tenancy agreements, oral or written ⁸².

It is well-known that the law of ‘**contract**’ was radically transformed, even newly-created, in this period. The older actions of debt and covenant were replaced, in due course, by ‘*assumpsit*’ — ‘action on the case’. Amongst other things, debt required a sealed deed. It allowed only recovery of the amount itself, with a smaller amount for damages. Only a definite specified sum could be recovered for the debt. Without a sealed document, the defendant could

‘wage his law’ — ie deny liability by obtaining twelve ‘compurgators’ or ‘oath-helpers’ to swear in his support. This exercise had already become a sham at the beginning of the sixteenth century; one of the jobs of the court door-keeper was to provide such professional oath-swearers for a fee — he was liable to return the fee if he brought in fewer than the number required⁸³. By the later sixteenth century, wager of law was considered a despicable method of evading payment. To use it was to lose one’s credit, even if the allegation of money owed was false, or the jury — available under *assumpsit* — were tainted⁸⁴.

Assumpsit covered oral and unsealed agreements — just those that merchants used. There was no wager of law — it may be noted that under the law merchant a defendant could *not* wage his law; this was seen as its most characteristic feature. Under *assumpsit*, the case went to a jury. The jury could take into account the actual loss suffered and award damages on that basis. Moreover, the amounts laid out for, eg materials, that could not be specified in advance, could also be recovered. In short, “It now seemed there was a general remedy for any breach of promise causing damage”⁸⁵.

Prof. Baker summarises a Serjeant’s observations made in 1544: “Tudor society was founded on contract”. The various developments hinted at above culminated in the determination of Slade’s Case in 1602, which “may be regarded as the date whence the modern law of contract traces its life as a single entity”⁸⁶. The seven main legal categories into which commercial disputes were fitted, lasted till the general legislative changes of 1852: “for goods sold and delivered, or bargained and sold, for work done, for money lent, for money laid out to the plaintiff’s use at his request, for money had and received to the plaintiff’s use, and for money due upon an account stated”⁸⁷.

FOOTNOTES CHAPTER 10

1. C.E. Challis, “Review of C.G.A. Clay, *Economic Expansion and Social Change, 1500-1700* (C.U.P., 2 vols, 1984)”, *Econ. Hist. Rev.*, 39 (1986) p. 296.
2. Mark Overton, *Agricultural Revolution in England, 1500-1850* (C.U.P 1996) pp. 8, 63, 198 (Malthusian check), quote pp. 197-98; “large extent” (p. 107); This practice — quote: p. 107; Midlands: p. 117; Nitrogenous capital: p. 107; Clover: p. 110; “moderate rise” and other quotes: p. 198; wool and mutton: p. 115; regional specialisation: p. 104; mid-nineteenth century: p. 105; national livestock market: p. 139; grain: pp 139-40; quote from p. 137.
3. Overton: subsistence farmers: pp. 8, 21-22, 195; labour supply and quote: p. 38; market activity: p. 136; “at least doubled”: p. 137.
4. Overton, pp. 116-117.
5. Eric Kerridge, *The Agricultural Revolution* (1967) Ch. 3.
6. Joan Thirsk, “Farming Techniques”, Ch 3 in *AHEW, Vol IV*, pp. 168-78. Coleseed cake: *idem*, *AHEW, Vol V*: 2, p. 544.

7. Thirsk, "Farming" p. 166; Kerridge, *Trade*, p. 19.
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