Journal of Libertarian Studies, Vol. 1, No. 4, pp. 325-336. Pergamon Press 1977. Printed in Great Britain.

FROM HOLLIS AND NELL TO HOLLIS AND MISES*

DON C. LAVOIE

Department of Economics, New York University

Establishment economics is in a much deserved state of disarray. While the natural sciences have made remarkable progress in the 20th century, the mainstream social sciences remain impotent to solve the real and worsening political/economic problems of our time. Emphasis on fundamental methodological issues has been conspicuously missing from the economic journals for a generation and the cost of this neglect has become clear. Economists in the 1970s continue to ground their analysis on the philosophy of science of logical positivism, a doctrine from which most modern philosophers have long ago retreated in embarrassment.

To the devastating critiques of positivism by such philosophers as Brand Blanshard, W. V. Quine, S. Toulmin, A. R. Lousch and Karl Popper, can now be added that of Professors Hollis and Nell.[1] The reason for the impotence of modern economics, these authors show, lies in its method. The rejuvenation of economics necessitates developing a different methodology, one which pays attention to the aspects of social sciences which distinguish them from natural sciences. We need a method which recognizes that people are not atoms and that society is not a laboratory.

Hollis and Nell demonstrate that economics must be a deductive science, analogous to geometry, and founded upon necessary truths. In making this claim Hollis and Nell align themselves with a point of view that has been completely neglected by the economic Establishment: the praxeological approach of Ludwig von Mises and the Austrian school. Praxeology, the science of human action, is that particular deductive approach which takes human action or choice as its axiomatic foundation.

The first part of our review, then, will cover the argument of the book with which we agree, that economics must be deductive, the second part will offer a critique of the particular starting point chosen by Nell as the foundation of economics, and the third part will offer a different foundation of deductive economics.

I. HOLLIS AND NELL'S CRITIQUE OF NEOCLASSICAL ECONOMICS

The book *Rational Economic Man* is an intriguing combination of philosophical argument and economic analysis, of sound criticism of mainstream economics interwoven with weak arguments against capitalism. One author, Martin Hollis, is a rationalist philosopher who admits to ignorance of economics, while the other, Edward Nell, is an orthodox Marxian economist who does *not* admit to ignorance of economics. When the two work together on the first seven chapters of the book the result is an excellent philosophical critique of positivist economics. When the Marxian Nell sets out on his own in the last two chapters to offer a starting point for economics, we have, as we shall see, less reason for praise.

Much of mainstream economics today is founded on positivism. Hollis and Nell describe positivism as a philosophy of science springing from logical positivism, which is itself an epistemology in the empiricist tradition. They describe these three categories with the following ten tenets.[2]

empiricism: (i) claims to knowledge of the world can be justified only by experience;

(ii) whatever is known by experience could have been otherwise;

*A review-essay of Martin Hollis and Edward J. Nell, *Rational Economic Man: A Philosophical Critique of Neo-Classical Economics* (London: Cambridge University Press, 1975).

logical positivism:

(iii) all cognitively meaningful statements are either analytic or synthetic but not both;

(iv) synthetic statements, being refutable, cannot be known as true *a priori*;

(v) analytic statements have no factual content;

(vi) analytic truths are true by convention;

the philosophy of science of Neoclassical Economics:

(vii) a known causal law is a well enough confirmed empirical hypothesis;

(viii) the test of a theory is the the success of its predictions;

(ix) judgments of value have no place in science;

(x) sciences are distinguished by their subject-matter and not by their methodology.

The authors devote the first five chapters to a devastating broadside against almost all of these tenets. Positivism isn't being rejected as an alternative philosophy of science which is less fruitful than rationalism. Rather, positivism is rejected for its own internal incoherence. Hollis and Nell first show that while many economists claim to believe in positivism, their practice is far different from what one would expect. Positivists are committed to holding that *the* test of their models is simply whether their predictions fit the facts. Now one cannot reject models that are inapplicable to the situation characterized by the facts, so we must first establish whether the model is *supposed* to apply to the facts. This can only be ascertained by checking whether the *ceteris paribus* conditions hold.

However, Hollis and Nell point out, the only way that economists can verify their *ceteris paribus* conditions is "to measure the degree to which the facts fail to fit the model".[3] The *ceteris paribus* condition amounts to a synthetic statement about the world, according to the positivists' own logic, i.e. the empirical condition that no exogenous changes occur to disrupt the theoretical conclusions.

Virtually any American doctoral dissertation in economics is an example of this problem. "*Ceteris paribus*" is a positivist escape hatch for any test.

Another escape hatch of positivist economics is the fact that the observed values of economic variables are not always, or even usually, identical to the theoretical variables in the "hypothesis". Thus the data can be rejected or more likely adjusted on the grounds that, for example, when the theory said "unemployment rate" it meant "of those intent upon working", whereas the raw data included many slackers. Many data manipulations can also be effectively achieved at the econometric level by means of corrections of alleged heteroscedasticity or autocorrelation, or even more fundamentally, by the very curve fitting procedure employed. Given virtually *any* set of data, an accomplished econometrician could eventually fit any theoretical model to it. Of course such extreme data-bending would be scorned by the profession, yet there is only a degree of difference between this and the economist's ordinary procedure. The principle is the same. The point is that this is no more the *testing* of hypotheses than it is a "testing" of democratic safeguards to have the CIA investigate itself. The conclusions can be manufactured at will, and the method is incapable of distinguishing scientific discovery from idle speculation.

In other words, the positivist, when his test fails, cannot tell whether to blame the assumptions, the theory, or the facts. In practice the theory is rarely rejected, simply because there are always enough ways to manipulate the data and the assumptions to "verify" any theory proposed.

The answer is not to stop using *ceteris paribus* conditions, but to recognize that "other-things-being-equal" is a useful abstraction only in *deductive* economics, in the analytic process called mental experiments. One can meaningfully abstract from other changes in order to imagine "what would happen if", but one *cannot* meaningfully formulate falsifiable predictions applicable to the economic world which *assume* that no external changes will happen. That assumption, in the real kaleidic world of change, will simply never be true.

Hollis and Nell find a number of confusions stemming from the analytic/synthetic distinction. Indeed, Economics has itself come to characterize that distinction in its own content. Half of modern economics, dealing with various unrealizable "models" from perfect competition to Arrow–Debreu equilibrium, is "analytic", with no possible reference to the real world; while the other half, econometrics, dealing with the compilation and manipulation of seemingly raw facts, is "synthetic", with no possible reference to genuine theory. We have, as the fruit of positivism, a body of theory with no applicability to the real economic problems of society, and a mountain of incomprehensible unanalyzed data.

An objective of positivism seems to be to leave the data untainted by *a priori* theory, and to formulate the theory on the basis of observed facts. Yet, as Mises wrote, "(t)here 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."[4]

To the positivist, causal laws are "inductive generalisations of observed correlations".[5] The theory is not allowed to ask *why* economic variables are related because theory has no empirical content. Theory is to the positivist an arbitrary choice of assumptions, logical and manipulative conventions, etc. This leads the positivists to a difficult dilemma.

> Either theory and hypothesis differ in kind or they do not. If they do not, then theoretical statements are synthetic; if they do, then theoretical statements are analytic. If theoretical statements are analytic, then, by Positivist canon, they are optional and empty and contribute nothing to the validation of hypotheses. If theoretical statements are synthetic, then they *are* . . . hypotheses and cannot play the explanatory role assigned them by received opinion.[6]

Theory can only be helpful in analyzing the real world to the extent that it is fact-laden, and likewise, facts can only be comprehensible to the extent that they are theory-laden. Hollis and Nell point out that even the theory of statistics is a *theory*, and certainly any *use* of statistics requires a theory. The "fact" of the rising price of coffee is rendered meaningful by a theory that discusses the concept "price" and its causal and not merely correlative interaction with other phenomena. Expensive coffee means that coffee has grown scarce relative to the demand, and that meaning can only be ascertained and further elucidated by means of fact-laden theory.

By "fact-laden theory" we do not wish to imply that the theory must make explicit reference to particular facts, but rather that the theory must apply to and render those facts more comprehensible. Abstraction makes possible the direction of our attention to the essential aspects of general cases and away from irrelevant specifics. Thus the comprehension of reality *expands* with the increasing abstraction of rationalist theory. The more aspects of the economic system are subsumable under a particular concept, the greater is the generality of that concept, and thus the more extensive is its applicability.

Theory is the means of comprehending facts, i.e. it is the *connection* between a conscious mind and the real world. The analytic/synthetic distinction attempts to put theory entirely in the mind, and facts entirely in the external world, with the result that any *understanding* of the facts is impossible at the outset.

The culmination of Hollis and Nell's dissection of positivist methodology is the conclusion elaborated in Chapter 4 that the analytic/synthetic distinction must be dropped. The "theory-free, brute, atomic facts" of the positivist are as meaningless as the theory-free brute colors of a man's vision. The facts must be coordinated, analyzed, related to others by reference to prior causes and subsequent effects. They must, in short, be interpreted. Any methodology that disdains deductive theory in effect rejects the comprehension of facts.

Chapter 5, entitled "Behavior and Prediction", is particularly interesting from the perspective of Austrian economics. "Economic actions", the authors perceptively argue, "are to be explained in terms of inner preferences . . . ".[7] This renders absurd the doctrine of behaviorism, the attempt to predict action, since inner preferences are not data accessible to statisticians. Revealed preference theory is at the same time shown to fail as a substitute for the actual inner preferences of actors.

Optimizing models such as those found in standard microeconomics courses are not necessarily predictive; they merely state what alternatives are best in the face of given resources and constraints. Positive economics has tried to tie such models to behaviorism by saying that *if* the actor is rational, *then* he will set his marginal cost equal to his marginal revenue. Hollis and Nell reject this as a profoundly useless prediction. Men are *not* perfectly rational; all their resources, never mind their constraints, are not typically known. Thus optimizing models are permitted their limited role in aiding the economic actor in choosing optimal alternatives, but as a description or forecast of actual economic events these models must be pronounced a failure.

In Chapter 6 the authors take up conceptual pragmatism, essentially the philosophy of science of W. V. Quine. This issue is raised more to tighten the philosophical case than to criticize Neoclassical economics, for there is little justification for holding that any prominent economist grounds his method on conceptual pragmatism. Quine rejects the analytic/synthetic distinction by making *all* theory subject to revision, although some statements (such as the law of identity in logic) are more "costly" to give up than others (say, the Keynesian consumption function). There is some truth in this of course, but it understates the matter to say that giving up logic is "costly". It could be better characterized as an epistemological catastrophe. We must finally face the fact that there are some necessary truths, that some things *must* be true, and that to deny them requires assuming their validity. Knowledge is not the amorphous blob suggested by pragmatism, nor is it divisible into the clearcut categories "analytic" and "synthetic". Knowledge is an intricate, hierarchical network of distinction, integration and deduction, referring throughout to reality but with varying degrees of abstraction, and it is founded necessarily on axioms which cannot be denied.

Having swept the field of the major contenders, Hollis and Nell make the case for an *a priori* economics.[8] Interestingly they choose Lionel Robbins (*An Essay on the Nature and Significance of Economic Science*) and Milton Friedman (Part I of *Essays in Positive Economics*) as representing the two poles of thought respectively, rationalism to positivism, and conclude strongly for the kind of economics defended by Robbins. "Economics consists of the logical consequences of conceptual definitions".[9] The authors even go so far as to quote Robbins' methodological mentor, Mises, to the effect that "in the concept of money all the theorems of monetary theory are already implied".[10]

Our disagreements with Hollis and Nell up to this point are slight and relatively insignificant. But it is with Chapter 8 that Nell takes up his positive case for what economics ought to be, i.e. orthodox Marxism, and in these last two chapters we find a great many issues of disagreement.

II. NELL'S POSITIVE THEORY

Professor Nell argues that the fundamental concept in economics upon which the whole edifice of deductive economics must be built is the conditions of the reproduction of the economic system. How, one might ask, did he decide upon that peculiar basic concept? He simply asks what is the essence of an economy. "A thing's essence", he explains, "is those properties without which the thing could not be the thing it is; or, to anticipate our discussion of production, what it must have, if it is to continue to exist."[11] Therefore, Nell continues, the essence of the economy must be the conditions necessary for the reproduction of the means of production, physical and human, i.e. what is necessary for the economy to continue to exist.

First of all, the "properties without which the thing could not be the thing it is" is not the same as "what it must have, if it is to continue to exist".[12] The former are the essential definitional attributes of the concept under consideration and are therefore, for example, abstracted from time and place. The latter, on the other hand, is a list of conditions necessary for the thing's survival as the thing it is. What makes a car a car is given by a list of its essential attributes, but what conditions are necessary for the car to remain a car is given by a list referring to the proper use of the car through time, its maintenance, its driver's avoidance of collisions, etc. We will suggest a list of essential attributes of an economy in Part III of this essay, but for the moment suffice it to say that what is needed by their own criteria, definitional attributes, is not supplied by Professor Nell's economic maintenance manual.

Secondly, Nell's starting place is with a set of conditions which can only be specified by the use of such advanced concepts of economics as wages, production, prices, etc. At the *very* beginning of an analysis one should always start with how the phenomenon interacts with one's senses; the first thing we know about something is what we see, hear, touch, etc. For example, in Physics one would not start with an elaborate theoretical model of an atom, rather one would start with what one sees to be the characteristic interaction of the atom with other atoms and other phenomena from what we can learn from our senses (enhanced by technical instruments). One could then proceed from such observation to the construction of greater and greater levels of abstraction and finally, if possible, to an elaborate theoretical model. We cannot begin with the attributes of the thing if those attributes are themselves abstractions, for how are we to know whether the process of abstraction necessary to take us from our sensory observations to these attributes was correct? The conditions of an economy's reproduction are themselves abstractions from the interaction of thousands of people, capital goods, etc. We do not see economies reproducing themselves. If the method of economics is, as Hollis and Nell have ably argued, to proceed by spinning out the logical consequences of conceptual definitions, we must begin with *known* concepts and proceed to higher levels of abstraction. It would presumably be Nell's response that we know that the economy has to reproduce itself *a priori*. This will not do. We cannot pick *a priori* knowledge out of the blue. We need a firm criterion for axioms, for example that an axiom must be necessary for an attempt at its own denial. This is certainly *not* the case with the reproduction of an economy as it *is*, say, with the law of noncontradiction. Indeed, one can easily imagine economies which do not reproduce their capital or working force, but rather continually entirely revise their production schemes from period to period. That this would likely be a very poor economy is only something we can learn from an investigation of different economies. In any case it does not seem to be self-evident that the economy must reproduce itself.

Thirdly, the selection of the basic concept of a deductive science ought to refer to the explanatory power of the concept. The method will consist of deducing the implications and applications of this central concept for the field of economics. Therefore the concept chosen ought to have the widest possible application to economics, for the wider the basic concept, the more aspects of economics can be explained by it. If too narrow a concept, say exchange, were chosen, then only a subset of economic phenomena (those which involve exchange but not the isolated actions of individuals) would be explainable in terms of that concept. Furthermore, if this overly narrow concept can itself be explained only in terms of a wider and more fundamental concept (say, choice) it would remain unexplained. In geometry if one defines a triangle *in terms of* lines, then the concept "line" is wider, i.e. has more explanatory power, than the concept "triangle". "Triangle" can be explained in terms of "line", but "line" cannot be explained in terms of "triangle". Similarly, "the conditions of the reproduction of the economic system" can be explained in terms of more fundamental concepts, such as "choice", whereas "choice" cannot be explained in terms of the conditions of the reproduction of the economy.

We must reject Professor Nell's starting point on these three grounds: (1) one must say what an economy *is* before one can say what an economy requires through time to remain an economy: (2) one must begin with known concepts and deduce to previously unknown concepts. To start with conditions of reproduction is essentially to start in the middle; and (3) one should choose the widest concept applicable to the subject-matter. That our central concept is to be "choice" should come as no surprise by this time, and we will develop a case for the choice of "choice" in part III of this essay. At this point we will consider Nell's specific attempt to reject "choice" as the basic concept of deductive economics.

> (C)hoice depends on the context and activities of the choosers. We do not want things in a vacuum, we want something "under some aspect" as philosophers would put it. If we want a good or service, i.e. if we want it *regularly* on a continuing repeatable basis, not as a once for all whim, then we want it *for* something *in order to do* something with it, because it fits into a project or activity of ours. So some aspect or other of the thing must relate to the reason for wanting it.[13]

So far Professor Nell has apparently told us that people have purposes. "Some very important conclusions follow", we are told, and on both counts praxeologists are in complete agreement. An analysis of choice cannot proceed without paying very close attention to the context and purposes of the choosers. But unfortunately Nell draws some rather different conclusions.

> First, the formation of relative preferences among goods and services, *if it is to be rational* [why limit our investigation to rational action?] *must* involve solving typical *production* problems. [Indeed, which also must be subject to human choices.] Preferences for goods and services, what economists normally call "tastes", cannot be among the fundamental raw data of economics. Preferences for commodities must be calculated and the calculation will be based, as in the linear programming example, on the way the characteristics of different goods contribute to the objectives of the choosing agent.[14]

Nell seems to be saying that the economist must go beyond the choices of the actor and figure out *why* he wants this or that. All that we can say to him is good luck. Psychologists spend years trying to answer one or two such questions for their clients. If the economist has to do this for all goods and for all participants he will find himself doing little else. In any case, nothing Nell has said precludes taking "choice" as the primary concept. No praxeologist denies that people usually have extensive reasons for their choices, that in buying food they may be optimizing nutrition or some other aspect of food consumption. The point is that we cannot scientifically discover such reasons, they are beyond our reach because they reside in the minds of millions of actors who have every right to tell any economist that it's none of his business why they buy the things they buy.

One of the dangers of attempting this impossible task of going beneath the preferences of actors to examine their internal optimizing calculations is that the examiner might perceive as irrational choices which in fact are entirely rational but conform to a different set of subjective preferences. The economist, in other words, cannot tell when an apparently foolish choice is the result of miscalculated internal optimizing and when the choice is the result of the actor's having a different goal in mind.

As if to illustrate this danger, Nell succumbs to it when he draws his second conclusion. "Secondly, what one wants and what is good for one can, and frequently do, conflict. One may like cigarettes but one's doctor may know better. To function properly and effectively in his appointed [!] roles, a person must maintain both his health and his levels of training and competence: and in either or both of these areas personal preference may be at variance with rational choice."[15]

Of course the question is *who* decides what is good for one. The doctor may know the danger of smoking to human health better than the smoker, but he most assuredly does *not* know better than the smoker whether the pleasure is worth the risk. Nell has not shown the smoker to have been irrational in his optimizing calculations; he has shown that the smoker values the pleasure of smoking differently from the doctor. Nell displays some of the worst totalitarian aspects of Marxism when he speaks of the "functioning" of a person in his "appointed roles", as if a person were like a gear in a machine that has to be maintained properly. The Professor is looking at "his" economic participants the way a General looks at his soldiers, as a means toward some "social" purpose (be it war or material production). However, unlike gears in a machine, people often decide that they don't *want* to perform effectively in roles allotted to them by Marxist central planners. People have their *own* preferences, a fact which will forever frustrate manipulators from molding people for "higher purposes". In the smoking example Nell has arrogated his subjective risk aversion to a position higher than that of the actor he is studying. We cannot resist chiding Professor Nell that such elitism is unbecoming to an egalitarian, and should be contrasted with the position of praxeologists on this issue. Thus, Mises writes:

> There is no yardstick that a scientific investigation can apply to human action other than that of the ultimate goals the acting individual wants to realize in embarking upon a definite action. [In our example, the pleasure of smoking must be considered one goal of the actor.] The ultimate goals themselves are beyond and above any criticism. Nobody is called upon to establish what could make another man happy.[16]

Nell goes on to summarize his two points. "Both . . . imply that choosing is a concrete activity taking place in specific circumstances. We choose what we do because the context we are in provides us with certain options, certain resources and certain goals. Apart from the context neither 'choice', nor any of its synonyms amongst economists (preferences, wants, etc.) have significance. But once we allow that the chooser *must* exist in a specific social context, then the characteristics of the chooser we can assume are limited by the requirements for the maintenance of the context. The conditions of reproduction are prior to, because determining, those of choice."[17]

The social context in which the actor chooses was itself the result of previous choices, but there is no point in historically tracing back these contexts to an original state of nature, where the *first* choice was presumably made. The praxeological analysis of "choice" has explicitly taken the contexts of choices into account at the outset, and in a more comprehensive way than Nell's "reproduction" scheme can supply. All choice is *specific*, and always involves limited alternatives. The limitations are the resources at hand at the time of the choice, not the "conditions of reproduction", whatever that may mean. An economic system which is failing to properly maintain its capital goods, i.e. presumably, one that is failing to reproduce itself, is subject to praxeological, but not to Nell's Marxian inquiry. The only limit to human action is the scarcity of resources (including time) at the disposal of the actor. This limitation is by no means ignored by praxeology, indeed it is one of its major themes. The limitation is more precisely stated by the more general exposition of praxeology than by the narrow viewpoint of "reproducing" an economic system, since the latter assumes an essentially evenly rotating system where parts replace themselves, whereas the former is a conceptual apparatus that can be applied to progressing or regressing economies, to economies in constant flux, to systems whose means of production are constantly being revised for new purposes rather than being merely reproduced.

The concluding sentence of Nell's argument reads "(t)he conditions of reproduction are prior to because determining, those of choice." This consists of two statements: (1) that the conditions of reproduction determine the conditions of choice, and (2) that this fact implies that the concept "the conditions of reproduction" is *prior to* the concept "the conditions of choice".

It is of interest to note in statement (1) that Nell is trying to establish that one set of conditions (for an economy's survival) determine another (for its participants' survival — the conditions of choice). It can, with equal force, be argued in reverse, that the minimum conditions for the individual choosers' survival determine those of the economy. In other words, to have an economy one must have surviving choosers, and to have choosers one must have a surviving economy. So where does one go from here?

To engage in fruitless chicken-and-egg debates on whether the "conditions of reproduction" determine the conditions of choice, or vice versa, is not the issue. In statement (2) Nell is confusing a metaphysical question (what determines what?) with an epistemological question (what explains what?). We are trying to select a concept from which economic theory is to be deduced. We are seeking *epistemological* priority, i.e. priority in the hierarchical network of deductive thought, not metaphysical priority, i.e. priority in the causal stream of events.

Therefore it is not "conditions" of either reproduction *or* choice which is relevant to this epistemological priority; it is rather the analytical framework supplied by different fundamental concepts. The choice, the purposefulness, the plans, the limited resources and information of the actor, the ends/means categories, the conditions for the actor's choosing, the context of the choice, etc. are all part of the praxeological framework. The issue is whether this "choice" or "ends/means" analytic framework can be used to *explain* economic phenomena better than some other framework.

The idea of the "conditions of reproduction" must itself be explained in terms of concepts such as "exchange", "production", "means of production", "price", and so forth, and each of *these*, and therefore the "conditions" themselves, can be explained in terms of choice. How to maintain an economy is a "how-to" question, i.e. it is an attempt to discover the best *means* available for attaining the *ends* sought, in this case a properly continuing economy. In the spirit of Professor Nell we could conclude: The choice framework is prior to, because *explaining* that of the conditions of reproduction.

In attempting to anticipate a likely argument from proponents of "choice" as the basic concept of economics, Nell argues "(b)ut what of the argument that we choose the methods of production, that choice determines [metaphysics again] the system of production, and so the basic context itself?" He says that he answers the Neoclassicals by "pointing out that durable capital goods are among the determinants of choice".[18] He may answer the Neoclassicals with that comment, but he certainly does not *touch* the praxeologists who take full cognizance of the role of capital goods in limiting choice.

Again quoting from Mises, "All material wealth is a residuum of past activities and is embodied in concrete capital goods of limited convertibility. The capital goods accumulated direct the actions of the living into lines 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 for the attainment of these ends is influenced by the past."[19]

Professor Nell suggests that we don't choose our methods of production but that, if I'm permitted to paraphrase his argument, the social means of production are the spontaneous result of society and are not consciously chosen by anyone. Again, he is not telling praxeologists anything we didn't already know. We do not claim that everything in society is consciously chosen but that everything in society is a *result of* conscious choices. The followers of Hayek require no instruction from Marxians on the difference between the spontaneous order that results from choice on the one hand, and human design on the other. Nell rejoices in the fact that "in our time the area of conscious control over economic activity has widened and that *we* are moving toward a time when perhaps *we* may be able to control and determine the *shape* and *form* of what exists in society."[20] The "we" he is talking about is presumably the government, and what he is hoping to control and determine is not some vague "shape" or "form", but the *choices* of the rest of us. The unconscious advocacy of totalitarianism is perhaps one of the risks of failing to pay adequate attention to the role of choice in society.

Partly to defend the market against such Marxist charges, and partly to try to illustrate the explanatory power of an economic theory which takes choice as its central focus, we will next take up a specific issue raised by Nell in criticism of the free market.

In Chapter 8 Nell argues that the doctrine of consumer sovereignty is mistaken because, as he tries to prove, there can be a situation where producers profit by reducing the quality of their product, and by spending more money on advertising. "If a sales campaign will bring in more sales than are lost by the quality reduction, the firm should reduce quality and begin intensive marketing; quality should be reduced, in theory, up to the point where the loss in sales from an additional drop in quality just equals the gain in sales from the extra marketing effort made possible with the funds transferred from production to marketing."[21] This is supposed to indicate how market forces can generate inefficiency.

But this situation is only considered inefficient because Nell is ignoring the evident preferences of a whole group of consumers. The entrepreneur is active in the economy finding opportunities for mutually benefitting trades. Consumers exist who lack things which they would prefer and can afford, but these things are not currently being produced and distributed in adequate quantity relative to the demand. One way for the entrepreneur to find such a discrepancy is by improving perceived product quality[22], meaning that he is anticipating that many current consumers demand higher quality products, or that many potential buyers can be impressed by product improvement. Another direction in the satisfaction of consumer desires, the one Nell doesn't see, is for the entrepreneur to invest in advertising, anticipating that many people who are now unaware of the product would prefer to buy it if they knew of its existence, than to spend their money in other ways. Unsatisfied consumer desires can be the result of *either* inadequate product quality *or* inadequate information: therefore, both entrepreneurial directions tend to satisfy consumer demand. The tendencies of the profit motive strike a rough balance among such possible directions as entrepreneurs discover where the greatest consumer desires lie. In this manner the profit motive encourages those choices on the market which are reflected in an "optimal" proportion of spending between sales and product departments.

Failing to pay close attention to the choices and purposes of the relevant actors, Nell considers one type of consumer dissatisfaction (lacking high enough quality goods) worthy of removing, while the other (lacking information about this product) is not. From the point of view of praxeologists consumers can demand whatever they want. But once again we find our elitist Marxian professor arrogating his value scale above those of the masses.

III. THE PRAXEOLOGICAL POSITIVE THEORY

We begin in this section at the point where we believe Hollis and (especially) Nell went astray. First we must define the object of our investigation, the economy, but must keep in mind our criticisms of Nell's attempted definition: (1) we must properly specify those "properties without which the thing could not be the thing it is", (2) we must start with known and proceed to unknown concepts, i.e. we cannot choose as attributes defining the economy abstractions which can only be understood *after* we have developed the economic theory itself, since this would be circular reasoning, and (3) we must keep in mind the explanatory power, or wideness, of the fundamental concept (and its cognitive framework), i.e. we are looking for the epistemological foundation of deductive economic science.

Starting from the beginning, we must step back from the collection of phenomena labeled "the economy" and ask, in the manner of Hollis and Nell, what are its *essential* attributes. What makes an economy different from other things? If, for example, we landed on Mars and saw something happening amongst the inhabitants, what essential features would we have to find to legitimately refer to the "Martian economy"?

At the very beginning of epistemology, as the human mind begins to advance beyond the level of simple perceptions, these percepts are categorized under a few extremely fundamental concepts. Quoting from Peter Coffey's work on epistemology:

> Sense alone does not give us knowledge, but only the raw materials of knowledge. Our first spontaneous and scarcely conscious judgment is the judgment of *existence*, the judgment that "something is", the judgment which involves the concept of *actual being, actually existing reality*.
>
> According as sense perception and consciousness furnish their real data the intellect is, however, not only conceiving the actual existence of these data and judging *that* they "are" or "exist". It is also conceiving *what* they are, or that in which their reality consists, viz. "substance", "body", "extension", "number", "space", "time", "life", "mind", "action", "change", "cause", "effect", "possibility", "actuality", "quality", "relation", etc., etc.: and is judging or interpreting *what* those *data* are, by means of these thought-objects derived from these data.[23]

Our intention is to select one of these thought-objects which applies specifically to economics and not particularly to other fields of inquiry, but one which is extremely *general* in its applicability to economics. Thus, for example, "life" refers to biology and not exclusively to economics, "time" refers to physics as well as to economics, "cause" is too general, and so forth. The concept listed which is at the same time generally applicable to the economy and yet largely inapplicable to other fields seems to be "action".

Our Martians would have to be "acting", they would have to be *doing* something, so what distinguishes economic action from the action of molecules, chemicals, or amoebae?

Our first criterion, then, might be that the Martians be living things. "Economy" does not refer to purely physical phenomena. Secondly, the Martians ought to have the capacity to reason. An ant colony is sufficiently different from an economy to warrant making this distinction.

But to *have* reason is not enough. Our third condition is that the Martian *use* his reason, that he *apply* his understanding of the physical world to his own existence. This means that he must be capable not only of *seeing* causal connections (wood burns) but also of *doing* something about it (burn wood). The Martian must consciously insert himself into causal chains of events for the purpose of modifying those chains. In short, he must act with reason. If he acted without reason we would choose the bee hive or ant colony as the closest earthly analogue to Martian society, rather than a human economy. If the Martian reasoned without acting we would have been unlikely to have noticed him in the first place, for he's not *doing* anything. In any case nothing like an economy, where there is certainly a great deal of activity, could be going on. Only if he *purposefully* acts, only if he *uses* reason to accomplish goals, would we term him part of an economy.

Our third condition then, which includes the first two, is that the Martians act purposefully. To act with a purpose is to guide one's own actions with one's reasoning, i.e. to select the most reasonable actions and avoid those which are deemed unreasonable. Selection of actions on the basis of reasoning about the different causal effects of each is what praxeologists mean by "choice". This in the most general sense is the object of investigation of the social sciences, causation within human (or Martian?) society. People's actions have an effect on the course of history. What *kind* of effect? We first perceive things around us as being means towards primitive ends (berries for taste) and gradually toward more complex goals (wheels for transport). People employ resources, they apply means for the attainment of ends.

This we believe to be the central concept of economics, choice, from which one may begin to deduce some of the basic insights of economics. The resources which men employ are in limited supply (even more so, presumably, on Mars), i.e. there is scarcity; the actors interact not only with their environment, but also with each other, in other words there is exchange: the resources are more appropriate for some purposes than others, and entirely inappropriate for some, i.e. there are varying degrees of specificity of means; time is scarce; the future is uncertain; and so forth. It is not my purpose here to develop the whole deductive science of economics (fortunately much of this has already been done far better than we could presume to attempt, mainly by Ludwig Mises and Murray Rothbard)[24] but rather it is to establish choice as the most appropriate starting place.

The French Marxist Ernest Mandel uses a similar argument to the praxeological one to establish the concept "labour" as the foundation of his deductive economics. He begins his magnum opus, *Marxist Economic Theory*: "Man alone, of all species, is unable to survive by adapting himself to the natural environment, but has instead to try to bend this environment to his own needs. Labour, an activity at once conscious and social, born of the possibility of communication and of spontaneous mutual aid between the members of this species, is the means whereby man acts upon his natural environment."[25]

Now this is very close to our starting point, and in fact it makes a better case for *our* starting point than it does for *his*. To "bend this environment to his own needs" is to insert his action into the causal stream of history in order to attain his goals.

But firstly, "human labour" only appropriately characterizes *some* of the possible "means whereby man acts upon his natural environment". Some actions, for example, involve waiting for wine to mature, or directly consuming berries, neither of which is generally called "labour", while both of these *are* choices involving the employment of scarce resources for some purpose. Or as Mises put it, "(f)rom no point of view whatever can artifacts be considered as the products of mere labor. They are the yield of a purposive combination of labor and of material factors of production".[26]

Secondly, man requires means not only to act upon his natural environment, but also to act with other men. Such actions as management (coordinating other men's activities toward a complex goal) and speculation (anticipating other men's future goals and preparing for their satisfaction) are also an integral part of an economy.[27] All of these activities commonly found in economies are subsumable under the general category of action, of the means/ends distinction. Not all can be subsumed under the subcategory "labour". Therefore, according to the very criteria given us by Hollis and Nell, human action or choice is the fundamental conceptual starting point for a deductive science of economics.

Before concluding this investigation we should explain, in at least a broad outline, what aspects of choice are within the purview of economics. There are a few basic kinds of questions we can ask about human action, so we must consider which of these are economic questions and which would better be classified as psychological, historical or other questions.

In the social sciences, we have said, we are interested in human causation: what people have done, are doing, and will do; in other words, we are interested in "doing"; what things people do, how they do them, why they do them, when they do them, where they do them, etc. Of these, "what", "when", and "where", people do things are questions for the historian (if the "when" refers to the past) or the speculator (if the "doing" has not yet occurred). To answer the question "why" people do what they do is the task of psychology. "How" things are done seems to apply to economics, but we should distinguish different kinds of "how" questions. The question "how something could be done if all known means were available" is an engineering question. But, as we have noted, all means are *not* available, they must be procured and at different costs. So the question relevant to understanding an economy must be *how* to achieve given ends with limited resources. Hollis and Nell quote a significant passage from Robbins in this regard: "In pure Mechanics we explore the implication of the existence of certain given properties of bodies. In pure Economics we examine the implication of the existence of scarce means with alternative uses."[28]

The economic "how" question gets to the root of our subject-matter. The actors are faced with alternative means of attaining given ends. The question can be answered by imagining the causal sequence of consequences which would result from each alternative means, and selecting the means whose anticipated results most conform to the purposes of the actors. In order to best answer the question "how", the actor surveys the expected advantages (psychic profit) and costs (the psychic profit of possible alternatives) of each choice. The primacy of "choice" as the basic concept of economics should be clear. In asking how people do what they do when they interact in an economy we are investigating human choice. The economy is a complex network of individual choosers and can thus be best explained by praxeology, the science of human choice.

NOTES

1. I owe a debt of gratitude to Professor Ludwig Lachmann of New York University for bringing this book to my attention.
2. These attributes accurately describe the crude positivism implicit in most contemporary economics rather than its more sophisticated versions in philosophical circles. Hollis and Nell, *Rational Economic Man*, p. 10.
3. *Ibid.*, p. 42.
4. Ludwig von Mises, *Human Action* (3rd Ed., Chicago: Henry Regnery, 1966), p. 647.
5. Hollis and Nell, *Rational Economic Man*, p. 71.
6. *Ibid.*, p. 72.
7. *Ibid.*, p. 114. Also see Richard Taylor, *Action and Purpose*, Arthur Koestler, *The Ghost in the Machine*, and Brand Blanshard, *The Nature of Thought*, Vol. I.
8. While Hollis and Nell refer to "*a priori*" economics, what we believe they have proven is that economics must be deductive rather than inductive. The primary concepts from which economics is to be deduced may be considered *a priori* truths analogous to logic, as appears to be Mises' position, or they may be considered as derived from simple observations, as is Rothbard's (and this writer's) contention.
9. Hollis and Nell, *Rational Economic Man*, p. 204.
10. *Ibid.*, quoted on p. 201, from *Human Action*, p. 38.
11. *Ibid.*, p. 178.
12. *Ibid.*, p. 243.
13. This is not necessarily the case; rather, our subjective attribution to it of some quality or meaning must relate to the reasons for wanting it.
14. *Ibid.*
15. *Ibid.*
16. Mises, *Human Action*, p. 651.
17. Hollis and Nell, *Rational Economic Man*, pp. 243–44.
18. *Ibid.*, p. 244.
19. Mises, *Human Action*, p. 506.
20. Hollis and Nell, *Rational Economic Man*, p. 244; emphasis mine.
21. *Ibid.*, p. 219.
22. We assume for the sake of this example that "product quality" is similarly perceived by the consumers.
23. Peter Coffey, *Epistemology* (2 vols., London: Longmans Green, 1917), I, 252.
24. Mises, *Human Action*, and Murray N. Rothbard,

Man, Economy, and State (Los Angeles: Nash, 1970.)
25. Ernest Mandel, *Marxist Economic Theory* (New York: Monthly Review Press, 1962), p. 23.
26. Mises, *Human Action*, p. 625.
27. We are not here discussing whether these actions are morally justifiable, but only whether they can be comprehended by use of the praxeological and the Marxian axiomatic frameworks.
28. Hollis and Nell, *Rational Economic Man*, p. 201, from Lionel Robbins, *An Essay on the Nature and Significance of Economic Science* (London: Macmillan, 1932), p. 83.