

SUBJECTIVE EXPECTATIONS AND THE PROCESS OF EQUILIBRATION: THE VIEWS OF LACHMANN AND MISES

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ABSTRACT: Ludwig Lachmann claimed that expectations are subjective, and argued that this phenomenon, coupled with the ceaseless change characterizing market data, greatly undermines the strength of any process of equilibration. This paper compares his views on this subject with those of Mises. It argues that Mises also viewed expectations to be subjective. But contrary to Lachmann, he did not conclude that this phenomenon undermines the process of equilibration. Thus, in Mises's view, a thoroughgoing subjectivism goes hand in hand with a belief in a dynamic market economy where there are strong forces at work ensuring that the decisions of entrepreneurs are coordinated with those of consumers.

KEYWORDS: subjectivism, expectations, equilibrium, coordination

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1. INTRODUCTION

Extending the scope of subjectivism from the realm of wants to the realm of expectations was the overarching goal of Ludwig Lachmann's research agenda. In a dynamic world, Lachmann noted, the economic problem consists of not one but two distinct spheres of subjectivism: "the subjectivism of want and the subjectivism of interpretation" (Lachmann, 1943, p. 73). Recognition of the latter implies that the expectations held by market participants are subjective; for the prices of the future that enter the plans of individuals are based on a subjective interpretation of prior catalytic experience.¹

The process of bringing expectations under the lens of subjectivism had, according to Lachmann, been a slow and difficult one. The subjectivist revolution of the late nineteenth century had been left incomplete (Lachmann, 1978b), with the early marginalists paying attention only to the first realm of subjectivism while ignoring the second. Moreover, this neglect of subjective expectations had continued as marginalist economics developed during the twentieth century.²

All the marginalist schools of thought stood guilty of this neglect. The followers of Walras, with their attention trained exclusively on analyzing a state of general equilibrium, had no room for a truly non-deterministic view of human choice and thus could not incorporate subjective expectations into their theoretical schema (Lachmann, 1943, 1966). Surprisingly, and despite their emphasis on analyzing all economic phenomena from a strictly subjectivist viewpoint, the Austrians had also "treated the subject rather gingerly" and had "failed to enlarge the basis of their approach" by doing so (Lachmann, 1976, p. 229).

Lachmann includes Mises amongst the Austrian economists who had failed to pay due attention to the subjective nature of expectations. Mises, according to him, "hardly ever mentions expectations, though entrepreneurs and speculators often turn

¹ Lachmann's views on the nature of expectations can be found in Lachmann (1943; 1978a [1956], pp. 20–34; 1976; 1978c).

² Hence his lament that "as economic thought developed in this century, subjectivism, again and again, has been thwarted" (Lachmann, 1978c, p. 214).

up in his pages” (Lachmann, 1976, p. 229). Yet, contrary to Lachmann’s assertion, a study of Mises’s work reveals that he did have well-developed views on the nature of expectations. In fact, the two of them shared very similar views on the subject. For Mises, as for Lachmann, expectations were subjective due to the subjective nature of interpretation in a world of change.

Moreover, in sharp contrast to Lachmann, Mises was able to successfully establish a *modus vivendi* between the process of equilibration and the presence of subjective expectations in a dynamic market economy. His focus on the inherent subjectivism of expectations had led Lachmann to question the strength of the equilibrating forces in a dynamic market economy. Would the process of equilibration result in the emergence of a state of general equilibrium in a world with given resources, techniques and wants? The fact that two individuals with the same market experience could formulate plans with different estimations of future prices made him highly skeptical of this possibility. Mises, however, argued otherwise.

The fact that Lachmann and Mises shared similar views on the nature of expectations but drew very different implications from them regarding the strength of equilibrating forces has been largely neglected in the modern literature on the subject. Some scholars, while analyzing Lachmann’s work on the nature of expectations and its implications for the process of equilibration, repeat his assertion that Mises gave short shrift to the subject.³ Others, while acknowledging that Mises did have well-developed views on the subjective nature of expectations, claim that he failed to integrate these views into his discussion of price formation and the process

³ Thus, Lewis and Runde (2007) state: “Lachmann re-defines praxeology, which Mises understood to be the study of how people use means to achieve *given* ends, as the study of how people devise and act upon plans to use means to achieve (imagined) ends” (Lewis and Runde, 2007, p. 171; emphasis added), thereby implying that an analysis of expectations did not enter into Mises’ theory of human action. Koppl (1998) is more emphatic on the subject: “Lachmann claims that ‘Mises hardly ever mentions expectations.’ And a look at the index of Mises’ magnum opus, *Human Action*, shows no entry under ‘expectations’. *Though Mises was a subjectivist, his system of thought does not permit the development of a subjectivist theory of expectations.*” (Koppl, 1998, p. 67; emphasis added).

of equilibration.⁴ And scholars who analyze Mises's views on the implications of subjective expectations for such a process tend to underscore the differences between Lachmann and him on the subject while ignoring the manifold similarities, especially the emphasis that both place on the subjectivism of interpretation.⁵

Garrison (1986) is a contribution to the literature that constitutes an exception to this trend. It explicitly acknowledges the fact that both Lachmann and Mises viewed expectations as subjective and proceeds to compare their treatment on the implications of this for the process of equilibration in a market economy. Moreover, Garrison correctly notes that the key to the *modus vivendi* that Mises establishes between this process and subjective expectations lies in his theory of profit and loss and the process of entrepreneurial selection that this entails.

The article does not, however, provide a detailed analysis of the similarity of their views on the nature of expectations. Most importantly, it leaves out the emphasis that both place on the subjective interpretation of market experience in this context. It also does not address the fact that Mises's theory of equilibration explicitly acknowledges the problem posed by the path dependency effect, something that Garrison himself, in another paper, has singled out as the "*sine qua non* of Lachmann's market process" (Garrison, 1987, p. 86).

This paper aims to extend and develop Garrison's analysis to address the gaps in the modern literature on subjective expectations and its implications for the process of equilibration. It provides a

⁴ This argument is made, for example, by Butos (1997, pp. 81–84).

⁵ See Rothbard (1995) and Salerno (1995). Salerno, for instance, argues that for Lachmann expectations are "autonomous" in the same sense as human preferences" and from this premise concludes that Lachmann's view of expectations ignores the fact that they are "derived from thymological and catallactic experience," thereby placing it at odds with Mises's analysis of the subject (Salerno, 1995, p. 219). This interpretation, however, ignores the emphasis that Lachmann himself placed on the subjectivism of interpretation of market experience while discussing the nature of expectations. Moreover, it also runs counter to the consensus in the modern literature on the subject as found in Lewin (1993), Koppl (1998), Aimar (1999), Foss and Garzarelli (2007), Lewis and Runde (2007) and Sauce (2014), all of whom argue that catallactic experience and subjective interpretation of the same play a vital role in Lachmann's theory of expectations.

detailed analysis of the similarity in the views of Lachmann and Mises on the subjective nature of expectations, emphasizing, in particular, the key role that the subjective interpretation of experience plays in this regard. It also discusses the differing implications that they drew from this identical starting point for the process of equilibration, focusing especially on how Mises's arguments on this subject explicitly acknowledge the problems posed by the path dependency effect.

The paper is structured as follows: section 2 analyzes Lachmann's views on the subjective nature of expectations, while section 3 discusses Mises's views on the subject. Section 4 discusses Lachmann's views on the process of equilibration, focusing, in particular, on the problems posed by the path dependent nature of the process in a dynamic world. Section 5 analyzes how Mises managed to integrate subjective expectations into his theory of the process of equilibration while acknowledging the path dependent nature of the process. Section 6 concludes the paper.

2. SUBJECTIVE EXPECTATIONS IN A DYNAMIC WORLD: THE VIEWS OF LACHMANN

2.1 The Need for Interpretation

Individual plans, according to Lachmann, are inherently future oriented, consisting of a set of actions that an individual seeks to undertake over a given period. Each plan can be said to embody both "the means at his [the individual's] disposal and the obstacles he is likely to encounter" (Lachmann, 1943, p. 68). In a market economy, characterized by inter-personal exchange, these obstacles consist of prices: rates at which the individual can transform the means at his (or her) disposal into the goods that he (or she) desires by entering various markets.

Since both the means as well as the obstacles lie in the near or distant future, expectations form an integral part of any plan. The individual planner, while formulating a plan, must first estimate the future means at his disposal as well as the prices that will prevail. It is based on these expectations that he embarks on a particular course of action.

The future, however, is inherently uncertain. And the chief cause of this uncertainty is the prospect of change. Both the means available in the future as well as the future prices that form the heart of any plan are subject to change; their values can be different from those that prevail today and those that prevailed in the recent past. Thus, individuals, while formulating their expectations, must find a way to cope with this uncertainty.

To form expectations of future prices the individual must first form some idea of how the potential market participants in the markets that he expects to have dealings in will act under various circumstances. He must, in other words, have some knowledge of the plans that these market participants will formulate when faced with different price vectors, for the future prices that he expects to prevail are implied in these plans.

To obtain this knowledge of the plans of others, the individual must rely on his own prior market experience. He must look at past prices and the plans that individuals formulated at these prices to form some idea of the plans that they will embark upon now and the exchanges that they will undertake at different prices over the relevant period in the future. It follows, therefore, that the prices of the past are related to those of the future. What, however, is the precise nature of this relationship?

According to Lachmann, it is only in a "quasi-stationary state" in which "changes are few and far between," and where every change "has had its repercussions before the next change takes place" that "knowledge is guided by prices functioning as signposts to action" (Lachmann, 1978a [1956], p. 21). Indeed, in such a world, consumers can learn how to substitute one good for another and producers can learn which industries to enter and which ones to abandon by "observing price changes," for "every significant change in needs or resources expresses itself in a price change, and every price change is a signal to consumers and producers to modify their conduct" (Lachmann, 1978a [1956], p. 21).

It follows that the relationship between the prices of the past and the expectations of future prices in such a scenario is mechanical and deterministic. Individuals, in the process of drawing up their expectations, can simply look at the prices of the past and the plans undertaken at these prices and can, on the basis of this, obtain

knowledge of how individuals will choose in the future. They can do so without having to analyze and interpret their market experience; without having to try and understand why individuals carried out the plans that they did in the past at the prevailing prices.

The quasi-stationary state, however, is an unrealistic construct. In the real world, Lachmann argues, "change does not follow such a convenient pattern" (Lachmann, 1978a [1956], p. 22). There are multiple changes that occur simultaneously or close together in time. Moreover, before the repercussions from any one change ripple through the economy, other changes occur and their repercussions are layered on top of the initial ones. In such a scenario, "knowledge derived from price messages becomes problematic," i.e., these messages require interpretation and analysis (Lachmann, 1978a [1956], p. 22). Indeed, in a world buffeted by continuous change, "prices are no longer in all circumstances a safe guide to action" and do not "tell the whole story." Although they do continue to "transmit information," this information is "incomplete" and thus "requires interpretation (the messages have to be decoded) in order to be transformed into knowledge [...]" (Lachmann, 1978a [1956], p. 22).

Indeed, in a dynamic world, individuals, while forming their expectations of the future, need to "analyze the situation" that they find themselves in (Lachmann, 1978a [1956], p. 23). It is impossible, in such a world, for individuals to form an idea of the plans that individuals will undertake in the future and the future prices that can be expected to prevail without understanding why they acted the way that they did in the past. The process of learning and the transformation of experience into knowledge that guides the formation of a new set of expectations and a new set of plans is one that is complex and hinges significantly on individuals interpreting their market experience. Thus, for Lachmann the interpretation of experience is the crucial link that connects the past, the present and the future in a dynamic world.

2.2 The Subjectivism of Interpretation and Expectations

Given that expectations, in a dynamic world, are the result of an individual's interpretation of market experience, they are not formed *in vacuo* but are shaped by the "experience of economic processes" (Lachmann, 1943, p. 12). Thus, they cannot be treated as data by the

economic theorist as tastes and the endowment of resources can. Instead, the theorist must develop a theory of expectations.

A theory of expectations, however, is faced with a seemingly insuperable difficulty that stems from the inherently subjective nature of all human choice. It is one of the fundamental implications of the subjective theory of choice that two individuals may react very differently to the same external situation. When faced with the same constellation of prices, individual A may choose to adopt one course of action whereas individual B may opt for a completely different course. But if the formation of expectations is shaped by an individual's interpretation of his past market experience, it follows that this subjectivism must stain expectations as well. For it implies that the same economic facts of the past, i.e., the same constellation of prices paid and quantities produced and sold, will be interpreted very differently by different individuals and will result in the formation of vastly different expectations regarding the course of future prices.⁶ Indeed, if one were forced to define any given situation not in terms of objective economic facts but in subjective terms, one would be forced to conclude that "there will be as many 'business situations' as there are different interpretations of the same facts, and they will all exist alongside each other" (Lachmann, 1943, p. 13).

Thus, while it is clear that expectations are formed on the basis of an interpretation of the recent and more remote economic past, "the *modus operandi* of the response is not the same in all cases even of the same experience" (Lachmann, 1943, p. 14). Any experience, as it proceeds through the process of interpretation and the distillation of knowledge, has to "pass through a "filter" in the human mind, and the undefinable character of this process makes the outcome of it unpredictable" (Lachmann, 1943, p. 14). Indeed, the inherently subjective nature of this process is what makes expectations and knowledge subjective.⁷

⁶ Thus, "Two farmers confronted with the same observable event, a rise in apple prices, will take different views of the situation and react differently if one interprets it as a symptom of inflation and the other as indicating a shift in demand under the influence of vegetarianism" (Lachmann, 1943, p. 17).

⁷ It is this subjectivism that, according to Lachmann, makes expectations indeterminate (Lachmann, 1943, p. 18). Thus, expectations, in other words, do not constitute a mere reaction to a set of conditions and are not determined by them.

3. MISES ON SUBJECTIVE EXPECTATIONS: UNCERTAINTY, THYMOLOGY AND APPRAISEMENT

All human action, according to Mises, necessarily takes place in time. Man, in acting, necessarily distinguishes between the present and the future; he strives now to substitute a future state of affairs that he considers more satisfactory for the less satisfactory one that he believes will emerge without his interference. Indeed, "it is acting that provides man with the notion of time and makes him aware of the flux of time; [...] Man becomes conscious of time when he plans to convert a less satisfactory state of affairs into a more satisfactory state" (Mises, 1998 [1949], p. 100).

The lapse of time inherent in all action brings with it the possibility of change. In the period of time that lies between the commencement of an act and its completion, the underlying conditions confronting the actor could change. Every actor, in deciding upon a course of action, must be cognizant of the conditions and their patterns of change during the present, i.e., the period of time that the act will take to complete. In the process, he must try and estimate as best as he can the conditions that will prevail in the future if he were to not act. Thus, in the conceptual world of Mises, as is the case for Lachmann, individuals formulate and embark on courses of action that involve considerations of time and distinguish between the present and the future in a changing world. This future orientation of action implies that expectations form a crucial component of every act; indeed, all action necessarily involves the formation of some expectations about relevant events in the future.

In a market economy with interpersonal exchange these expectations manifest themselves as appraisements of the relevant prices that might influence the outcome of a choice. Mises defines appraisement as "the anticipation of an expected fact," specifically of "what prices will be paid on the market for a particular commodity or what amount of money will be required for the purchase of a definite commodity" (Mises, 1998 [1949], p. 329). Given that in a world characterized by interpersonal exchange the outcome of an individual's decision is necessarily dependent on the valuations of others, Mises argues that "the valuations of a man buying and selling on the market must not disregard the structure of market prices; they depend upon appraisement" (Mises, 1998 [1949], p. 329).

It is important at this stage to take note of three characteristics regarding the nature and formation of expectations that are implied in Mises's work; views that are strikingly similar to those of Lachmann's. To begin with, all expectations, for Mises, are necessarily based on imperfect knowledge, for changing conditions bring with them the specter of uncertainty. Indeed, the conditions that are crucial and often impinge on the success of an act, such as "future needs and valuations, the reaction of men to changes in conditions, future scientific and technological knowledge, future ideologies and policies" always remain partially hidden to acting man and "can never be foretold with more than a greater or smaller degree of probability." Every action is thus oriented and "refers to an unknown future" and necessarily involves "risky speculation" (Mises, 1998 [1949], p. 106).

Second, experience forms the basis on which expectations of the future are formed. The constellation of prices and quantities produced and sold in the past aid the acting individual in his attempt to peer into the future to anticipate the prices that will prevail then. But, as for Lachmann, there is, for Mises, no simple and straightforward relationship that prevails between the prices of the past and those of the future. The prices of the past and the market experiences of individuals at these prices do not in and of themselves serve as a guide to future action. Indeed, the only knowledge that a past price conveys is that "one or several acts of interpersonal exchange were effected according to this ratio." It does not, however, "convey directly any knowledge about future prices." The prices of the past, therefore, are "merely starting points" in the attempt of an actor to "anticipate future prices" (Mises, 1998 [1949], p. 213).

What the individual really needs to form expectations and plan future action in a world of change is knowledge of the underlying conditions and how they gave rise to these prices in the past. Acting man needs to peer underneath the layer of prices to form some opinion of why the market participants acted the way they did under the conditions that prevailed, for this is the raw material that he can utilize to appraise the valuations that will prevail in the future. And to do so he must draw on his store of "thymological experience," on what he knows about "human value judgments, the actions determined by them and the responses these actions

arouse in other people" in order to anticipate "other people's future attitudes and actions" (Mises, 2007 [1957], p. 312).⁸

How does a man acquire this thymological knowledge or insight? He does so by interpreting and analyzing his prior market experience and his wider social experience and the valuations of others and his own valuations that underlay this experience. In order to gain this knowledge he must strive to analyze the various factors that might have caused individuals (including himself) to act the way they did under various conditions and must try and form an opinion, in each case, of which of these factors are important and which can be neglected.⁹ It is this vast store of commonsensical knowledge of how he and the other market participants will act under various conditions that he draws upon in formulating his anticipations of how people will act in the conditions that he believes will prevail in the future and in deciding his course of action.¹⁰

⁸ As Mises notes, "People as a rule call this insight into the minds of other men psychology" (Mises, 2007 [1957], p. 265). Indeed, the term psychology is colloquially used to signify the "cognition of human emotions, motivations, ideas, judgments of value and volitions, a faculty indispensable to everybody in the conduct of daily affairs [...]" (Mises, 2007 [1957], p. 264). Thus, it is often said that "a salesman ought to be a good psychologist" or that a "political leader should be an expert in mass psychology" (Mises, 2007 [1957], p. 265). Nevertheless, while the popular usage of the term psychology refers to such knowledge of the motivations guiding action, it is also used scientifically with reference to the "various schools of experimental psychology," the subject matter of which is completely unrelated to the "problems of the sciences of human action" (Mises, 2007 [1957], p. 264). As a result, Mises chooses to coin the term "thymology" to describe the "knowledge of human valuations and volitions," in order to "prevent mistakes resulting from the confusion of [...] two entirely different branches of knowledge" (Mises, 2007 [1957], p. 265).

⁹ Thus, in the words of Mises,

Thymology is on the one hand an offshoot of introspection and on the other hand a precipitate of historical experience. It is what everybody learns from intercourse with his fellows. It is what a man knows about the way in which people value different conditions, about their wishes and desires and their plans to realize these wishes and desires. It is the knowledge of the social environment in which man lives and acts [...] (Mises, 2007 [1957], p. 266).

¹⁰ As Mises notes,

For lack of any better tool, we must take recourse to thymology if we want to anticipate other people's future attitudes and actions. Out of our general

Third, and perhaps most importantly, the accumulation of this thymological knowledge, according to Mises, is bound to be subjective. This, in fact, follows for him, just as it did for Lachmann, from the inherently subjective nature of choice. The same external situation can give rise to vastly different courses of action on the part of different individuals. Given that these courses of action are based on thymological experience and what the actor predicts will occur in the future on the basis of such experience, it follows that this experience must therefore be subjective and must vary from person to person. Thus, for Mises as well, the ultimate valuations and actions in the marketplace, given that they incorporate the actor's interpretation of the past and his appraisal of the future, reflect two layers of subjectivism: the subjectivism of his wants and how he ranks them in order of relative importance and the subjectivism of his expectations and anticipations.

This inherent subjectivism in the ability to understand the underlying conditions of the past and the future and to analyze the actions that individuals are willing to undertake under these conditions manifests itself in a "datum that is a general characteristic of human nature" and is "present in all market transactions:" the fact that "various individuals do not react to a change in conditions with the same quickness and in the same way" (Mises, 1998 [1949], p. 256). Indeed, "the phenomenon of leadership is no less real on the market than in any other branch of human activities," and here too there are "pacemakers" who are quick to adjust their actions to the underlying conditions and have "more initiative, more venturesomeness, and a quicker eye than the crowd," and there are "others who only imitate the procedures of their more agile fellow citizens" (Mises, 1998 [1949], p. 255–256). This uneven distribution of the ability to accumulate thymological knowledge and appraise the future with its aid plays an important role in Mises's theory of equilibration.

thymological experience, acquired either directly from observing our fellow men and transacting business with them or indirectly from reading and from hearsay, as well as out of our special experience acquired in previous contacts with the individuals or the groups concerned, we try to form an opinion of their future conduct (Mises, 2007 [1957], p. 313).

4. SUBJECTIVE EXPECTATIONS AND EQUILIBRATION: LACHMANN ON THE PROBLEM OF PATH DEPENDENCY

An economy in a state of disequilibrium is characterized by the presence of divergent expectations. Market participants formulate plans based on differing expectations of future prices. As a result, their plans are inconsistent with one another and they experience widespread plan failure and frustration.

The gradual approach of the economy from such a state of disequilibrium to one of equilibrium is characterized by a gradual convergence of expectations. Individuals initially formulate their plans based on differing estimates of what prices will be in the future. The resulting plan failures, however, force them to recalibrate their expectations and to formulate new plans. They do so based on expectations that lie closer to one another, thereby reducing the extent of plan failures. Multiple rounds of this process push the economy gradually to a state of general equilibrium, characterized by the market participants formulating their plans based on identical expectations.

According to Lachmann, there are two sets of forces that ensure the perpetual divergence of expectations and prevent the emergence of general equilibrium. The first of these consists of exogenous changes in the data that characterize the economy. These changes, that emerge outside of the process of exchange, consist of those in the wants of individuals, in the technical knowledge possessed by producers and in the endowments of the market participants that are independent of past transactions undertaken by them. In a world of uncertainty, the price changes that result from these exogenous changes are never predicted with complete accuracy, resulting in the continued divergence of expectations and plans.

Expectations, however, will also continue to diverge in a world without such exogenous changes in the data. It is vital to note that such a world, while it appears static and shorn of change from the point of view of the economist, is nevertheless dynamic from the point of view of the individual planner. For, while there are no changes in the data that emerge from outside the process of exchange, there are still changes in the data that are relevant to the plans of the individuals that are endogenous to it. These changes,

and the price changes that result from them, are thrown up by the process of exchange itself.

Most importantly, the exchanges that take place at disequilibrium prices result in changes in the distribution of resources amongst the market participants, thereby altering their endowments during subsequent exchange. In financial markets, for instance, the prices established from day to day “reflect nothing but the daily balance of expectations” of the bulls and the bears. In the process, “new capital gains and losses are made every day that change the distribution of resources” (Lachmann, 1976, pp. 231–232).

This constant change in the distribution of resources implies that, despite the absence of exogenous changes, the state of equilibrium towards which the economy tends is a moving target. Or, stated differently, the position of final or general equilibrium is path dependent. It depends, as Garrison notes, “upon the particular sequence in which the market eats away at disequilibrium” (Garrison, 1987, p. 86). The changing endowments that result from trades made at disequilibrium prices imply that “each step in the market process significantly changes the equilibrium toward which the process is supposedly tending” (Garrison, 1987, p. 86).

The path dependent nature of the equilibrium position, moreover, also implies that the set of future prices to which the expectations of the market participants must converge is a moving target. Exchanges made at disequilibrium prices not only redistribute resources and change the position of general equilibrium to which the economy is tending. But, given that a state of equilibrium only emerges if all market participants formulate their plans based on expectations that involve the equilibrium price vector itself, they also ensure that the set of expectations needed to bring about equilibrium does not remain unchanged through time.

The dynamic nature of a world free of exogenous change and the path dependent nature of the equilibrium position have important implications for the process of equilibration. To begin with, market participants will still need to interpret their market experience while formulating their plans. The relationship between past and future prices will not be mechanistic but will be complex, with the process of culling knowledge of the future from market experience being influenced by the subjective nature of interpretation. It

follows, therefore, that the expectations of the market participants will be subjective and non-deterministic in such a scenario as well.

Moreover, the path dependent nature of the equilibrium position implies that market participants will be utilizing the knowledge acquired from experience to form expectations regarding a price vector that is a moving target. This implies that they might be faced with the possible "obsolescence of the stock of knowledge" in their possession. Indeed, as Lachmann notes, "as time flows, so does information," increasing the stock of knowledge (Lachmann, 1986, p. 70). But the lapse of time and the change in conditions facing the individual planner also implies that "existing knowledge may also become out of date (Lachmann, 1986, p. 71)" This fact adds another layer of subjectivism to the interpretation of experience that lies at the heart of the knowledge accumulation process. For it means that individuals will not only have to interpret their experience and the information that this throws up, but also will have to make interpretative and necessarily subjective decisions about which components of the stock of knowledge in their possession is relevant and which of them are irrelevant.

For all these reasons one can conclude that, even in a world with no exogenous changes in the data, knowledge of the underlying conditions will not grow in a steady, uniform fashion. Indeed, all one can assert is that "changes in the constellation of knowledge are an inevitable concomitant of the passing of time, and changes in the constellation of expectations are bound to follow them" (Lachmann, 1975, p. 200). One cannot, however, claim that each step in this process will be one that ensures a greater convergence of expectations, thereby pushing the economy ever closer to a state of equilibrium. Hence, the need to be skeptical about the possibility of the "market process as at least potentially terminating in a state of long run equilibrium" (Lachmann, 1976, p. 232).

This conclusion regarding the weakness of the forces of equilibration in a world free of exogenous change has vital implications for the market process in the real world where such changes are frequent. The fact that there are major and significant forces scuttling the gradual convergence of expectations to the equilibrium price vector greatly undermines the extent to which production and consumption activities can be coordinated in the real world. Indeed, with these considerations in mind, a market

economy resembles, not “a clockwork” that swings back and forth around a fixed point of equilibrium (Lachmann, 1986, p. 157) but a kaleidoscope that throws up ever changing patterns of activity and resource allocation that may or may not coordinate the activities of entrepreneurs and consumers (Lachmann, 1976). In such a kaleidic world, when “one pattern of prices gives way to another,” there is no assurance that “a given pattern is any closer to a general equilibrium, or represents any higher degree of coordination, than the one that preceded it” (Garrison, 1987, p. 84).

5. MISES ON EXPECTATIONS, ENTREPRENEURIAL SELECTION AND EQUILIBRATION

5.1 The Profit and Loss System and the Process of Entrepreneurial Selection

The valuations of market participants, according to Mises, are tested every day in the process of exchange and price formation that takes place in the markets for various goods and services. Most crucially, the process of exchange serves as a daily referendum on the valuations of the entrepreneurs, who enter factor markets ready to bid certain amounts of money for the factors of production based on their subjective expectations. Given that the prices of all goods and services result from the interaction of the momentary valuations of the participating buyers and sellers, the realized prices that emerge on markets everyday exploit all potential gains from trade and exhaust all reverse valuations.¹¹ Thus, the factor prices that emerge everyday allocate the available stocks of these goods to their highest valued uses as encapsulated in the momentary bids of the various competing entrepreneurs. Similarly, the prices of consumer goods allocate these goods to their highest valued ends as represented by the prevailing valuations of the buyers.

These factor and consumer goods prices realized in the process of exchange give rise to profits and losses. And it is through earning these profits and losses that entrepreneurs test their valuations and their ability to successfully predict future conditions. Indeed, the

¹¹ On realized prices establishing a plain state of rest, or a momentary state of equilibrium with error, see Salerno (1994) and Manish (2014).

very emergence of profits and losses implies that the subjective valuations of the entrepreneurs necessarily diverge.¹² Those entrepreneurs that were successful in their appraisal of the future valuations of their customers earn a profit while those that failed in this endeavor are penalized with losses. Thus, those entrepreneurs who are better able to accumulate accurate thymological knowledge and apply that knowledge successfully in determining what valuations their customers will have in the future accumulate resources while those that fail to do so successfully lose resources.

Every round of the exchange process, by generating multiple rounds of profits and losses, helps weed out poor entrepreneurs and reward the successful appraisers. In Mises's opinion, one of the key functions of the profit and loss system is to "shift the control of capital to those who know how to employ it in the best possible way for the satisfaction of the public." For, "the more profits a man earns, the greater his wealth consequently becomes, the more influential does he become in the conduct of business affairs" (Mises, 2008 [1951], p. 23). Thus, the profit and loss system essentially provides a mechanism for the selection of entrepreneurs: for the selection of who will be entrusted with making the all-important decisions of what, how, where and how much to produce. It is a part of the more widespread selective process that is generated by the process of exchange and the ensuing price structure whereby the market adjusts the "social apparatus of production to the changes in demand and supply" and assigns "definite tasks to the various individuals" (Mises, 1998 [1949], p. 308).

¹² For as Mises notes, "If all entrepreneurs were to anticipate correctly the future state of the market, there would be neither profits nor losses. The prices of all the factors of production would already today be fully adjusted to tomorrow's prices of the products. In buying the factors of production the entrepreneur would have to expend (with due allowance for the difference between the prices of present goods and future goods) no less an amount than the buyers will pay him later for the product. An entrepreneur can make a profit only if he anticipates future conditions more correctly than other entrepreneurs. Then he buys the complementary factors of production at prices the sum of which is smaller than the price at which he sells the product" (Mises 1998 [1949]: 291).

5.2 Entrepreneurial Selection, Path Dependency and the Process of Equilibration

Now, for Mises, as for Lachmann, there are two forces of change in a dynamic world. First, exogenous changes in wants, technical knowledge and endowments that emerge from outside the process of exchange generate changes in the prices and quantities of the various goods bought and sold. And second, changes in economic phenomena also result from changes in the data that are endogenous to the process of exchange. Indeed, as Mises notes:

The absence of further changes in the data which is the condition required for the establishment of equilibrium refers only to such changes as could derange the adjustment of conditions to the operation of those elements which are already operating today. The system cannot attain the state of equilibrium if new elements, penetrating from without, divert it from those movements which tend toward the establishment of equilibrium. But as long as the equilibrium is not yet attained, the system is in a continuous movement which changes the data. The tendency toward the establishment of equilibrium, not interrupted by the emergence of any changes in the data coming from without, is in itself a succession of changes in the data" (Mises, 1998 [1949], p. 708).

Thus, for Mises as well, the process of equilibration is inherently dynamic. An economy that, in the eyes of the theorist is static and shorn of change, is nevertheless dynamic from the point of view of the individual actor. Moreover, the equilibration process is characterized by repeated changes in the underlying distribution of the available resources, which implies that the position of final equilibrium is path dependent. The available pool of capital, for instance, is being constantly redistributed as a result the emergence of profits and losses. Indeed, each round of exchange that results from the momentary valuations of the entrepreneurs involves a change in the underlying distribution of resources and consequently a change in the equilibrium price vector.

Nevertheless, despite this dynamism and path dependency, the process of entrepreneurial selection ensures a gradual movement in time towards a state of equilibrium. For, it is the activities of "enterprising men, the promoters and speculators, eager to profit from the discrepancies in the price structure," that tends towards "eradicating such discrepancies and thereby also blotting out the

sources of entrepreneurial profit and loss" (Mises, 1998 [1949], p. 353). Moreover, these activities of entrepreneurs, each guided by his subjective expectations, sets into motion the "process that would result in the establishment of the evenly rotating economy" (Mises, 1998 [1949], p. 353). The constant shifting of resources from the less successful to the more successful entrepreneurs ensures that the factors of production are gradually allocated to their highest valued purposes and that over a course of time the factor prices approach those that will prevail in a state of general equilibrium.

Thus, far from scuttling the process of equilibration, the inherent redistribution of resources entailed by the profit and loss system is vitally important for the movement of the economy towards a state of equilibrium in an economy free of exogenous change. Indeed, what for Lachmann constitutes the most important stumbling block for developing a theory of equilibration is for Mises the building block in doing so. For Lachmann, the constant changes in the endowments of the market participants and the resulting path dependency of equilibrium thwarts the process of equilibration in a world where expectations are subjective. For Mises, on the other hand, it is precisely these changes in the distribution of resources and the resulting alterations in the endowments of the entrepreneurs that ensures the emergence of equilibrium in an economy where each entrepreneur bids for factors based on his subjective expectations.

In the real world, however, given the constant exogenous changes in the data, there would be no movement in time towards equilibrium.¹³ Nevertheless, the system of profit and loss and the

¹³ In a dynamic world, in the apt words of Lionel Robbins, "through history, the given data change, and though *at every moment* there are tendencies towards an equilibrium, yet *from moment to moment* it is not the *same* equilibrium towards which there is movement" (Robbins, 1932, p. 62). Or as Mises noted, the

final state of rest (a state of general equilibrium) is an imaginary construction, not a description of reality. For the final state of rest will never be attained. New disturbing factors will emerge before it is realized. What makes it necessary to take recourse to this imaginary construction is the fact that the market at every instant is moving toward a final state of rest. Every later new instant can create new facts altering this final state of rest. But the market is always disquieted by a striving after a definite final state of rest (Mises, 1998 [1949], p. 246).

associated entrepreneurial selection process ensures there are forces promoting the coordination of production and consumption activities in a dynamic market economy. For, given that this process rewards those who are better able to interpret and analyze the actions of their fellow men and are able to thus better appraise what market phenomena will emerge in the future, it ensures that at each stage of the market process the best equipped appraisers are on hand to make fresh decisions of how to allocate resources. At any given moment in time, those entrepreneurs who have accumulated the most accurate thymological knowledge and who have utilized this to make the most accurate appraisements of future prices are the ones who control the process of resource allocation. And while their speculations are always subject to error, it is via ensuring that the quality of appraisal is the best possible that the market economy ensures that resources are allocated broadly in line with consumer preferences.¹⁴

6. CONCLUSION

This paper set out to compare the views of Lachmann and Mises on the process of equilibration in a world with subjective expectations. For Lachmann there is no simple connection between the prices of successive planning periods in a dynamic world. Past prices and the frustrations suffered at these prices do not in and of themselves provide any knowledge of the underlying conditions and thus do not provide the basis for plan revision. Instead, market participants, in learning from the past, need to analyze and interpret this experience. The inherent subjectivity of this endeavor, however, undermines the very existence of any process pushing the market towards equilibrium.

Given the weakness of the forces of equilibration, for Lachmann the process of exchange in the real world is inherently open ended and kaleidic. Changing patterns of data and the subjectivism of interpretation and the subsequent divergent expectations ensure that multiple rounds of exchange activity do not proceed in

¹⁴ For a more detailed discussion of how the process of entrepreneurial selection facilitates coordination between production and consumption activities see Manish (2014) and Bylund and Manish (2015).

historical time towards any end state. In a dynamic world, the forces of disequilibrium trump those enhancing coordination.

For Mises, as for Lachmann, there is no straightforward relationship between the prices of the past and those of the present and future. Individuals, in other words, cannot learn about what to do now based simply on their knowledge of the prices of the past. They must, instead, analyze their market experience based on their thymological knowledge and use the results of this analysis to decide on a course of action for the future. Moreover, Mises also agrees with Lachmann on the inherent subjectivity of this process. However, the presence of a process of equilibration is ensured by the presence of the profit and loss system that acts as a mechanism for entrepreneurial selection.

In an economy with given wants, techniques and resources this process of selection would lead the economy to a point of equilibrium over a period of time. However, the process of exchange is inherently open ended in the real world of continuous exogenous changes in the data. There is no movement in historical time towards any end state of inter-temporal equilibrium. Nevertheless, the market economy is not kaleidic. Instead, it has a process of equilibration, but one that proceeds not in historical but in logical time. The appraisements of the entrepreneurs and the ensuing process of entrepreneurial selection ensures that, at every moment in time, those individuals who are best equipped to draw on their thymological experience and speculate about future conditions are at the helm, taking decisions about the allocation of the available resources.

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