

Did the theory of market socialism answer the challenge of Ludwig von Mises? A reinterpretation of the socialist controversy

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I. Introduction

In microeconomics courses, students often encounter descriptions of the interwar debate on the efficiency of resource allocation under socialism. Textbooks use that debate to motivate issues in welfare economics. The standard view of Ludwig von Mises' role in that debate is given by Samuelson:

Around 1900 Pareto showed that an ideal socialism would have to solve the same equations as competitive capitalism. Around 1920, Ludwig von Mises, perhaps unaware of Pareto's proof, set forth the challenging view that rational economic organization was *logically* impossible in the absence of free markets. Fred Taylor of Michigan, A. P. Lerner of England and California, and Oskar Lange of Poland answered Mises with the view that socialism could conceptually solve the problems of economic organization by a decentralized process of bureaucratic trial and error [1976, 642].

The impression gained is that Mises was both wrong and lacking in scholarship in being unaware of Pareto's contribution. Although recently Mises has attracted some defenders,¹ the standard conclusion drawn from

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1. Since this essay was first written, Vaughn (1980) has published an important re-evaluation of the debate. Vaughn uses the works of Hayek to criticize Mises' opponents in the debate. She downplays Mises' contribution relative to that of Hayek in stating that the latter raised "more difficult issues" (1980, 537). In fact, the present article shows that Mises did raise most of the issues later presented, perhaps more clearly, by Hayek. Apart from this difference of interpretation on Mises' role, Vaughn's article and mine should be regarded as complementary contributions. Two other works have also challenged the near-consensus view of the debate. Rothbard (1976), a student of Mises, has defended Mises' views, relying mainly on quotations from Hayek and from *Human action*. Roberts (1971) has challenged the view that the opponents of Mises triumphed. In doing so, he uses some arguments similar to those of Mises, but does not defend Mises' general position. In fact, Roberts (p. 573) argues that Mises' contribution was responsible for the confusion in the debate as to the true nature of socialism.

examination of the debate is that Mises was in error. The close of the debate is usually signified by Bergson's review article (1952; first published in 1948), even though Mises declared himself triumphant in 1949.²

The purpose of the present article is to challenge the standard interpretation of the debate. In Section II, Mises' theory is outlined in order to describe the features of an economy which Mises thought necessary for efficient resource allocation. By claiming that these features were absent under socialism, Mises presented his challenge to socialism's proponents. The 'competitive solution,' usually regarded as the definitive response to Mises, is analyzed in Section III. The analysis shows that the competitive solution does not have those features Mises deemed necessary for efficiency.

In Section IV important differences in assumptions and emphases between Mises and his critics are identified. Those differences center on assumptions concerning changes in economic conditions and on the importance attached to an economy's ability to react to new information. These differences are also found when comparing Mises' theory and modern general equilibrium and welfare theory. As Mises' theory was usually analyzed, using the assumptions and conceptual tools of welfare economics, it is not surprising that it was misunderstood and regarded as incorrect. In contrast, the competitive solution, using the framework of modern economics, could be accepted within that framework. Thus, the debate was not resolved with victors and vanquished. The debate ended with two theories, resting on different assumptions and emphasizing different properties of economies.

The purpose of the present article is not to maintain that one cannot refute Mises' claim that socialist economies are inefficient. Mises did not make explicit all the assumptions his analysis required. His exposition was incomplete, and proofs were often either absent or sketchy. However, the proponents of the competitive solution did not criticize Mises on such grounds. They did not identify logical errors in Mises' work. Rather, they constructed an 'answer' which did not confront Mises' challenge. Thus, the theoretical debate which Mises initiated cannot be regarded as closed. Recent work in the economics of information holds the promise of addressing the issues Mises stressed. Perhaps the socialist controversy can be reopened, forty years after it was thought to have been resolved.

II. Mises' Theory

The debate was a theoretical one and its focus was identification of the features of capitalism which are necessary for efficiency. Mises' criticism of socialism was based on the claim that those features could not be imi-

2. Mises 1963, 706. The first edition of this book was published in 1949.

tated under socialism. Thus, in discussing Mises' challenge it is necessary to focus on his theory of capitalism. Acceptance of the view of the economic process contained in this theory is tantamount to rejection of the competitive solution as an answer to Mises. In presenting Mises' theory, reference will be made to both *Socialism* (1936) and *Human action* (1963, first published in 1949). The essence of Mises' argument is contained in the former, but the argument is presented more completely and clearly in the latter. Because *Human action* was published after the works that established the competitive solution, *Socialism* is used as the guide to Mises' stance during the debate. Thus, the main features of Mises' theory are established, using citations from *Socialism*. However, in some cases, interpretations of those features are justified using citations from *Human action*.

In order to function, an economy must have a means of "economic calculation" (S117, H199).³ Economic calculation provides valuations, based on present and expected future conditions, which enable producers to choose a production point. When economic calculation fails, resources are used inefficiently. Thus, the problem of economic calculation is equivalent to the problem of economic efficiency.⁴ In order to understand Mises' theory of economic calculation under capitalism, one must first state the basic assumption which underlies all his analysis.

In a stationary world, economic calculation would not be needed, and socialism could be efficient (S163). However: "In the world of reality there is no stationary state, for the conditions under which economic activity takes place are subject to perpetual alterations which it is beyond the human capacity to limit" (S196). Change is the most important environmental feature because the uncertain future produced by change is the cause of all action (H105). Thus, "the problem of economic calculation is of economic dynamics: it is no problem of economic statics" (S139). Despite Mises' emphasis on 'change,' he did not give a precise definition of the phenomenon. However, it is clear that change caused unpredictable alterations in the behavior of economic agents and that it revealed new information. In Section IV below, I comment more fully on the meaning of change and new information.

Given the importance of change, Mises did not think that the allocation

3. Because Mises' works are referred to frequently, a short-hand notation is used. S117 refers to p. 117 of *Socialism* (1936) and H199 to p. 199 of *Human action* (1963). The article of Mises which is usually referred to in discussions of the debate is "Economic calculation in the socialist commonwealth" (Mises 1935; first published in German in 1920). The article is almost completely embodied in *Socialism* and is therefore not referred to in these pages.

4. Mises' definition of efficiency was vague (H207). A formalization of his theory at a standard of rigor acceptable today would require a precise definition of efficiency. During the debate Mises was not explicitly criticized on this point.

of goods for present use in consumption was a crucial problem. The economic problem was one of "dissolving, extending, transforming, and limiting existing undertakings, and establishing new undertakings" (S215). Such acts would be based on "speculative" anticipations of future conditions (S205). Thus, analysis of an economic system cannot be complete without examining the way in which that system influences the relationship between expectations formation and economic outcomes.

The emphasis on expectations led Mises to attribute much importance to the entrepreneur. "Clearly any analysis of the capitalist order must take as its central point not capital nor capitalists but the entrepreneur" (S212). 'Entrepreneur' is defined functionally and does not necessarily represent a distinct person. Entrepreneurial actions are undertaken because the future is uncertain and there are differing interpretations of the basic data (H253). In taking such actions, entrepreneurs influence the employment of the factors of production (S520). This influence may be indirect, through dealings on stock or commodity markets (S139). In pursuing profits, entrepreneurs create the data, especially prices, and the conditions which guide those agents who do not focus on the future in making their decisions (S140). Therefore, entrepreneurial actions are necessary for economic calculation and "the entrepreneur fulfills a task which must be performed even in a socialist community" (S213). Thus, one must examine why Mises thought that task would be performed well under capitalism.

The majority of people have no anticipatory ability (S205). The only way to judge who has that ability is see who has previously anticipated well. The market does this judging, rewarding with profits those who succeed. Those with superior anticipatory ability then have more resources for anticipatory actions:

The more successfully [a person] speculates the more means of production are at his disposal, the greater becomes his influence on the business of society. The less successfully he speculates the smaller becomes his property, the less becomes his influence in business. If he loses everything by speculation he disappears from the ranks of those who are called to the direction of economic affairs (S206).

This 'selective process' lies at the heart of Mises' theory. The selective process ensures that the market "tends to entrust the conduct of business affairs to those men who have succeeded in filling the most urgent wants of consumers" (H705). Thus, consumer preferences are the ultimate determinant of the selective process. Consumer sovereignty is established more effectively than when only present data affect decisions (S521).

The focus on the entrepreneurial task and the selective process follow from Mises' view of information. When new information arises, only a

few will perceive the change and there will be differing appraisals of the information. Objective analysis of the meaning and significance of the data is impossible.⁵ The market does not require such analysis. Differing interpretations are embodied in separate decisions. Hence, it is vital that people skilled at finding and using new information become entrepreneurs. The selective process finds those people and enables them to use their skills (S206). These entrepreneurs spread information through the price system. (S520). If no further changes in data occurred, an equilibrium would result in which entrepreneurial profits would be zero (H356). The information would be embodied in all economic decisions. Thus, the competitive market is an effective information-diffusing mechanism.

Profits not only aid the automaticity of the selective process but also encourage the ceaseless striving of entrepreneurs. This encouragement is necessary because the pain of labor is an unconditional given (S170, H131). Possibility of profit or loss also encourages entrepreneurs to make decisions with the appropriate seriousness (S217). Without such individual incentives, society would put a premium on "audacity, carelessness, and unreasonable optimism" (H709). Using modern terminology, the individual must take an appropriate attitude towards risk. Given an emphasis on change and anticipations, encouragement of such an attitude is vital for any economy.

For several reasons, Mises stresses the importance of competition, especially between entrepreneurs. First, in the absence of objective measurement of anticipatory performance, competition provides a test in the selective process. Second, competition leads to new information from diverse sources being embodied in present decisions.⁶ Third, competition ensures that others will benefit from the actions of entrepreneurs (S178, H328). For if change were to cease, competition would eventually ensure that entrepreneurial profits were zero.

Mises' placed much emphasis on the need for financial markets (S139). This emphasis is not surprising, given the importance attributed to speculative acts. The following passage captures this emphasis and clarifies Mises' oft-quoted comment that socialism must result in abolition of the market:

The entrepreneurs and capitalists establish corporations and other firms, enlarge or reduce their size, dissolve them or merge them with other enterprises; they buy and sell the shares and bonds of already existing and of new corporations; they grant, withdraw and recover credits; in short they perform all those acts the totality of which is called the

5. As Seligman (1971, 333) remarks, Mises' theory at this point is very similar to Hayek's (1945) theory of knowledge.

6. Mises assumed that when there is no agreement on the meaning of the information, it is better to use several interpretations rather than settling on one in a bureaucratic process.

capital and money market. It is these financial transactions of promoters and speculators that direct production into those channels in which it satisfies the most urgent wants of the consumers in the best possible way. These transactions constitute the market as such. If one eliminates them, one does not preserve any part of the market (H709).

This passage leads naturally to Mises' analysis of the relative efficiency of capitalism and socialism. Mises argued that features of an economy necessary for efficiency are present under capitalism but not under socialism. It is not the intention here to establish that Mises' theory is correct in concluding that socialism must be inefficient. Rather, it is the intention to demonstrate that the competitive solution does not refute Mises. The proponents of the competitive solution attempted to counter Mises by describing a socialist economy which, they claimed, answered his challenge. To examine their claim, one must analyze the competitive solution using Mises' theory. This is the task of the following section.

III. *The Competitive Solution*

Taylor 1964 (first published in 1929), Dickinson 1939, Lange 1964 (first published in 1938), and Lerner 1944 are usually identified as collectively giving the definitive answer to Mises. As the theory of the competitive solution is well known, a detailed summary is unnecessary. The discussion will center on those details and omissions which determine whether the competitive solution is an adequate response to Mises. In the competitive solution, economic agents behave as would the corresponding agents in a perfectly competitive economy. A Central Planning Board (CPB) imitates a Walrasian auctioneer in finding equilibrium prices. Managers of plants and of industries are to assume that prices are fixed when following two rules. The first rule is that any given output must be produced at minimum cost:

A second rule determines the scale of output by stating that output has to be fixed so that marginal cost is equal to the price of the product. This rule is addressed to the managers of plants and thus determines the scale of output of each plant. . . . Addressed to the managers of an industry the second rule performs the function which under competition is carried out by free entry of firms into an industry or their exodus from it, i.e. it determines the output of an industry [Lange, 76-77].

These two rules and the definition of the CPB's task are the essence of the competitive solution.

The competitive solution is a static equilibrium model. Investment is

taking place but is determined by present conditions. Decisions are not influenced by expectations of future conditions. These would be fundamental flaws for Mises, who emphasized the pervasiveness of change and the need to look to the future in all actions. As economic calculation is a problem of dynamics, not statics (S139), the calculation of market-clearing prices based only on present conditions does not solve that problem. A system's ability to react to change, rather than its static equilibrium properties, is the most important determinant of efficiency. As the competitive solution is a static model, its ability to react to change cannot be evaluated without specifying details omitted by the original authors.

Mises claimed that all economic decisions necessarily rest on subjective estimates of future conditions (S205, 521). Without these estimates, today's decisions, which must affect the future, will be inappropriate. The competitive solution would be inefficient because decisions, including those on investment, are based on present price. Expectations do enter one formulation of the competitive solution. Lerner mentions briefly that investment decisions must use expected future prices rather than present prices (1944, 214-15). However, there is no mention of whose expectations are to be used nor how these expectations are to be formed. The emphases in Lerner's analysis imply that discussion of the role of expectations is not crucial in convincing a reader that the 'controlled economy' is efficient. In contrast, Mises stated that "all economic activity . . . is essentially speculation" (S205).

Mises argued that under capitalism, agents would be appropriately motivated because of the nature of property rights. In undertaking exchange, agents subject their own wealth to risk. Mises and his critics agreed that under socialism means of production would be collectively owned (S239; Lange 1964, 72). As exchange is the exchange of property rights, exchange relationships in the means of production are absent in socialism (S131-32). Goods would be transferred between managers, but this is not true exchange. Thus, the basic motivating force of capitalism is absent under socialism. A substitute incentive system for socialist managers is required (S211).

The authors of the competitive solution devoted little attention to incentive problems. Lange noted that managers are not to be guided by profit maximization but provided no alternative (1964, 75). Dickinson (1939, 213-19) concluded that "quite a small pecuniary interest" would make the socialist manager a "genuine entrepreneur." He relegated the problem of incentive design to administrative science. Lerner (1944, 84) mentioned a "delicate problem" in designing incentives, without proposing a solution. He concluded: "In private enterprise under conditions of perfect competition all these problems are solved." Mises would not have disagreed.

However, he would attribute more importance to this conclusion than Lerner.⁷

Given Mises' emphasis on "dissolving, extending, transforming, and limiting existing undertakings and establishing new undertakings" (S215), an incentive scheme for managers of whole industries is especially important. These managers would have to play the same role as capitalism's entrepreneurs. Therefore these managers must be rewarded according to their anticipatory ability. In the competitive solution there is no discussion of such rewards. There is no analysis of how the appropriate attitude towards uncertainty can be fostered. There is no selection procedure to choose industry managers on the basis of anticipatory ability. A functional equivalent of capitalism's 'selective process' is absent. Thus, the competitive solution does not meet the requirements of a system designed to function in a changing world.

As industry managers are the functional equivalent of entrepreneurs, the absence of competition among these managers is a fundamental flaw in the competitive solution. The problem is not only the danger of monopolistic behavior (Bergson 1967, 658) but also inefficient use of information. Entrepreneurial competition enables the selective process to find individuals best at using information. Without competition between industry managers, their selection is not based automatically on the preferences of consumers, as in the selective process. To say, as some authors do, that such problems will necessitate inspection of costs is to miss the point. For costs must be subjective, based on anticipations.⁸ To 'measure' costs is to substitute the judgment of the central administration for that of the industry manager. This would end even the limited division of intellectual labor which is the main advantage claimed for the competitive solution (H709).

In the competitive solution, industry managers cannot trade claims on their industry. In Mises' view the existence of such trading in stock and money markets is vital to an economic system (S140, 220). These markets provide future-oriented data, above all to agents whose speciality is not anticipation. Without such markets, all prices are based on present conditions rather than perceptions of the future. However, let us go beyond the competitive solution and examine whether financial markets could function appropriately under socialism. Mises, in fact, anticipated such a suggestion. Putting aside the crucial question of the selection of market participants, these markets would still work imperfectly. Because the means of production would be collectively owned, individuals would not trade

7. Bergson (1967, 657-58) has also noted the absence of an explicit incentive mechanism in the competitive solution.

8. Hayek's critique of the competitive solution emphasizes the immeasurability of costs. See Vaughn 1980, 549-50 for discussion and references.

their own property. Individuals would not adopt the correct attitude to uncertainty and would not have the incentive to collect all the information necessary for formulating expectations (\$217). These markets would then supply misleading data to the rest of the system. Mises recognized a solution to these problems. The state could subject all participants in these markets to all consequences of their actions. This solution would entail giving those participants property rights in the means of production. Then the economic system would be capitalist, not socialist (\$220).

In conclusion, for many reasons the competitive solution is not an answer to Mises' challenge. The competitive solution is based on a static theory. Mises (1932, 138, 173) holds that the economic problem exists only because the future is uncertain. The competitive solution has no role for expectations. Yet all action is based on expectations (Mises 1932, 182, 484). There are no future-oriented markets in the competitive solution whereas Mises (1932, 484) claimed that these markets are central to economic calculation. The competitive solution does not mention incentives or selection of personnel. Mises emphasized the incentive inherent in exchange and saw the selective process as a crucial determinant of efficiency (1932, 184, 188-93, 291-92). However, the competitive solution is usually regarded as an adequate reply to Mises.⁹ Section IV below discusses the reasons for such a 'resolution' of the debate. Before that discussion, it is necessary to show that the outcome of the debate was not due to the fact that the participants were unaware of the ideas of their opponents. Thus, this section will end on an historical note.

The essential details of Mises' argument were published before the works on the competitive solution. Note that the references in the preceding paragraph are from the 1932 German edition of *Socialism*. Thus, Mises' theory was sufficient to answer the competitive solution in 1932.¹⁰ This is not surprising, because the competitive solution went little beyond the work of Barone 1935 (first published in 1908; see Lange 1964, 59). Critics of Mises often imply that he must have been unaware of Barone's work. Yet quite clearly in the 1932 edition of *Socialism* (p. 115), Mises noted Barone's contribution and commented that it did not penetrate to the core of the problem. The historical record reveals that the participants in the debate had adequate opportunity to make themselves familiar with the arguments of their opponents.

IV. Conclusion: Mises and Modern Economics

In preceding sections, no indication has been given of how most economists came to regard the competitive solution as a satisfactory answer to

9. See note 1 above for the major exceptions to this generalization.

10. This does not imply that Mises' theory was not stated more clearly in later works; hence, the citations to *Human action* to back up some of the interpretations made in this study. However, those citations are not essential to the general argument made here.

Mises. In this section, I give a tentative explanation of the outcome of the debate. This explanation centers on Mises' basic assumption: the ubiquity of change. Mises did not precisely state this assumption. He obviously thought that the meanings of the two concepts, 'change' and 'new information,' were self-evident. However, in order to show that the assumption on change is the distinguishing feature of Mises' analysis, it is necessary to elaborate on the meanings of these two concepts.

As shown by contingent contract theory, it is possible that information can be revealed to economic agents without any consequent change in behavior. The occurrence of a particular environmental event may lead solely to implementation of a specific contingent contract. Agents' behavior could be predicted from existing contracts (Hirshleifer & Riley 1979, 1400). The occurrence of the event need not be new information in an economic sense.¹¹ Thus, absence of a complete set of contingent contracts is a necessary condition for new information to arise. When this condition is satisfied, an environmental occurrence will lead to transactions not previously embodied in contracts. The change which has occurred, the environmental event, and the resultant transactions are new information to which the system must react.¹²

For new information to arise there must be imperfections: absence of a complete set of contingent contracts. However, there are fundamental reasons why such imperfections exist. Bounded rationality is a sufficient condition for the absence of some contingent contracts. Radner 1968, Meade 1970, Grossman 1977, and Williamson 1975 all argue that complete contingent markets will not exist. Thus, although Mises' theory requires the existence of imperfections, it is reasonable to assume that those imperfections will be present. Mises undoubtedly had in mind a world with such imperfections (H705).

As the competitive solution is a static equilibrium model, the problem of adjustment over time to changing conditions is not addressed. This lack of emphasis on the problem of change can be shown to be responsible for most of the deficiencies of the competitive solution, as seen in Mises' perspective. In order to show this point, let us review those deficiencies, explaining how they are related to the lack of emphasis on change. The authors of the competitive solution assumed that expectations have no value in making present decisions. This assumption is untenable if new information continuously becomes available. Absence of competition between industry managers is not a problem if there are no conflicting inter-

11. The fact that an environmental occurrence may change subjective probabilities is not sufficient to make that occurrence new information. Agents may have subjective probabilities of subjective probabilities and may anticipate that the latter could change. Life may be viewed simply as an information service (Hirshleifer & Riley, 1394-97).

12. However, not every environmental event leads to new information.

pretations of data. Investment decisions are then obvious and can be easily evaluated. In contrast, in a world with diverse sources of new information, competition leads to efficiencies in using new information and to automatic evaluation of managers in the selective process. Financial markets are not necessary in a stationary environment. However, in a changing world, financial markets are crucial to the process of "dissolving, extending, transforming" enterprises. Monetary incentives for managers would not be necessary in a static world where costs can be easily ascertained and managerial performance easily monitored and evaluated. However, when new information continually arises, costs are subjective, because they are based on expectations. Hence, managerial performance is difficult to evaluate and incentives based on individual property rights are essential.

The preceding paragraph shows that the basic difference between Mises and his critics was the importance attached to change and new information. The competitive solution was constructed using the framework of modern welfare economics (Seligman 1971, 109). Indeed, the competitive solution is often identified as an important contribution to welfare economics (Koopmans 1957, 42). Thus, Mises' critics used assumptions and conceptual tools which were perfectly consistent with those of standard general equilibrium and welfare economics. The differences between Mises and his critics were also differences between Mises and standard postwar economic theory. In the thirty years following the debate, few economists examined the issue which Mises stressed: the use of new information.¹³ In the theory of competitive equilibrium, efficiency is analyzed, given expectations and the structure of information (Radner 1968, 57). In modern welfare economics, the models of certain and uncertain worlds are formally similar (Debreu 1959, p. 98). This similarity would not exist if change were viewed as the most important characteristic of an economy.

Recent theoretical developments, arising from a new interest in information, show that Mises' theory is difficult to evaluate using standard conceptual tools. Radner 1968, 54-58, has argued that traditional general equilibrium and welfare analysis may be inapplicable if market outcomes generate usable new information. The selective process is one example of an information-generating market outcome. Hirschleifer & Riley (1979, 1414) emphasize the disequilibrium nature of information processes. They conclude that the efficiency concept presently used by economists cannot be applied to information activities.¹⁴ Thus, it is possible to conclude:

13. The same point is made by Grossman & Stiglitz 1976, 246. Stigler 1961 is an important exception to this statement.

14. As noted (see note 4 above), Mises' definition of efficiency is also unsatisfactory. However, the important point to note is that the definition of efficiency used in the competitive solution cannot be applied to an analysis of the issues stressed by Mises. Thus, the competitive solution cannot be a satisfactory answer to Mises.

"The basic character of how we ought to view the competitive economy is altered if we take seriously imperfections of information" (Stiglitz 1977, 389).

As the competitive solution used the framework of welfare economics, economists were receptive to its conclusions. Similarly, given that Mises emphasized problems which were intractable using standard conceptual tools, it is hardly surprising that he was misunderstood and regarded as in error.¹⁵ Let us give two examples of possible misunderstandings. First, Mises used 'entrepreneur' to refer to agents who undertook actions aimed at using new information. Standard general equilibrium theory cannot be used to analyze such actions (Malinvaud 1972, 257). Therefore, for some economists an entrepreneur is simply a manager.¹⁶ With 'entrepreneur' used in such conflicting ways, confusion could result from a claim that socialist managers cannot play the same role as capitalist entrepreneurs. Second, the use of 'equilibrium' could cause misunderstandings. Mises did not attribute any practical importance to a general equilibrium. An equilibrium would only exist in the long run after all change ceased. Thus, Mises could correctly claim that equilibrium prices never guide actions, but he would certainly be regarded as incorrect by a neoclassical economist.

The most crucial misunderstanding was over the nature of Mises' challenge. Mises emphasized a system's ability to use new information, but standard welfare economics could not be used to evaluate this ability. Thus, if Mises' challenge was to be confronted using standard conceptual tools, the nature of that challenge would be reinterpreted. Difficulties of change and new information were forgotten and the problem was summarized as follows:

... let us imagine a Board of Supermen, with unlimited logical faculties, with a complete scale of values for the different consumers' goods and present and future consumption, and detailed knowledge of production techniques. Even such a Board would be unable to evaluate rationally the means of production [Bergson 1952, 446].¹⁷

During the debate, economists were aware of the problems posed for their discipline by information processes. Lerner (1937, 269) in helping to establish the competitive solution concluded:

15. This statement is not meant to imply that none of the misunderstanding was due to lack of clarity in Mises work.

16. See Hicks 1939, 79, or Layard & Walters 1978, 220.

17. Use of Bergson's words here should not be taken to imply that Bergson regarded this interpretation as correct. He offered two interpretations, the quoted one having gained the "wider currency" (1952, 445).

The objective cost of hiring [an instrument of capital equipment] depends upon the estimated value of the future use that is sacrificed to the present when the instrument is hired since this governs the hiring fee charged. The question is then the sociological one, whether the Socialist Trust is able to estimate this future value more or less accurately than the competitive owner of the hired instrument, and here we leave pure economic theory.

Thus, the problem which Mises posed was not one which economists, at that time, were willing to study. Today economists are beginning to analyze the issues raised by assuming a changing world. Work on the economics of information is burgeoning. It is surely not coincidental that this work has led to a suggestion that the socialist controversy be reopened (Grossman & Stiglitz 1976, 252). Fifty years after Mises presented his challenge, economic theory may be ready to confront the issues he raised.

I would like to thank Alan Dyer, Allan Gruchy, Daniel Hausman, David Lamoreaux, Naomi Lamoreaux, and two anonymous referees for comments on an earlier draft of this study. Research was partially funded by the General Research Board of the University of Maryland.

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