Lange is correct, however, in citing a praxeological interpretation of utility by Max Weber as early as 1908, in which Weber stated that marginal utility should be formulated, not in such psychological terms as pleasure, but in such "pragmatic" categories as *ends* and *means*.[17]

Thus far our Marxian was willing to go with praxeological economics. But here Lange confronted a precipice even steeper than before: for just as it was important for him to deny that praxeology might be confined to economics, so it was still more important for him to deny that all of economic theory is a subset of praxeology. For if that were really the case, where would that leave Marxism? And so Lange separates himself from the final step in the development of praxeological economics: the transformation of economics into a branch of praxeology. Separated now from concrete objects, economic analysis became a formal science of rational behavior, of the maximization of magnitudes. Conversely, the formal aspects of all rational behavior became analyzable by the economic principle.[18]

For this transformation of economics into a branch of praxeology, Lange cites Lionel Robbins and his well-known depiction of economics as a certain aspect of all activity, namely the relation between scarce means and alternative ends, and the choice among those ends.[19] He also devotes attention to the Austrian economist Hans

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Cuhel's great contribution was his *Zur Lehre von der Bedürfnissen* (Innsbruck: Wagner Universitäts-Buchhandlung, 1907). On Cuhel, see Eugen von Böhm-Bawerk, *Capital and Interest*, 3 vols. (South Holland, Ill.: Libertarian Press, 1959), vol. 2, pp. 191, 193–94, 423, 431–32; vol. 3, pp. 124–36, 232–33. Mises's development of Cuhel is in his *Theory of Money and Credit* (New Haven, Conn.: Yale University Press, 1953), pp. 38ff.

[17]Max Weber, "Die Grenznutzlehre mit das 'psychophysische Grundgesetz," *Gesammelte Aufsätze zur Wissenschaftslehre*, 2nd ed. (Tübingen: J.C.B. Mohr, 1951), pp. 364ff. On the Weber article, see Emil Kauder, *A History of Marginal Utility Theory* (Princeton, N.J.: Princeton University Press, 1965), pp. 116–17, 136–37.

[18]Lange, *Political Economy*, p. 237.

[19]Robbins, *The Nature and Significance of Economic Science*. On the relationship between Robbins's and Mises's views on the nature of economics, which however greatly understates their similarities, see Kirzner, *Economic Point of View*, pp. 108–86. Bracketing them more closely is Ludwig M. Lachmann, "The Science of Human Action," *Economica* (November 1951): 413.

Mayer and to Max Weber, who had originated the Robbinsian distinction between economics as the choice between ends and technology as the choice of means to realize a given end.[20] While this distinction is rather simplistic—neglecting for example, the point that economic as well as technological considerations enter even into the choice of means toward a single end—Lange is incorrect in charging that the distinction is meaningless because the hierarchy of alternative ends are all aimed toward one principal end: the maximization of utility. Lange does not realize that "utility," for the praxeological school, is not a thing or an entity in itself, but is simply the *label* placed upon the preference rankings which everyone makes among his various ends. "Maximizing utility" simply means the formal principle that a man attempts to attain his highest ranking, his most preferred rather than his less preferred end.[21]

Lange then points out that this transformation of economics into a branch of the universal science of praxeology culminated in Ludwig von Mises's *Human Action* in 1949. Classical political economy was now fully transformed into a general theory of human action, of the acts of choice. Economics becomes no longer an empirical science with "real" phenomena, but a formal logic of choice, where the only criterion of truth is agreement with the original axioms. The economic theory becomes empirically true *insofar* as any concrete action is governed by the economic principle. Lange is particularly critical because all of the laws of praxeological, subjective economics are considered by Mises and the preceding Austrians to be applicable to Crusoe economics as well as to the exchange economy. Lange's hostility to this "unrealism" stems precisely from the fact, as he points

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[20]Hans Mayer, "Untersuchungen zu dem Grundgesetz der wirtschaftlichen Wertrechnung," *Zeitschrift für Volkwirtschaft und Sozialpolitik* (Vienna: Franz Deutsche, 1921), vol. 2, p. 5; Max Weber, *The Theory of Social and Economic Organization* (New York: Oxford University Press, 1947), pp. 162, 209. For a critique of Weber's views on economic methodology, see Ludwig von Mises, *Epistemological Problems of Economics* (Princeton, N.J.: D. Van Nostrand, 1960), pp. 74–106. On Mayer, see Kauder, *A History of Marginal Utility Theory*, pp. 107ff.

[21]Kirzner falls into the same error. Kirzner, *Economic Point of View*, p. 134.

out, that application to Crusoe economics implies that the laws of economics are universal and apodictic for every time and place, regardless of the concrete content of social relations or economic activity. By means of praxeology, economics, like the natural sciences, has transcended the concrete and changing data of history and has assumed the character of a universal and apodictic science. As Lange characterizes this position: "Historically conditioned social relations may influence the concrete form in which these laws manifest themselves but they cannot change their basic character."[22] Lange is willing to concede this universal and trans-historical character to *praxeology*; he is not willing to concede economics to be only a subset of praxeology and therefore to take on the same timeless character. For if he were, Marxism, with its proclaimed laws of historical determinism, would have to be completely abandoned.

The characteristic method of the praxeological economists in developing their analysis, Lange points out, is to begin with the economics of an isolated Robinson Crusoe, an analysis which elucidates the basic laws of men in relation to things. Then, other people are brought in, and exchanges between these individuals explained as each person choosing to give up something he wants *less* in order to obtain something he wants *more*. Exchanges thus become the resultants of the subjective attitudes and preferences of the participating individuals. Lange complains that this process of beginning with man *vis-à-vis* nature is the opposite of the Marxian conception, which concentrates on "economic relations among men—relations of production and relations of distribution." He further quotes from the Marxist Rudolf Hilferding, in his charge that the Austrian School economics of Böhm-Bawerk

> takes as the starting point of its system the *individual* relation of man to things. It conceives relations from a psychological point of view, as subject to natural invariable laws; it excludes socially determined relations of production, and . . . development of the economic process according to definite laws is quite foreign to it.[23]

[22]Lange, *Political Economy*, p. 242.

[23]For a slightly different translation of this passage, see Paul M. Sweezy, *Böhm-Bawerk's Criticism of Marx*, in Rudolf Hilferding, eds. (New York Augustus M. Kelley, 1949), p. 196.

This, to be sure, is the liquidation of the classical "political economy."

But while Lange accuses subjectivist economics of ignoring real economic relations between men, he also correctly asserts that this school of thought treats the economic categories of capitalism "as general praxeological categories, categories of rational human activity."[24] Wages, capital, profit become universal categories independent of the historical shaping of society, and therefore capitalism becomes a universal requirement of rational economic activity. Lange sees that this leads to the heart of the Mises-Lange calculation controversy on whether rational economic activity requires the private ownership of the means of production.[25] But then Lange can hardly be correct in charging that praxeological economics *ignores* concrete social and economic relations; on the contrary, his real complaint is that from these abstract, universal economic laws may be deduced the very real necessity for market capitalism in order to sustain a rational economy.

Thus, while Lange is willing to concede the universality of the economic principle and the achievement of subjectivist economics in discovering a praxeology that can be applied to political economy and to other fields, he is of course not willing to concede that economics is exclusively praxeological. The remainder of Lange's discussion is an unsatisfactory attempt to outline what Marxism or any other economic theory might add to praxeology in the formation of economics. He mentions institutional discussions of the social organization of production, of the State, labor, national income, and so on, but the unanswered question is the role of these categories in economic *theory* as compared to an accumulation of institutional data to which that theory can be applied. Lange also approvingly cites the attack on the subjectivist Austrian School by the Polish economist Stanislaw Brzozowski, who charged that the Austrians merely analyzed the relations between man and given things and comprised a theory of consumption rather than a "complete theory of society." In the first place, this contradicts Lange's previous insight that the Austrians, in contrast to Marshall and the Lausanne School, had

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[24]Lange, *Political Economy*, p. 298.

[25]Ibid., p. 298*n*.

extended their subjectivist analysis from consumption to production and the productive factors; the "given things" constituted only the first step in their complete analysis. Second, why should it be a defect of praxeological economics that it does not offer a "complete theory of society"? Is physics to be condemned because it is not chemistry? Has a complete and correct theory of society been offered by any sphere of economics or social science?

Lange proceeds to unworthy and rather absurd attempts to subject the Austrian School economists to a Marxian "sociology of knowledge." The Austrian School, he asserts, is the economics of pensioners and tax officials, because it discusses only consumption and not production, and Nikolai Bukharin is cited asserting that the Austrian School, with its concentration on consumption, is the "rentier's political economy."[26] Not only does this contradict Lange's own previous concession to the Austrian integration of production and consumption, but it also leaves us with the puzzle of how to "explain" such consumption-oriented economics as that of John A. Hobson or J.M. Keynes. Are they too to be dismissed as "rentiers," even the Keynes who called for the "euthanasia" of that very class? Lange's second attempt is to "explain" the abstract and unrealistic Austrian methodology as the product of the professionalization of economics in the universities in the late nineteenth century, which thereupon developed in "isolation from the productive process."[27] But while the earlier classical economists may not have been as professionalized, they were also—apart from Ricardo—not businessmen, and thus were equally "cut off" from the productive process. Neither the university professor Adam Smith nor the civil servant Mill was any closer to the productive process than Menger or Böhm-Bawerk. Furthermore, a bit later in the book Lange turns around and salutes the professionalization of all scientific research in the past century as leading to an autonomy of science, a critical attitude toward the social system, and a science that "becomes independent of the social milieu which produces" it.[28]

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[26]Lange, *Political Economy*, pp. 300ff. Lange himself is a bit dubious on this point, since capitalism in Austria was not as highly developed as in the other Western countries where the subjectivist, praxeological economics did not take hold.

[27]Ibid., pp. 301–02.

[28]Ibid., pp. 314ff.

Lange declares that since the bourgeoisie had to know what was actually happening in the economy, they couldn't pursue completely the Austrian path of liquidating political economy. Therefore, the more "realistic" Anglo-American neoclassicists continued to study such important economic problems as money, business cycles, growth, and international trade. What Lange ignores here is that the Austrian subjectivists have studied and come to a position on all of these important questions, so that what he sees as their abstract "isolation" applies only to the fundamental laws and not to the more developed and applied branches of the theory. One need only mention the Mises-Hayek "monetary malinvestment" theory of the business cycle to see how praxeological economics has been applied to vital and realistic economic problems. The problem, however, is that Lange cannot be very happy with the policy conclusions of the Austrians in these areas: ultra-hard money, the gold standard, *laissez-faire* capitalism. Again, the problem is not so much the relevance of the method as the kind of conclusions that are obtained.

Lange's remarkable adoption of Misesian praxeology as the major base for economics, onto which Marxian and other approaches were then hastily grafted, met predictably mixed reaction in Marxian circles. Most striking was the laudatory critique of Lange by Ronald Meek, the distinguished English historian of economic thought.[29]

Professor Meek, summarizing Lange's lengthy chapter on the "Principle of Economic Rationality," notes that "significantly, the references to Marx's work become purely incidental."[30] Meek considers it "interesting and paradoxical" that praxeology, which "has now become an indispensable adjunct to Marxian economics," was the culmination of a violently anti-Marxist subjectivist trend in "bourgeois" economics.[31] The paradox might well be put the other way round: that of a leading Marxian economist adopting the economics of his own and Marxism's major opponents and then rather desperately trying to insist that there is still room for Marxian and institutional approaches in the wider rubric of political economy.

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[29]Ronald L. Meek, *Economics and Ideology and Other Essays* (London: Chapman and Hall, 1967), pp. 216ff.

[30]Ibid., p. 216.

[31]Ibid., p. 218.

To Marxian "fundamentalists," on the other hand, the Lange-Meek movement is seen for what it genuinely is: a massive "revisionist" retreat from Marxism. In his review of Meek, Ben Brewster despairingly writes:

> for if the relations of production is a general principle governing society the latter becomes merely the totality of human social interaction; there is no specificity of the economic level at all and the distinction between base and superstructure breaks down. The result is that in the last essay in the book (the title essay), Meek apparently falls for the most general principle of society and the most bourgeois ideology of them all, von Mises's "Praxeology" (the principle of all rational action) in Lange's purely ideological attempt to graft Marxist and neoclassical economics.[32]

And so, as Marxian economic thought joins the actual economies of Eastern Europe in a headlong flight from Marxism and socialist central planning to Western and capitalistic modes of thought and economic systems, Oskar Lange's original irony is truly beginning to boomerang. Perhaps the free-market, capitalist economy of a future Poland will erect a statue of Lange alongside the monument to his old antagonist?

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[32]B.B. (Ben Brewster), "Review of Ronald L. Meek, *Economics and Ideology and Other Essays*," *New Left Review* (November-December 1967): 90.

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Ludwig von Mises and Economic Calculation Under Socialism

What might be called the "orthodox," or textbook, version of the famous economic calculation debate under socialism goes somewhat as follows:

Ludwig von Mises first raised the question of socialist economic calculation in 1920 by asserting that socialism could not calculate economically because of the absence of a price system for the factors of production. Enrico Barone "then" showed (the fact that he had done so twelve years earlier is laid to accidents of timing and translation) that this was not a theoretical problem because all the equations existed for a solution. F.A. Hayek then retreated to a second line of attack by conceding the "theoretical" solution to economic calculation in a socialist state but challenging its "practical" possibility. Finally, Oskar Lange, Abba Lerner, and others "demonstrated" the practical solution by advancing the concept of "market" socialism, in which the planning board arrives at market clearing prices through trial and error. Q.E.D. and socialist planning has been salvaged, replete with Lange's ironic tribute to Mises for raising the problem for Lange and other socialists to solve. If the actual record of Communist economies is brought into the discussion at all, it is usually done as a vindication of the Lange-Lerner thesis in practice.

That there are numerous holes in this neat and triumphal saga should be immediately clear. One example is that the "market socialism" in Yugoslavia and, less so, in the other East European countries has nothing to do with the alleged Lange-Lerner "market"; for while firms in Yugoslavia engage in genuine exchanges and therefore in a

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Originally appeared in *The Economics of Ludwig von Mises*, Lawrence Moss, ed. (Kansas City, Kans.: Sheed and Ward, 1976), pp. 67–77.

genuine price system, the Lange-Lerner planning boards were to be central planners who manipulated prices as a pure accounting device and in no sense allowed "markets" at all. Another example is that Barone, in the course of his alleged "theoretical" solution to the problem of socialist calculation, himself ridiculed the idea that planning by means of his equations was in any sense workable, especially when we consider the continuing economic variability of the technical coefficients involved.[1]

But a particularly important flaw in the orthodox story is, as Hayek tried to make clear during the debate, the curious disjunction between the "theoretical" and the "practical." It is not simply that Barone and his mentor Pareto scoffed at the workability of the theoretical equations under socialist planning. More important is the point that Mises and Hayek were implicitly attacking the relevance of the entire concept of Walrasian general equilibrium from which these equations flowed. For Mises and Hayek there was no disjunction between the "theoretical" and the "practical"; following the Austrian tradition, a theory that necessarily violated practical reality was an unsound theory. The fact that in a changeless world of perfect knowledge and general equilibrium a socialist planning board could "solve" equations of prices and production was for Mises a worse than useless demonstration. Clearly, as Hayek would later develop at length, if complete knowledge of economic reality is assumed to be "given" to all, including a planning board, there is no problem of calculation or, indeed, any economic problem at all, whatever the economic system. The Mises demonstration of the impossibility of economic calculation under socialism and of the superiority of private markets in the means of production applied only to the real world of uncertainty, continuing change, and scattered knowledge.

In his monumental *Human Action*, the 1949 treatise that contained his final rebuttal to his socialist critics, Mises emphasized the sterility of the mathematical approach:

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[1]See Enrico Barone, "The Ministry of Production in the Collectivist State," in *Collectivist Economic Planning*, F.A. Hayek, ed. (London: George Routledge and Sons, 1935), p. 286. See also Trygve J.B. Hoff, *Economic Calculation in the Socialist Society* (London: William Hodge, 1949), pp. 140–43.

> The mathematical economists . . . formulate equations and draw curves which are supposed to describe reality. In fact they describe only a hypothetical and unrealizable state of affairs, in no way similar to the catallactic problems in question. They substitute algebraic symbols for the determinate terms of money as used in economic calculation and believe that this procedure renders their reasoning more scientific.
>
> In the imaginary construction of the evenly rotating economy all factors of production are employed in such a way that each of them renders the most valuable service. . . . It is, of course, possible to describe this imaginary state of the allocation of resources in differential equations and to visualize it graphically in curves. But such devices do not assert anything about the market process. They merely mark out an imaginary situation in which the market process would cease to operate. . . .
>
> Both the logical and the mathematical economists assert that human action ultimately aims at the establishment of such a state of equilibrium and would reach it if all further changes in data were to cease. But the logical economist knows much more than that. He shows how the activities of enterprising men, the promoters and speculators, eager to profit from discrepancies in the price structure, tend toward eradicating such discrepancies and thereby also toward blotting out the sources of entrepreneurial profit and loss. . . . The mathematical description of various states of equilibrium is mere play. The problem is the analysis of the market process.
>
> The problems of process analysis, that is, the only economic problems that matter, defy any mathematical approach.[2]

In developing this approach, Hayek engaged in a searching critique of Schumpeter's assertion that socialism suffers from no problem of economic calculation, because, to quote Schumpeter, the "consumers, in evaluating ('demanding') consumers' goods *ipso facto* also evaluate the means of production."[3] Hayek pointed out, however, that this easy step would only follow:

[2]Ludwig von Mises, *Human Action* (Chicago: Henry Regnery, 1966), pp. 353–56.

[3]Joseph A. Schumpeter, *Capitalism, Socialism, and Democracy* (New York: Harper and Bros., 1942), p. 175.

> to a mind to which all these facts were simultaneously known. . . . The practical problem, however, arises precisely because these facts are never so given to a single mind . . . instead, we must show how a solution is produced by the interactions of people each of whom possesses only partial knowledge.

Hayek concluded that:

> any approach, such as that of much of mathematical economics with its simultaneous equations, which in effect starts from the assumption that people's *knowledge* corresponds with objective *facts* of the situation, systematically leaves out what is our main task to explain.[4]

Proceeding to an explicit refutation of the Lange-Lerner approach, Mises in *Human Action* scoffed at the idea that the socialist managers will be instructed to "play market as children play war, railroad, or school." Specifically, the socialists leave out the crucial function of shareholding, capital allocation, and entrepreneurship in their concentration on the purely managerial role:

> The cardinal fallacy implied in this and all kindred proposals is that they look at the economic problem from the perspective of the subaltern clerk whose intellectual horizon does not extend beyond subordinate tasks. They consider the structure of industrial production and the allocation of capital to the various branches and production aggregates as rigid, and do not take into account the necessity of altering this structure in order to adjust it to changes in conditions. What they have in mind is a world in which no further changes occur and economic history has reached its final stage. They fail to realize that the operation . . . of the managers, their buying and selling, are only a small segment of the totality of market operations. The market of the capitalist society also performs all those operations which allocate the capital goods to the various branches of industry. 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

[4]F.A. Hayek, *Individualism and Economic Order* (Chicago: University of Chicago Press, 1948), pp. 90–91.

> they perform all those acts the totality of which is called the 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. . . .
>
> The role that the loyal corporation manager plays in the conduct of business is . . . only a managerial function, a subsidiary assistance granted to the entrepreneurs and capitalists. . . . It can never become a substitute for the entrepreneurial function. The speculators, promoters, investors, and moneylenders, in determining the structure of the stock and commodity exchanges and of the money market, circumscribe the orbit within which definite minor tasks can be entrusted to the manager's discretion. . . .
>
> The capitalist system is not a managerial system; it is an entrepreneurial system. . . . Nobody has ever suggested that the socialist commonwealth could invite the promoters and speculators to continue their speculations and then deliver their profits to the common chest. Those suggesting a quasi-market for the socialist system have never wanted to preserve the stock and commodity exchanges, the trading in futures, and the bankers and moneylenders. . . . One cannot *play* speculation and investment. The speculators and investors expose their own wealth, their own destiny. This fact makes them responsible to the consumers. . . . If one relieves them of this responsibility, one deprives them of their very character.[5]

Mises also refuted the idea that a socialist planning board would arrive at correct pricing through trial and error, through clearing the market. While this could be done for already produced consumer goods, for which a market would presumably continue to exist, it would be precisely impossible in the realm of capital goods, where there would be no genuine market; hence, any sort of rational decisions on the kinds and amounts of the production of capital and of consumer goods could not be made. In short, the process of trial and

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[5]Mises, *Human Action*, pp. 707–09. See also Dominick T. Armentano, "Resource Allocation Problems under Socialism," in *Theory of Economic Systems*, W.P. Snavely, ed. (Columbus, Ohio: Charles E. Merrill, 1969), pp. 127–39. On the importance of the stock market in the free-market economy, see Ludwig M. Lachmann, *Capital and Its Structure* (London: London School of Economics and Political Science, 1956), pp. 67–71.

error works on the market because the emergence of profit and loss conveys vital signals to the entrepreneur, whereas such apprehensions of genuine profit and loss could not be made in the absence of a real market for the factors of production.

A common attempt to rebut Mises has been the simple empirical pointing to the existence of central planning in the Soviet Union and the other Communist states. But, in the first place, this argument is a two-edged sword, (1) because of the blatant failures of early War Communism in its abolition of the market, and (2) because the evident failures and breakdowns of central planning have led to the Communist countries in East Europe, especially in Yugoslavia, to move rapidly away from socialism toward a genuine, and not a Lange-Lerner type of pseudo, market economy. But, more importantly, Mises pointed out that the Soviet Union and the other socialist countries are not fully socialist, since they still operate within a world market environment and are at least roughly able to use world capital and commodity prices on which to base their economic calculations.[6] That Communist planners base their calculations on world market prices is now generally acknowledged and is illustrated by an amusing encounter of Professor Peter Wiles with Polish Communist planners:

> What actually happens is that "world prices," that is, *capitalist world prices*, are used in all intra-block trade. They are translated into rubles and entered in bilateral clearing accounts To the question, "What would you do if there were no capitalist world?" came only the answer "We'll cross that bridge when we come to it." In the case of electricity the bridge is already under their feet: there has been great difficulty in pricing it since there is no world market.[7]

[6]On socialist countries operating within a world market environment, see Mises, *Human Action*, pp. 698–99. On the rapid breakdown of War Communism, see Boris Brutzkus, *Economic Planning in Soviet Russia* (London: George Routledge and Sons, 1935); and Paul Craig Roberts, *Alienation and the Soviet Economy* (Albuquerque: University of New Mexico Press, 1971), pp. 20–47.

[7]P.J.D. Wiles, "Changing Economic Thought in Poland" *Oxford Economic Papers* 9 (June 1957): 202–03.

Mises's followers in the debate have continued to develop his basic critique of the impossibility of economic calculation under socialism. Thus, the attempted Lange-Lerner criterion of pricing in accordance with "marginal cost" has been attacked on what are essentially Austrian grounds, namely, that costs are not "given" and objective but are subjective estimates by various individuals of future selling prices and other economic conditions. Thus Hayek wrote that:

> excessive preoccupation with the conditions of a hypothetical state of stationary equilibrium has led modern economics . . . to attribute to the notion of costs in general a much greater precision and definiteness than can be attached to any cost phenomenon in real life. . . . As soon as we leave the realm of . . . a stationary state and consider a world where most of the existing means of production are the product of particular processes that will probably never be repeated; where, in consequence of incessant change, the value of most of the more durable instruments of production has little or no connection with the costs which have been incurred in their production but depends only on the services which they are expected to render in the future, the question of what exactly are the costs of production of a given product is a question of extreme difficulty which cannot be answered . . . without first making some assumption as regards the prices of the products in the manufacture of which the same instruments will be used. Much of what is usually termed cost of production is not really a cost element that is given independently of the price of the product but a quasi-rent, or a depreciation quota which has to be allowed on the capitalized value of expected quasi-rents, and is therefore dependent on the prices which are expected to prevail.[8]

At another place, Hayek added that Lange and others

> speak about "marginal costs" as if they were independent of the period for which the manager can plan. Clearly, actual costs depend in many instances, as much as on anything, on buying at the right time. In no sense can costs during any period be said to depend solely on prices during that period. They depend as much on whether these prices have been correctly foreseen as on the views that are held about future prices.[9]

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[8]F.A. Hayek, "The Present State of the Debate," in *Collectivist Economic Planning*, pp. 226–27.

[9]Hayek, *Individualism and Economic Order*, p. 198.

And Paul Craig Roberts, while writing generally from a different perspective, pointed out that

> under real-world conditions characterized by the passage of time, the marginal rule gives no clear guidance to those directed to organize production in accordance with it. Introducing the element of time brings in uncertainty and requires the exercise of *judgment*. Neither uncertainty nor judgment is present in the formulation of perfect competition from which Lange took his idea of the marginal rule.[10]

Moreover, the outstanding critique of the marginal cost as well as of other authoritarian rules imposed on the entrepreneur was by G.F. Thirlby, who pointed out that costs are wrapped up inextricably in subjective estimates by the individual capitalists and entrepreneurs of alternative choices that are forgone, and since these alternatives are usually never undertaken, they can never be "objectively" determined by outside observers.[11]

The subjectivist Austrian critique of the modern concept of costs and its relevance to the question of socialist calculation were neatly summed up by Professor Buchanan:

> Confusion arises . . . when the properties of equilibrium, as defined for markets, are transferred as criteria of optimization in *nonmarket* or political settings. It is here that the critical distinction between the equilibrium of the single decisionmaker and that attained through market interaction, the distinction stressed by Hayek, is absolutely essential. . . . The theory of social interaction, of the mutual adjustment among the plans of separate human beings, is different in kind from the theory of planning, the maximization of some objective function by a conceptualized omniscient being. The latter is equivalent, in all respects, to the problems faced by Crusoe or by any individual decision-maker. But this is not the theory of markets, and it is artificial and basically false thinking that makes it out to be. . . . Shadow prices are not market prices, and the opportunity costs that inform market decisions are not those that inform the choices of even the omniscient planner. These

[10]Roberts, *Alienation and the Soviet Economy*, p. 97.

[11]G.E. Thirlby, "The Rule?' in *L.S.E. Essays on Cost*, James M. Buchanan and G.E. Thirlby, eds. (London: London School of Economics and Political Science, 1973), pp. 163–200.

> appear to be identical only because of the false objectification of the magnitudes in question. . . .
>
> Simply considered, cost is the obstacle or barrier to choice, that which must be got over before choice is made. Cost is the underside of the coin, so to speak, cost is the displaced alternative, the rejected opportunity. Cost is that which the decision-maker sacrifices or gives up when he selects one alternative rather than another. Cost consists therefore in his own evaluation of the enjoyment or utility that he anticipates having to forgo as a result of choice itself. There are specific implications to be drawn from this choice-bound definition of opportunity cost:
>
> 1. Cost must be borne exclusively by the person who makes decisions; it is not possible for this cost to be shifted to or imposed on others.
>
> 2. Cost is subjective; it exists only in the mind of the decision-maker or chooser.
>
> 3. Cost is based on anticipations; it is necessarily a forward-looking or *ex ante* concept.
>
> 4. Cost can never be realized because of the fact that choice is made; the alternative which is rejected can never itself be enjoyed.
>
> 5. Cost cannot be measured by someone other than the chooser since there is no way that subjective mental experience can be directly observed.
>
> In any general theory of choice cost must be reckoned in a *utility* rather than in a *commodity* dimension. From this it follows that the opportunity cost involved in choice cannot be observed and objectified and, more importantly, it cannot be measured in such a way as to allow comparisons over wholly different choice settings. The cost faced by the utility-maximizing owner of a firm, the value that he anticipates having to forego in choosing to produce an increment to current output, is not the cost faced by the utility-maximizing bureaucrat who manages a publicly owned firm, even if the physical aspects of the two firms are in all respects identical.[12]

There is one vital but neglected area where the Mises analysis of economic calculation needs to be expanded. For in a profound sense, the theory is not about socialism at all! Instead, it applies to

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[12]James M. Buchanan, "Introduction: L.S.E. Cost Theory in Retrospect," in *L.S.E. Essays on Cost*, pp. 4–5, 14–15.

any situation where one group has acquired control of the means of production over a large area—or, in a strict sense, throughout the world. On this particular aspect of socialism, it doesn't matter whether this unitary control has come about through the coercive expropriation brought about by socialism or by voluntary processes on the free market. For what the Mises theory focuses on is not simply the numerous inefficiencies of the political as compared to the profit-making market process, but the fact that a market for capital goods has disappeared. This means that, just as socialist central planning could not calculate economically, no One Big Firm could own or control the entire economy. The Mises analysis applies to any situation where a market for capital goods has disappeared in a complex industrial economy, whether because of socialism or because of a giant merger into One Big Firm or One Big Cartel.

If this extension is correct, then the Mises analysis also supplies us the answer to the age-old criticism leveled at the unhampered, unregulated free-market economy: *what if* all firms banded together into One Big Firm that would exercise a monopoly over the economy equivalent to socialism? The answer would be that such a firm could not calculate because of the absence of a market, and therefore that it would suffer grave losses and dislocations. Hence, while a socialist planning board need not worry about losses that would be made up by the taxpayer, One Big Firm would soon find itself suffering severe losses and would therefore disintegrate under this pressure. We might extend this analysis even further. For it seems to follow that, as we *approach* One Big Firm on the market, as mergers begin to eliminate capital goods markets in industry after industry, these calculation problems will begin to appear, albeit not as catastrophically as under full monopoly. In the same way the Soviet Union suffers calculation problems, albeit not so severe as would be the case were the entire world to be absorbed into the Soviet Union with the disappearance of the world market. If, then, calculation problems begin to arise as markets disappear, this places a free-market limit, not simply on One Big Firm, but even on partial monopolies that eradicate markets. Hence, the free market contains within itself a built-in mechanism limiting the relative size of firms in order to preserve markets throughout the economy. This point also serves to extend the notable analysis of Professor Coase on the market determinants of the size of the firm, or of the relative extent of corporate planning within the firm as against the use of exchange and the price mechanism. Coase pointed out that there are diminishing benefits and increasing costs to each of these two alternatives, resulting, as he put it, in an "'optimum' amount of planning" in the free market system.[13] Our thesis adds that the costs of internal corporate planning become prohibitive as soon as markets for capital goods begin to disappear, so that the free-market optimum will always stop well short not only of One Big Firm throughout the world market but also of *any* disappearance of specific markets and hence of economic calculation in that product or resource. Coase stated that the important difference between planning under socialism and within business firms on the free market is that the former "is imposed on industry while firms arise voluntarily because they represent a more efficient method of organizing production."[14] If our view is correct, then, this optimal free-market degree of planning also contains within itself a built-in safeguard against eliminating markets, which are so vital to economic calculation.

In fact, we may turn the question around to ask the socialists: if, indeed, central planning is more efficient than, or even equally efficient to, the free-market economy, then why has central planning never come about through the creation of One Big Firm by the voluntary market process? The fact that One Big Firm has never arisen on the market and that it needs the coercive might of the state to establish such central planning under socialism demonstrates that the latter could not be the most efficient method of organizing the economy.[15]

In our expanded form, then, not only is Mises's insight into the irrationality of socialism in an industrial economy confirmed but so also is the self-subsistence and continuing optimality and rationality of the free-market economy.

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[13]Ronald H. Coase, "The Nature of the Firm," *Economica* 4 (November 1937): 384–405; reprinted in American Economic Association, *Readings in Price Theory* (Homewood, Ill.: Richard D. Irwin, 1952), p. 335*n*.

[14]Ibid.

[15]See Murray N. Rothbard, *Man, Economy, and State* (Los Angeles: Nash, 1970), vol. 2, pp. 547–50, 585.

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The End of Socialism and the Calculation Debate Revisited

At the root of the dazzling revolutionary implosion and collapse of socialism and central planning in the "socialist bloc" is what everyone concedes to be a disastrous economic failure. The peoples and the intellectuals of Eastern Europe and the Soviet Union are crying out not only for free speech, democratic assembly, and glasnost, but also for private property and free markets. And yet, if I may be pardoned a moment of nostalgia, four-and a-half-decades ago, when I entered graduate school, the economics Establishment of that era was closing the book on what had been for two decades the famed "socialist calculation debate." And they had all decided, left, right, and center, that there was not a thing economically wrong with socialism: that socialism's only problems, such as they might be, were political. Economically, socialism could work just as well as capitalism.

Mises and the Challenge of Calculation

Before Ludwig von Mises raised the calculation problem in his celebrated article in 1920,[1] everyone, socialists and non-socialists alike, had long realized that socialism suffered from

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Originally appeared in *The Review of Austrian Economics* 5, no. 2 (1991): 51–76.

[1]Mises's article, published in 1920 in German, "Die Wirtschaftsrechnung im sozialistischen Gemeinwesen," was only made available in English in 1935; Mises, "Economic Calculation in the Socialist Commonwealth," in F.A. Hayek, ed., *Collectivist Economic Planning* (London: Routledge and Sons, 1935), pp. 87–130. The article was republished as a monograph by the Mises Institute with a notable postscript by Professor Joseph T. Salerno (Ludwig von Mises, *Economic Calculation in the Socialist Commonwealth* [Auburn, Ala.: Ludwig von Mises Institute, 1990]).

an *incentive problem*. If, for example, everyone under socialism were to receive an equal income, or, in another variant, everyone was supposed to produce "according to his ability" but receive "according to his needs," then, to sum it up in the famous question: Who, under socialism, will take out the garbage? That is, what will be the incentive to do the grubby jobs, and, furthermore, to do them well? Or, to put it another way, what would be the incentive to work hard and be productive *at any job*?

The traditional socialist answer held that the socialist society would transform human nature, would purge it of selfishness, and remold it to create a New Socialist Man. That new man would be devoid of any selfish, or indeed any self-determined, goals; his only wish would be to work as hard and as eagerly as possible to achieve the goals and obey the orders of the socialist State. Throughout the history of socialism, socialist *ultras*, such as the early Lenin and Bukharin under "War Communism," and later Mao Tse-tung and Che Guevara, have sought to replace material by so-called "moral" incentives. This notion was properly and wittily ridiculed by Alexander Gray as "the idea that the world may find its driving force in a Birthday Honours List (giving to the King, if necessary, 165 birthdays a year)."[2] At any rate, the socialists soon found that voluntary methods could hardly yield them the New Socialist Man. But even the most determined and bloodthirsty methods could not avail to create this robotic New Socialist Man. And it is a testament to the spirit of freedom that cannot be extinguished in the human breast that the socialists continued to fail dismally, despite decades of systemic terror.

But the uniqueness and the crucial importance of Mises's challenge to socialism is that it was totally unrelated to the well-known incentive problem. Mises in effect said: All right, suppose that the socialists have been able to create a mighty army of citizens all eager to do the bidding of their masters, the socialist planners. What exactly would those planners tell this army to do? How would they know what products to order their eager slaves to produce, at what stage of production, how much of the product at each stage, what

[2]Alexander Gray, *The Socialist Tradition* (London: Longmans, Green, 1946), p. 90.

techniques or raw materials to use in that production and how much of each, and where specifically to locate all this production? How would they know their costs, or what process of production is or is not efficient?

Mises demonstrated that, in any economy more complex than the Crusoe or primitive family level, the socialist planning board would simply not know what to do, or how to answer any of these vital questions. Developing the momentous concept of *calculation*, Mises pointed out that the planning board could not answer these questions because socialism would lack the indispensable tool that private entrepreneurs use to appraise and calculate: the existence of a market in the means of production, a market that brings about money prices based on genuine profit-seeking exchanges by private owners of these means of production. Since the very essence of socialism is collective ownership of the means of production, the planning board would not be able to plan, or to make any sort of rational economic decisions. Its decisions would necessarily be completely arbitrary and chaotic, and therefore the existence of a socialist planned economy is literally "impossible" (to use a term long ridiculed by Mises's critics).

The Lange-Lerner "Solution"

In the course of intense discussion throughout the 1920s and 1930s, the socialist economists were honest enough to take Mises's criticism seriously, and to throw in the towel on most traditional socialist programs: in particular, the original communist vision that workers, not needing such institutions as bourgeois money fetishism, would simply produce and place their products on some vast socialist heap, with everyone simply taking from that heap "according to his needs." The socialist economists also abandoned the Marxian variant that everyone should be paid according to the labor time embodied into his product. In contrast, what came to be known as the Lange-Lerner solution (or, less commonly but more accurately, the Lange-Lerner-Taylor solution), acclaimed by virtually all economists, asserted that the socialist planning board could easily resolve the calculation problem by ordering its various managers to fix accounting prices. Then, according to the contribution of Professor Fred M. Taylor, the central planning board could find the proper prices in much the same way as the capitalist market: trial and error.

Thus, given a stock of consumer goods, if the accounting prices are set too low, there will be a shortage, and the planners will raise prices until the shortage disappears and the market is cleared. If, on the other hand, prices are set too high, there will be a surplus on the shelves, and the planners will lower the price, until the markets are cleared. The solution is simplicity itself![3]

In the course of his two-part article and subsequent book, Lange concocted what could only be called the Mythology of the Socialist Calculation Debate, a mythology which, aided and abetted by Joseph Schumpeter, was accepted by virtually all economists of whatever ideological stripe. It was this mythology which I found handed down as the Orthodox Line when I entered Columbia University's graduate school at the end of World War II—a line promulgated in lectures by no less an expert on the Soviet economy than Professor Abram Bergson, then at Columbia. In 1948, indeed, Professor Bergson was selected to hand down the Received Opinion on the subject by a committee of the American Economic Association, and Bergson interred the socialist calculation question with the Orthodox Line as its burial rite.[4]

The Lange-Bergson Orthodox Line went about as follows: Mises, in 1920, had done an inestimable service to socialism by raising the problem of economic calculation, a problem of which socialists had not generally been aware. Then Pareto and his Italian disciple Enrico Barone had shown that Mises's charge, that socialist calculation was impossible, was incorrect, since the requisite number of supply, demand, and price equations existed under socialism as under a capitalist system. At that point, F.A. Hayek and Lionel

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[3]Oskar Lange's well-known article was originally in two parts: "On the Economic Theory of Socialism," *Review of Economic Studies* 4 (October 1936): 53–71, and ibid., p. 5 (February 1937): 132–42; Fred M. Taylor's article was "The Guidance of Production in a Socialist State," *American Economic Review* 19 (March 1929); Taylor was reprinted and Lange revised and published in Oskar Lange and Fred M. Taylor, *On the Economic Theory of Socialism*, B. Lippincott, ed. (Minneapolis: University of Minnesota Press, 1938).

[4]Abram Bergson, "Socialist Economics," in H.S. Ellis, ed., *A Survey of Contemporary Economics* (Philadelphia: Blakiston, 1948), pp. 412–48.

Robbins, abandoning Mises's extreme position, fell back on a second line of defense: that, while the calculation problem could be solved *theoretically*, in practice it would be too difficult. Thereby Hayek and Robbins fell back on a practical problem, or one of degree of efficiency rather than of a drastic difference in kind. But now, happily, the day has been saved for socialism, since Taylor-Lange-Lerner have shown that, by jettisoning utopian ideas of a money-less or price-less socialism, or of pricing according to a labor theory of value, the socialist Planning Board can solve these pesky equations simply by the good old capitalist method of trial and error.[5]

Bergson, attempting to be magisterial in his view of the debate, summed up Mises as contending that "without private ownership of, or (what comes to the same thing for Mises) a free market for the means of production, the rational evaluation of these goods for the purposes of calculating costs is ruled out." Bergson correctly adds that to put Mises's point

> somewhat more sharply than is customary, 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. In the absence of a free market for these goods, decisions on resource allocation in Mises's view necessarily would be on a haphazard basis.

Bergson sharply comments that this "argument is easily disposed of." Lange and Schumpeter both point out that, as Pareto and Barone had shown,

> once tastes and techniques are given, the values of the means of production can be determined unambiguously by imputation without the intervention of a market process. The Board of Supermen could decide readily how to allocate resources so as to assure the

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[5]Lange was aided in this construction by being able to use Hayek's collection of articles on the subject, which had just been published the year before his first article, as a useful foil. Hayek's volume included the seminal article by Mises, other contributions by Pierson and Halm, two articles by Hayek himself, and the alleged refutation of Mises by Barone. See Hayek, *Collectivist Economic Planning*.

> optimum welfare. It would simply have to solve the equations of Pareto and Barone.[6]

So much for Mises. As for the Hayek-Robbins problem of practicality, Bergson adds, that can be settled by the Lange-Taylor trial-and-error method; any remaining problems are only a matter of degree of efficiency, and political choices. The Mises problem has been satisfactorily solved.

Some Fallacies of the Lange-Lerner Solution

The breathtaking naivete of the Orthodox Line should have been evident even in the 1940s. As Hayek later chided Schumpeter on the assumption of "imputation" outside the market, this formulation

> presumably means . . . that the valuation of the factors of production is implied in, or follows necessarily from, the valuation of consumers' goods. But . . . implication is a logical relationship which can be meaningfully asserted only of propositions simultaneously present to one and the same mind.[7]

Economists were convinced of the Lange solution because they had already come under the sway of the Walrasian general equilibrium model; Schumpeter, for example, was an ardent Walrasian. In this model, the economy is always in static general equilibrium, a changeless world in which all "data"—tastes or value scales, alternative technologies, and lists of resources—are known to everyone, and where costs are known and always equal to price. The Walrasian world is also one of "perfect" competition, where prices are given to all managers. Indeed, both Taylor and Lange make the point that the Socialist Planning Board will be better able to calculate than capitalist markets, since the socialist planners can ensure "perfect competition," whereas the real world of capitalism is shot through with various sorts of "monopolies"! The socialist planners can act like the

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[6]Bergson, "Socialist Economics," p. 446.

[7]F.A. Hayek, "The Use of Knowledge in Society" (1945), in Hayek, *Individualism and Economic Order* (Chicago: University of Chicago Press, 1948), p. 90.

absurdly fictional Walrasian "auctioneer," bringing about equilibrium rapidly by trial and error.

Set aside the obvious absurdity of trusting a coercive governmental monopoly to act somehow as if it were in "perfect competition" with parts of itself. Another grievous flaw in the Lange model is thinking that general equilibrium, a world of certainty where there is no room for the driving force of entrepreneurship, can somehow be used to depict the real world. The actual world is one not of changeless "givens" but of incessant change and systemic uncertainty. Because of this uncertainty, the capitalist entrepreneur, who stakes assets and resources in attempting to achieve profits and avoid losses, becomes the crucial actor in the economic system, an actor who can in no way be portrayed by a world of general equilibrium. Furthermore, it is ludicrous, as Hayek pointed out, to think of general equilibrium as the only legitimate "theory," with all other areas or problems dismissed as mere matters of practicality and degree. No economic theory worth its salt can be worthwhile if it omits the role of the entrepreneur in an uncertain world. The Pareto-Barone-Lange, etc. "equations" is not simply excellent theory that faces problems in practice; for in order to be "good," a theory must be useful in explaining real life.[8]

Another grave flaw in the Lange-Taylor trial-and-error approach is that it concentrates on consumer good pricing. It is true that retailers, given the stock of a certain type of good, can clear the market by adjusting the prices of that good upward or downward. But, as Mises pointed out in his original 1920 article, consumer goods are not the real problem. Consumers, these "market socialists" are postulating, are free to express their values by using money they had earned on a range of consumers' goods. Even the labor

[8]The silliness of hailing Barone's essay as a refutation of Mises is highlighted by the fact that Barone's article was published in 1908, twelve years before Mises's article which it is supposed to have refuted. The date was well known to, and made no impression upon, Ludwig von Mises. Moreover, Barone and Pareto themselves had only scorn for any notion that their equations could aid socialist planning. See Trygve J.B. Hoff, *Economic Calculation in the Socialist Society* (1949; Indianapolis, Ind.: Liberty Press, 1981), pp. 222–23.

market—at least in principle[9]—can be treated as a market with self-owning suppliers who are free to accept or reject bids for their labor and to move to different occupations. The real problem, as Mises has insisted from the beginning, is in all the intermediate markets for land and capital goods. Producers have to use land and capital resources to decide what the stocks of the various consumer goods should be. Here there are a huge number of markets where the State monopoly can only be both buyer and seller for each transaction, and these intra-monopoly, intra-state transactions permeate the most vital markets of an advanced economy—the complex lattice-work of the capital markets. And here is precisely where calculational chaos necessarily reigns, and there is no way for rationality to intrude on the immense number of decisions on the allocation of prices and factors of production in the structure of capital goods.

Mises's Rebuttal: The Entrepreneur

Moreover, Mises's brilliant and devastating rebuttal to his Lange-Lerner "market socialism" critics has virtually never been considered—neither by the economics establishment nor by the post-World War II Hayekians. In both cases, the writers were eager to dispose of Mises as having safely made his pioneering contribution in 1920, but being superseded later, either by Lange-Lerner or by Hayek, as the case may be. In both cases, it was inconvenient to ponder that Mises continued to elaborate his position with a penetrating critique of his critics, or that Mises's "extreme" formulation may, after all, have been correct.[10]

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[9]Here, as in other parts of his argument—as we shall see further below—Mises is leaning over backward to concede the market socialists their best case, and is not considering whether such free consumer or labor markets are really likely in a world where the state is the only seller, as well as the only purchaser, of labor.

[10]Mises's later rebuttal is in his *Human Action* (New Haven, Conn.: Yale University Press, 1949), pp. 694–711. For the establishment, the debate was supposed to be over by 1938. For an example of a Hayekian survey of the debate that does not bother to so much as mention *Human Action*, see Karen I. Vaughn, "Introduction," in Hoff, *Economic Calculation*, pp. ix–xxxvii. Indeed, in an earlier paper, Vaughn had sneered that "Mises's so-called final refutation in *Human Action* is mostly polemic and glosses

Mises began his rebuttal in *Human Action* by discussing the "trial-and-error" method, and pointing out that this process only works in the capitalist market. There the entrepreneurs are strongly motivated to make greater profits and to avoid losses, and further, such a criterion does not apply to the capital goods or land market under socialism where all resources are controlled by one entity, the government.

Continuing his reply, Mises pressed on to a brilliant critique, not only of socialism, but of the entire Walrasian general equilibrium model. The major fallacy of the "market socialists," Mises pointed out, is that they look at the economic problem from the point of view of the manager of the individual firm, who seeks to make profits or avoid losses within a rigid framework of a given, external allocation of capital to each of the various branches of industry and indeed to the firm itself. In other words, the "market socialist" manager is akin, not to the real driving force of the capitalist market, the capitalist entrepreneur, but rather to the relatively economically insignificant manager of the corporate firm under capitalism. As Mises brilliantly puts it:

> the cardinal fallacy implied in [market socialist] proposals is that they look at the economic problem from the perspective of the subaltern clerk whose intellectual horizon does not extend beyond subordinate tasks. They consider the structure of industrial production and the allocation of capital to the various branches and production aggregates as rigid, and do not take into account the necessity of altering this structure in order to adjust it to changes in conditions. . . . They fail to realize that the operations

over the real problems." Vaughn, "Critical Discussion of the Four Papers," in Lawrence Moss, ed. *The Economics of Ludwig von Mises* (Kansas City: Sheed and Ward, 1976), p. 107. The Hayekian doctrine will be treated further below.

For a refreshing example of an outstanding Misesian contribution to the debate that does not neglect or deprecate Human Action but rather builds upon it, see Joseph T. Salerno, "Ludwig von Mises as Social Rationalist," *Review of Austrian Economics* 4 (1990): 36–48. Also see Salerno, "Why Socialist Economy is Impossible," a Postscript to Mises, *Economic Calculation in the Socialist Commonwealth* (Auburn, Ala.: Ludwig von Mises Institute, 1990).

> of the corporate officers consist merely in the loyal execution of the tasks entrusted to them by their bosses, the shareholders. . . . The operations of the managers, their buying and selling, are only a small segment of the totality of market operations. The market of the capitalist society also performs those operations which allocate the capital goods to the various branches of industry. 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 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.[11]

Mises goes on to remind the reader that the corporate manager performs only a "managerial function," a subsidiary service that "can never become a substitute for the entrepreneurial function." Who are the capitalist-entrepreneurs? They are "the speculators, promoters, investors and moneylenders, [who] in determining the structure of the stock and commodity exchanges and of the money market, circumscribe the orbit within which definite tasks can be entrusted to the manager's discretion." The crucial question, Mises continues, is not managerial activities, but: "In which branches should production be increased or restricted, in which branches should the objective of production be altered, what new branches should be inaugurated?" In short, the crucial decisions in the capitalist economy are the allocation of capital to firms and industries. With regard to these issues," Mises adds,

> it is vain to cite the honest corporation manager and his well-tried efficiency. Those who confuse entrepreneurship and management close their eyes to the economic problem. . . . The capitalist system is not a managerial system; it is an entrepreneurial system.

But here, Mises triumphantly concludes, no "market socialist" has ever suggested preserving or carrying over, much less understood the importance of, the specifically entrepreneurial functions of capitalism:

[11]Mises, *Human Action*, pp. 703–04.

> Nobody has ever suggested that the socialist commonwealth could invite the promoters and speculators to continue their speculations and then deliver their profits to the common chest. Those suggesting a quasi-market for the socialist system have never wanted to preserve the stock and commodity exchanges, the trading in futures, and the bankers and money-lenders as quasi-institutions.[12]

Mises has been cited as stating, in *Human Action*, that it is absurd for the socialist planning board to tell their managers to "play market," to act *as if* they are owners of their firms in trying to maximize profits and avoid losses. But it is important to stress that Mises was focusing, not so much on the individual managers of socialist "firms," but on the speculators and investors who decide the crucial allocations of capital throughout the structure of industry. It is at least conceivable that one can order a manager to play market and act as if he were enjoying the profits and suffering losses; but it is clearly ludicrous to ask investors and capital speculators to act as if their fortunes were at stake. As Mises adds:

> one cannot *play* speculation and investment. The speculators and investors expose their own wealth, their own destiny. This fact makes them responsible to the consumers, the ultimate bosses of the capitalist economy. If one relieves them of this responsibility, one deprives them of their very character.[13]

One time, during Mises's seminar at New York University, I asked him whether, considering the broad spectrum of economies from a purely free market economy to pure totalitarianism, he could single out one criterion according to which he could say that an economy was essentially "socialist" or whether it was a market economy. Somewhat to my surprise, he replied readily: "Yes, the key is whether the economy has a stock market." That is, if the economy has a full-scale market in titles to land and capital goods. In short: Is the allocation of capital basically determined by government or by private owners? At the time, I did not fully understand the vital importance of Mises's answer, which I realized recently when poring

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[12] Ibid., pp. 704–05.

[13] Ibid., p. 705.

over the great merits of the Misesian, as compared to the Hayekian, analysis of the socialist calculation problem.

For Mises, in short, the key to the capitalist market economy and its successful functioning is the entrepreneurial forecasting and decisionmaking of private owners and investors. The key is emphatically *not* the more minor decisions made by corporate managers within a framework already set by entrepreneurs and the capital markets. And it is obvious that Lange, Lerner, and the other market socialists merely envisioned the relatively lesser managerial decisions. These economists, who had never grasped the function of speculation or capital markets, therefore had no idea that they would need to be or could be replicated in a socialist system.[14] And this is not surprising, since in the Walrasian general micro-equilibrium model, there is no capital structure, there is no role for capital, and capital theory has become totally submerged into "growth theory," that is, growth of a homogeneous "level," or blob, of aggregate macro-capital. The allocation of capital is considered external and given, and receives no consideration.

The Structure of Capital

Joseph Schumpeter and Frank H. Knight are interesting examples of two eminent economists who were personally anti-socialist but were seduced by their Walrasian devotion to general equilibrium and their lack of a genuine capital theory into strongly endorsing the orthodox view that there is no economic calculation problem under socialism. In particular, in capital theory, both Schumpeter and Knight were disciples of J.B. Clark, who denied any role at all for time in the process of production. For Schumpeter, production takes no time because production and consumption are somehow always "synchronized." Time is erased from the picture, even to assuming away the existence of any accumulated stocks of capital goods, and therefore of any age structure of such goods. Since production is magically

[14]The fact that some socialist bloc countries, such as Hungary, now permit a stock market, albeit small and truncated, and that other ex-communist countries are seriously considering introducing such capital markets, demonstrates the enormous importance of the de-socialization now under way in Eastern Europe.

synchronized, there is then no necessity for land or labor to receive advances in payment from capitalists out of accumulated savings. Schumpeter achieves this feat by sundering capital completely from its embodiment in capital goods, and limiting the concept to a money fund used to purchase such goods.[15]

Frank Knight, the doyen of the Chicago School, was also an ardent believer in the Clarkian view that time preference has no influence on interest paid by producers, and that production is synchronized so that time plays no role in the production structure. Hence, Knight believed, along with modern orthodoxy, that capital is a homogeneous, self-perpetuating blob that *has no* lattice-like, time-oriented structure. Knight's fiercely anti-Böhm-Bawerkian, anti-Austrian views on capital and interest led him to a then-famous war of journal articles over capital theory during the 1930s, a war he won by default when Austrianism disappeared because of the Keynesian Revolution.[16]

In his negative review of Mises's *Socialism*, Frank Knight, after hailing Lange's "excellent" 1936 article, brusquely dismisses the socialist calculation debate as "largely sound and fury." To Knight, it is simply "truistical" that the "technical basis of economic life" would continue as before under socialism, and that therefore "the managers of various technical units in production—farms, factories, railways, stores, etc.—would carry on in essentially the same way." Note, there is no reference whatever to the crucial capital market, or to the allocation of capital to various branches of production. If capital is an

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[15]See Murray N. Rothbard, "Breaking Out of the Walrasian Box: The Cases of Schumpeter and Hansen," *Review of Austrian Economics* 1 (1987): 98–100, 107; included in this volume as chapter 14.

[16]On Knight vs. Hayek, Machlup, and Boulding in the 1930s, see F.A. Hayek, "The Mythology of Capital," in W. Feliner and B. Haley, eds., *Readings in the Theory of Income Distribution* (Philadelphia: Blakiston, 1946), pp. 355–83. For a Knightian attack on the Austrian discounted marginal productivity theory on behalf of what is now the orthodox undiscounted (by time-preference) marginal productivity theory, see Earl Rolph, "The Discounted Marginal Productivity Doctrine," ibid., pp. 278–93. For an Austrian rebuttal, see Murray N. Rothbard, *Man, Economy, and State* (Los Angeles: Nash, 1970), vol. 1, pp. 431–33; and Walter Block, "The DMVP-MVP Controversy: A Note," *Review of Austrian Economics* 4 (1990): 199–207.

automatically renewing homogeneous blob, all one need worry about is growth in the amount of that blob. Hence, Knight concludes that "socialism is a political problem, to be discussed in terms of social and political psychology, and economic theory has relatively little to say about it."[17] Certainly, that is true of Knight's orthodox-Chicagoite brand of economic theory!

It is instructive to compare the naïvete and the brusque dismissal of the problem by Schumpeter and Knight with the penetrating Misesian critique of socialism by Professor Georg Halm:

> Because capital is no longer owned by many private persons, but by the community, which itself disposes of it directly, a rate of interest can no longer be determined. A pricing process is always possible only when demand and supply meet in a market. . . . In the socialist economy . . . there can be no demand and no supply when the capital from the outset is in the possession of its intending user, in this case the socialistic central authority.
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> Now it might perhaps be suggested that, since the rate of interest cannot be determined automatically, it should be fixed by the central authority. But this likewise would be quite impossible. It is true that the central authority would know quite well

[17]Frank H. Knight, "Review of Ludwig von Mises, *Socialism*," *Journal of Political Economy* 46 (April 1938): 267–68. In another review in the same issue of the journal, Knight claims that there would be a "capital market" under socialism, but it is clear that he is referring only to a market for loans, and not to a genuine market in equities throughout the production structure. Here again, Mises has a devastating critique of this sort of scheme in *Human Action*, pointing out that managers bidding for governmental planning board funds would not be bidding for or staking their own property, and hence they would

> not be restrained by any financial dangers they themselves run in promising too high a rate of interest for the funds borrowed. . . . All the hazards of this insecurity fall only upon society, the exclusive owner of all resources available. If the director were without hesitation to allocate the funds available to those who bid most, he would simply abdicate in favor of the least scrupulous visionaries and scoundrels.

See Knight, "Two Economists on Socialism," *Journal of Political Economy* 46 (April 1938): 248; and Mises, *Human Action*, p. 705.

> how many capital goods of a given kind it possessed or could procure . . . ; it would know the capacity of the existing plant in the various branches of production; but it would not know how scarce capital was. For the scarcity of means of production must always be related to the demand for them, whose fluctuations give rise to variations in the value of the good in question. . . .
>
> If it should be objected that a price for consumption-goods would be established, and that in consequence the intensity of the demand and so the value of the means of production would be determinate, this would be a further serious mistake. . . . The demand for means of production, labor and capital goods, is only indirect.

Halm goes on to add that if there were only one single factor of production in making consumers' goods, the socialist "market" might be able to determine its proper price. But this can not be true in the real world where *several* factors of production take part in the production of goods in various markets.

Halm then adds that the central authority, contrary to his above concession, would not *even* be able to find out how much capital it is employing. For capital goods are heterogeneous, and therefore how "can the total plant of one factory be compared with that of another? How can a comparison be made between the values of even only two capital-goods?" In short, while under capitalism such comparisons can be made by means of money prices set on the market for every good, in the socialist economy the absence of genuine money prices arising out of a market precludes any such value comparisons. Hence, there is also no way for a socialist system to rationally estimate the costs (which are dependent on prices in factor markets) of any process of production.[18]

Mises's Rebuttal: Valuation and Monetary Appraisement

In his original 1920 article, Mises emphasized that "as soon as one gives up the conception of a freely established monetary price for

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[18]Georg Halm, "Further Considerations on the Possibility of Adequate Calculation in a Socialist Community," in Hayek, ed., *Collectivist Economic Planning*, pp. 162–65. Also see ibid., pp. 13–20.

goods of a higher order, rational production becomes completely impossible." Mises then states, prophetically:

> One may anticipate the nature of the future socialist society. There will be hundreds and thousands of factories in operation. Very few of these will be producing wares ready for use; in the majority of cases what will be manufactured will be unfinished goods and production goods. All these concerns will be interrelated. Every good will go through a whole series of stages before it is ready for use. In the ceaseless toil and moil of this process, however, the administration will be without any means of testing their bearings. It will never be able to determine whether a given good has not been kept for a superfluous length of time in the necessary processes of production, or whether work and material have not been wasted in its completion. How will it be able to decide whether this or that method of production is the more profitable? At best it will only be able to compare the quality and quantity of the consumable end-product produced, but will in the rarest cases be in a position to compare the expenses entailed in production.

Mises points out that while the government may be able to know what ends it is trying to achieve, and what goods are most urgently needed, it will have no way of knowing the other crucial element required for rational economic calculation: valuation of the various means of production, which the capitalist market can achieve by the determination of money prices for all products and their factors.[19]

Mises concludes that, in the socialist economy "in place of the economy of the 'anarchic' method of production, recourse will be had to the senseless output of an absurd apparatus. The wheels will turn, but will run to no effect."[20]

Moreover, in his later rebuttal to the champions of the Pareto-Barone equations, Mises points out that the crucial problem is not simply that the economy is not and can never be in the general equilibrium state described by these differential equations. In addition to

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[19]Mises, "Economic Calculation in the Socialist Commonwealth," pp. 106–08.

[20]Ibid., p. 106. This conclusion of 1920 is strikingly close to the quip common in the Poland of 1989, as reported by Professor Krzyztof Ostazewaki of the University of Louisville: that the socialist planned economy is "a value-shredding machine run by an imbecile."

other grave problems with the equilibrium model (e.g., that the socialist planners do not now know their value scales in future equilibrium; that money and monetary exchange cannot fit into the model; that units of productive factors are neither perfectly divisible nor infinitesimal—and that marginal utilities of different people cannot be equated—on the market or anywhere else), the equations "do not provide any information about the human actions by means of which the hypothetical state of equilibrium" has been or can be reached. In short, the equations offer no information whatever on how to get from the existing disequilibrium state to the general equilibrium goal.

In particular, Mises points out, "even if, for the sake of argument, we assume that a miraculous inspiration has 'enabled' the director without economic calculation to solve all problems concerning the most advantageous arrangement of all production activities and that the price image of the final goal he must aim at is present to his mind," there remain crucial problems on the path from here to there. For the socialist planner does not start from scratch and then build a capital goods structure most perfectly designed to meet his goals. He necessarily starts with a capital goods structure produced at many stages of the past and determined by past consumer values and past technological methods of production. There are different degrees of such past determinants built into the existing capital structure, and anyone starting today must use these resources as best he can to meet present and expected future goals. For these heterogeneous choices, no mathematical equations can be of the slightest use.[21]

Finally, the unique root of Mises's position, and one that distinguishes him and his "socialist impossibility" thesis from Hayek and the Hayekians, has been neglected until the present day. And this neglect has persisted despite Mises's own explicit avowal in his memoirs of

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[21]Mises, *Human Action*, pp. 706–09. As Mises puts it:

> socialists of all shades of opinion, repeat again and again that what makes the achievement of their ambitious plans realizable is the enormous wealth hitherto accumulated. But in the same breath they disregard the fact that this wealth consists to a great extent in capital goods produced in the past and more or less antiquated from the point of view of our present valuations and technological knowledge. (Ibid., p. 710)

the root and groundwork of his calculation thesis.[22] For Mises was *not*, like Hayek and his followers, concentrating on the flaws in the general equilibrium model when he arrived at his position; nor was he led to his discussion solely by the triumph of the socialist revolution in the Soviet Union. For Mises records that his position on socialist calculation emerged out of his first great work, *The Theory of Money and Credit* (1912). In the course of that notable integration of monetary theory and "micro" marginal utility theory, Mises was one of the very first to realize that subjective valuations of the consumers (and of laborers) on the market are purely ordinal, and are in no way measurable. But market prices are cardinal and measurable in terms of money, and market money prices bring goods into cardinal comparability and calculation (e.g., a $10 hat is "worth" five times as much as a $2 loaf of bread).[23] But Mises realized that this insight meant it was absurd to say (as Schumpeter would) that the market "imputes" the values of consumer goods back to the factors of production. Values are not directly "imputed"; the imputation process works only indirectly, by means of money prices on the market. Therefore socialism, necessarily devoid of a market in land and capital goods, must lack the ability to calculate and compare goods and services, and therefore any rational allocation of productive resources under socialism is indeed *impossible*.[24]

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[22]In Mises's *Notes and Recollections* (Spring Mills, Penn.: Libertarian Press, 1978), p. 112. Also see the discussion in Murray N. Rothbard, *Ludwig von Mises: Scholar, Creator, Hero* (Auburn, Ala.: Ludwig von Mises Institute, 1988), pp. 35–38.

[23]On the market, then, consumers evaluate goods and services ordinally, whereas entrepreneurs appraise (estimate and forecast future prices) cardinally. On valuation and appraisement, see Mises, *Human Action*, pp. 327–330; Salerno, "Mises as Social Rationalist," pp. 39–49; and Salerno, "Socialist Economy is Impossible."

[24]Mises says in his memoirs:

> They [the socialists] failed to see the very first challenge: How can economic action that always consists of preferring and setting aside, that is, of making unequal valuations, be transformed into equal valuations, by the use of equations? Thus the advocates of socialism came up with the absurd recommendation of substituting equations of mathematical catallactics, depicting an

For Mises, then, his work on socialist calculation was part and parcel of his expanded integration of direct and monetary exchange, of "micro" and "macro," that he had begun but not yet completed in *The Theory of Money and Credit*.[25]

FALLACIES OF HAYEK AND KIRZNER

The orthodox line of the 1930s and 40s was wrong in claiming that Hayek and his followers (such as Lionel Robbins) abandoned Mises's "theoretical" approach by bowing down to the Pareto-Barone equations, falling back on "practical" objections to socialist planning.[26] As we have already seen, Hayek scarcely ceded to mathematical equations of general equilibrium the monopoly of correct economic theory. But it is also true that Hayek and his followers fatally and radically changed the entire focus of their "Austrian" position, either by misconstruing Mises's argument or by consciously though silently shifting the crucial terms of the debate.

It is no accident, in short, that Hayek and the Hayekians dropped Mises's term "impossible" as embarrassingly extreme and imprecise. For Hayek, the major problem for the socialist planning board is its lack of *knowledge*. Without a market, the socialist planning board has no means of knowing the value-scales of the consumers, or the supply of resources or available technologies. The capitalist economy is, for Hayek, a valuable means of disseminating knowledge from one individual to another through the pricing "signals" of the free market. A static, general equilibrium economy would be able to overcome the Hayekian problem of dispersed knowledge, since eventually all data would come to be known by all, but the everchanging, uncertain data of the real world prevents the socialist planning board from acquiring such knowledge. Hence, as is usual for Hayek, the argument for the free economy and against statism rests on an argument from ignorance.

> image from which human action is eliminated, for the monetary calculation in the market economy. (Mises, *Notes and Recollections*, p. 112)

[25]This integration was later completed by his business-cycle theory in the 1920s, and then in his monumental treatise *Human Action*.

[26]Except for the unfortunate emphasis of Hayek and Robbins on the alleged socialist difficulty of computing or "counting" the equations. See below.

But to Mises the central problem is not "knowledge." He explicitly points out that *even if* the socialist planners knew perfectly, and eagerly wished to satisfy, the value priorities of the consumers, and even if the planners enjoyed a perfect knowledge of all resources and all technologies, they *still* would not be able to calculate, for lack of a price system of the means of production. The problem is not knowledge, then, but calculability. As Professor Salerno points out, the *knowledge* conveyed by present—or immediate "past"—prices is consumer valuations, technologies, supplies, etc. of the immediate or recent past. But what acting man is interested in, in committing resources into, production and sale, is future prices, and the present committing of resources is accomplished by the entrepreneur, whose function is to *appraise*—to anticipate—future prices, and to allocate resources accordingly. It is precisely this central and vital role of the *appraising entrepreneur*, driven by the quest for profits and the avoidance of losses, that cannot be fulfilled by the socialist planning board, for lack of a market in the means of production. Without such a market, there are no genuine money prices and therefore no means for the entrepreneur to calculate and appraise in cardinal monetary terms.

More philosophically, the entire Hayekian emphasis on "knowledge" is misplaced and misconceived. The purpose of human action is not to "know" but to employ means to satisfy goals. As Salerno perceptively summarizes Mises's position:

> The price system is not—and praxeologically cannot be—a mechanism for economizing and communicating the knowledge relevant to production plans [the Hayekian position]. The realized prices of history are an accessory of appraisement, the mental operation in which the faculty of understanding is used to assess the quantitative structure of price relationships which corresponds to an anticipated constellation of economic data. Nor are anticipated future prices tools of knowledge; they are instruments of economic calculation. And economic calculation itself is not the means of acquiring knowledge, but the very prerequisite of rational action within the setting of the social division of labor. It provides individuals, whatever their endowment of knowledge, the indispensable tool for attaining a mental grasp and comparison of the means and ends of social action.[27]

[27]Salerno, "Mises as Social Rationalist," p. 44.

In a recent article, Professor Israel Kirzner argues for the Hayekian position. For Hayek and for Kirzner, the market is a "discovery procedure," that is, an unfolding of knowledge. There is, in this view of the market and of the world, no genuine recognition of the entrepreneur, not as a "discoverer," but as a dynamic risk taker, risking losses if his appraisal and forecast go awry. Kirzner's commitment to the "discovery process" fits all too well with his own original concept of the entrepreneurial function as being that of "alertness," and of different entrepreneurs as being variously alert to the opportunities that they see and discover. But this outlook totally misconceives the role of the entrepreneur. The entrepreneur is not simply "alert"; he forecasts; he appraises; he meets and bears risk and uncertainty by questing for profits and risking losses. As Salerno points out, for all their talk of dynamism and uncertainty, the Hayek-Kirzner "entrepreneur" is curiously bloodless and passive, receiving and passively imbibing knowledge imparted to him by the market. The Hayek-Kirzner entrepreneur is far closer than they like to think to the Walrasian automaton, to the fictional "auctioneer" who avoids all real trades in the marketplace.[28]

Unfortunately, while lucidly expounding the Hayekian position, Kirzner obfuscates the history of the debate by claiming that the later Mises, along with Hayek, changed his position (or, at the least, "elaborated" it) from his original, "static" view of 1920. But on the contrary, as Salerno points out, the "later" Mises explicitly spurned uncertainty of the future as the key to the calculation problem. The key to the calculation question, stated Mises in *Human Action*, is *not* that "all human action points to the future and the future is always uncertain." No, socialism has

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[28]Israel M. Kirzner, "The Economic Calculation Debate: Lessons for Austrians," *Review of Austrian Economics* 2 (1988): 1–18. Hayek coined the term "discovery procedure" in F.A. Hayek, "Competition as a Discovery Procedure," in *New Studies in Philosophy, Politics, Economics and the History of Ideas* (Chicago: University of Chicago Press, 1978), pp. 179–90. For a critique of Kirzner's concept of entrepreneurship, see Murray N. Rothbard, "Professor Hébert on Entrepreneurship," *Journal of Libertarian Studies* 7 (Fall, 1985): 281–85. For Hayek's own contributions to the socialist calculation debate after Lange-Lerner, see F.A. Hayek, "Socialist Calculation III: The Competitive 'Solution'" (1940), and "The Use of Knowledge in Society," (1945), in *Individualism and Economic Order*, pp. 181–208, 77–91.

> quite a different problem. Today we calculate from the point of view of our present knowledge and. of our present anticipation of future conditions. We do not deal with the problem of whether or not the [socialist] director will be able to anticipate future conditions. What we have in mind is that the director cannot calculate from the point of view of his own present value judgments and his own present anticipation of future conditions, whatever they may be. If he invests today in the canning industry, it may happen that a change in consumers' tastes or in the hygienic opinions concerning the wholesomeness of canned food will one day turn his investment into a malinvestment. But how can he find out today how to build and equip a cannery most economically?
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> Some railroad lines constructed at the turn of the century would not have been built if the people had at that time anticipated the impending advance of motoring and aviation. But those who at the time built railroads knew which of the various possible alternatives for the realization of their plans they had to choose from the point of view of their appraisements and anticipations and of the market prices of their day in which the valuations of the consumers were reflected. It is precisely this insight that the director will lack. He will be like a sailor on the high seas unfamiliar with the methods of navigation.[29,30]

Solving Equations and Lange's Last Word

One of the unfortunate formulations of Hayek and the Hayekians in the 1930s, giving rise to the general misunderstanding that the only problems of socialist planning are "practical" not "theoretical," was their stress on the alleged difficulty of specialist planners in computing or solving all the demand and supply functions, all the "simultaneous differential equations" needed to plan prices and the allocation of resources. If socialistic planning is to rely on the

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[29]Mises, *Human Action*, p. 696. Also see Salerno, "Mises as Social Rationalist," pp. 46–47ff.

[30]Kirzner apparently believes that Mises's concentration on entrepreneurship in his *Human Action* discussion of socialism demonstrates that Mises had gone over to the Hayek position. Kirzner seems to overlook the vast difference between Mises's forecasting and appraisement view of entrepreneurship and his own "alertness" doctrine, which totally leaves out the possibility of entrepreneurial loss.

Pareto-Barone equations, then how will all of them be known, especially in a world of necessarily changing data of values, resources, and technology?

Lionel Robbins began this equation-difficulty approach in his study of the 1929 depression, *The Great Depression*. Conceding, with Mises, that the planners could determine consumer preferences by allowing a market in consumer goods, Robbins correctly added that the socialist planners would also have to "know the relative efficiencies of the factors of production in producing all the possible alternatives." Robbins then unfortunately added:

> On paper we can conceive this problem to be solved by a series of mathematical calculations. We can imagine tables to be drawn up expressing the consumers' demands. . . . And we can conceive technical information giving us the productivity . . . which could be produced by each of the various possible combinations of the factors of production. On such a basis a system of simultaneous equations could be constructed whose solution would show the equilibrium distribution of factors and the equilibrium production of commodities.
>
> But in practice this solution is quite unworkable. It would necessitate the drawing up of millions of equations on the basis of millions of statistical tables based on many more millions of individual computations. By the time the equations were solved, the information on which they were based would have become obsolete and they would need to be calculated anew.[31]

While Robbins's strictures about changes in data were and still are true enough, they helped divert the emphasis from Mises's even-if-static and full-knowledge calculation approach, to Hayek's emphasis on uncertainty and change. More important, they gave rise to the general myth that Robbins's strictures against socialism, unlike Mises's, were only "practical" in the sense of not being able to calculate all these simultaneous equations. Furthermore, in the concluding essay in his *Collectivist Economic Planning*, Hayek set forth all the reasons why the planners could not know essential data, one of which is that they would have to solve "hundreds of thousands" of unknowns. But

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[31]Lionel Robbins, *The Great Depression* (New York: Macmillan, 1934), p. 151.

> this means that, at each successive moment, every one of the decisions would have to be based on the solution of an equal number of simultaneous differential equations, a task which, with any of the means known at present, could not be carried out in a lifetime. And yet these decisions would . . . have to be made continuously.[32]

It is fascinating to note the twists and turns in Oskar Lange's reaction to the equation-solving argument. In his 1936 article, which was long considered the last word on the subject, Lange ridiculed the very terms of the problem. Adopting his "quasi-market" socialist approach, and ignoring the crucial Misesian problem of the necessary absence of any market in land or capital, Lange simply stated that there is no need for planners to worry about these equations, since they would be "solved" by the socialist market:

> Neither would the Central Planning Board have to solve hundreds of thousands . . . or millions . . . of equations. The only "equations" which would have to be "solved" would be those of the consumers and the managers of production plants. These are exactly the same "equations" which are solved in the present economic system and the persons who do the "solving" are the same also. Consumers . . . and managers . . . "solve" them by a method of trial and error. . . . And only few of them have been graduated in higher mathematics. Professor Hayek and Professor Robbins themselves "solve" at least hundreds of equations daily, for instance, in buying a newspaper or in deciding to take a meal in a restaurant, and presumably they do not use determinants or Jacobians for that purpose.[33]

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[32]F.A. Hayek, "The Present State of the Debate," in Hayek, *Collectivist Economic Planning*, p. 212.

[33]Oskar Lange, "On the Economic Theory of Socialism, Part One," p. 67. The Norwegian economist and defender of Mises's position, Trygve Hoff, commented that "Quite apart from the fact that the equations the central authority would have to solve are of quite a different nature to those of the private individual, the latter tend to solve themselves automatically, which Dr. Lange must admit the former do not." Hoff, *Economic Calculation in the Socialist Society*, pp. 221–22. This excellent book on the socialist calculation controversy was originally published in Norwegian in 1938. In contrast to Bergson's almost contemporaneous survey article, Hoff's English-language translation, published in 1949 in Britain but not in the United States, sank without a trace.

Thus, the orthodox neoclassical economic establishment had settled the calculation dispute with Lange-Lerner the acclaimed winner. Accordingly, when the end of World War II brought communism/socialism to his native Poland, Professor Oskar Lange left the plush confines of the University of Chicago to play a major role in bringing his theories to bear on the brave new world of socialist Poland. Lange became Polish ambassador to the United States, then Polish delegate to the United Nations Security Council, and finally chairman of the Polish Economic Council. And yet not once in this entire period or later, did Poland—or any other communist government, for that matter—attempt to put into practice anything remotely like Lange's fictive accounting-type, play-at-market socialism. Instead, they all put into effect the good old Stalinist command-economy model.

It did not take long for Oskar Lange to adjust to the persistence of the Stalinist Model. Indeed, it turns out that Lange, in post-war Poland, argued strongly for the historical necessity of the persistence of the Stalinist model as opposed to his own market socialism. Arguing against his own quasi-decentralized solution, Lange, in 1958, revealed that "in Poland, we had some discussions whether such a period of highly centralized planning and management was historical necessity or a great political mistake. Personally, I hold the view that it was a historical necessity."

Why? Lange now claimed:

(a) that the "very process of the social revolution which liquidates one social system and establishes another requires centralized disposal of resources by the new revolutionary state, and consequently centralized management and planning."

(b) second, in underdeveloped countries—and which socialist country was not underdeveloped?—"Socialist industrialization, and particularly very rapid industrialization which was necessary in the first socialist countries, particularly in the Soviet Union . . . requires centralized disposal of resources." Soon, however, Lange promised, the dialectic of history will require the socialist government to organize quasi-market, decentralized decision-making within the overall plan.[34]

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[34]Oskar Lange, "The Role of Planning in Socialist Economy," in *The Political Economy of Socialism* (1958) in M. Bornstein, ed., *Comparative Economic Systems*, rev. ed. (Homewood, Ill.: Richard D. Irwin, 1969), pp. 170–71.

Shortly before his death in 1965, however, Oskar Lange, in his neglected last word on the socialist calculation debate, implicitly revealed that his socialist-market "solution" had been little more than a hoax, to be jettisoned quickly when he indeed saw a way for the Planning Board to solve all those hundreds of thousands or millions of simultaneous equations! Strangely gone was his gibe that everyone "solves equations" every day without having to do so formally. Instead, technology had now supposedly come to the rescue of the Planning Board! As Lange put it:

> Were I to rewrite my essay ["On the Economic Theory of Socialism"] today my task would be much simpler. My answer to Hayek and Robbins would be: so what's the trouble? Let us put the simultaneous equations on an electronic computer and we shall obtain the solution in less than a second. The market process with its cumbersome *tatonnements* appears old-fashioned. Indeed, it may be considered as a computing device of the pre-electronic age.[35]

Indeed, Lange claims that the computer is superior to the market, because the computer can perform long-range planning far better, since it somehow already knows "future shadow prices" which markets cannot seem to obtain.

Lange's naive enthusiasm for the magical planning qualities of the computer in its early days can only be considered a grisly joke to the economists and the people in the socialist countries who have seen their economies go inexorably from bad to far worse despite the use of computers. Lange apparently never became familiar with the computer adage, GIGO ("garbage in, garbage out"). Nor could be have become familiar with the recent estimate of a top Soviet economist that, even assuming that the planning board and its computers could learn the correct data, it would take even the current generation of computers 30,000 years to process the information and allocate the resources.[36]

But there is a more important flaw in Lange's last article than his naivete about the magical powers of the then-new technology of the

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[35]Oskar Lange, "The Computer and the Market," in A. Nove and D. Nuti, eds., *Socialist Economics* (London: Penguin Books, 1972), pp. 401–02.

[36]Yuri M. Maltsev, "Soviet Economic Reform: An Inside Perspective," *The Freeman* (March 1990).

computer. His eagerness to embrace a way of solving those equations he earlier had claimed didn't *need* conscious solving, demonstrates that he had been disingenuous in claiming that his pseudo-market trial-and-error method would provide a facile way for the socialist society to solve the calculation problem.

Socialist Impossibility and the Argument from Existence

Ever since 1917, or at least since Stalin's great leap forward into socialism in the early 1930s, the defenders of the possibility of socialism against Mises's strictures had one final, clinching, fallback argument. When all the arguments over general equilibrium or equations or entrepreneurship or Walrasian *tatonnements* or the command economy or pseudo-markets had been hashed over, the defenders of socialism could simply fall back on one point: Well, socialism exists, doesn't it? When all is said and done, it exists, and therefore it must be, for one reason or another, possible. Mises must clearly be wrong, even if the "practical" arguments of Hayek or Robbins, arguments of mere degrees of efficiency, need to be soberly considered. At the end of his celebrated survey essay on socialist economics Professor Abram Bergson put the point starkly:

> there can hardly be any room for debate: of course, socialism can work. On this, Lange certainly is convincing. If this is the sole issue, however, one wonders whether at this stage such an elaborate theoretic demonstration is in order. After all, the Soviet planned economy has been operating for thirty years. Whatever else may be said of it, it has not broken down.[37]

In the first place, this triumphal conclusion now rings hollow, since the economies of the Soviet Union and the other socialist bloc countries have now manifestly broken down. And now it also turns out that the Soviet GNP and production figures that Bergson, the CIA, and other Sovietologists have been taking at face value for decades have been nothing but a pack of lies, designed to deceive not the United States, but the Soviet managers' own ruling elite. Even now, Western Sovietologists are reluctant to believe the Soviet economists who are finally trying to tell them the truth about these alleged and much revered data.

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[37]Bergson, "Socialist Economics," p. 447.

But apart from all that, this sort of seemingly decisive empiricist counter to the Misesian critique reveals the perils of using allegedly simple and brute "facts" to rebut theory in the sciences of human action. For why must we assume that the Soviet Union and the Eastern European countries ever really enjoyed full and complete socialism? There are many reasons to believe that, try as they might, the communist rulers were never able to impose total socialism and central planning. For one thing, it is now known that the entire Soviet economy and society has been shot through with a vast network of black markets and evasions of controls, fueled by a pervasive system of bribery known as *blat* to allow escape from those controls. Managers who could not meet their annual production quotas were approached by illegal entrepreneurs and labor teams to help them meet the quotas and get paid off the books. And black markets in foreign exchange have long been familiar to every tourist. Long before the Eastern European collapse of communism, these countries stopped trying to stamp out their black markets in hard currency, even though they were blatantly visible in the streets of Warsaw, Budapest, and Prague. Without uncontrolled black markets fueled by bribery, the communist economies may well have collapsed long ago.[38] This historical point has also been bolstered by Michael Polanyi's "span of control" theory, which denies the possibility of effective central planning from a rather different viewpoint than Mises's.[39]

But the decisive rebuttal has, once again, been levelled by Mises in *Human Action*: the Soviet Union and Eastern European economies were not fully socialist because they were, after all, islands in a world capitalist market. The communist planners were therefore able, albeit clumsily and imperfectly, to use prices set by world markets as indispensable guidelines for the pricing and allocation of capital resources. As Mises pointed out:

> People did not realize that these were not isolated social systems. They were operating in an environment in which the price system

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[38]One source on this pervasive system in the Soviet Union is Konstantin M. Simis, *USSR: The Corrupt Society* (New York: Simon and Schuster, 1982).

[39]Michael Polanyi, *The Logic of Liberty* (Chicago: University of Chicago Press, 1951), pp. 111–37 and passim.

> still worked. They could resort to economic calculation on the ground of the prices established abroad. Without the aid of these prices their actions would have been aimless and planless. Only because they were able to refer to these foreign prices were they able to calculate, to keep books, and to prepare their much talked about plans.[40]

Mises's insight was confirmed as early as the mid-1950s, when the British economist Peter Wiles visited Poland, where Oskar Lange was helping to plan Polish socialism. Wiles asked the Polish economists how they planned the economic system. As Wiles reported:

> What actually happens is that "world prices," i.e., *capitalist world prices*, are used in all intra-[Soviet] bloc trade. They are translated into rubles . . . entered into bilateral clearing accounts.

Wiles then asked the Polish communist planners the crucial question. Since the Poles were, as good Marxist-Leninists, presumably committed to the triumph, as soon as possible, of world-wide socialism, Wiles asked: "What would you do if there were no capitalist world" from which you could obtain all those crucial prices? The Polish planners' rather cynical answer: "We'll cross that bridge when we come to it." Wiles added that "In the case of electricity the bridge is already under their feet: there has been great difficulty in pricing it since there is no world market."[41] But fortunately for the world and for the Polish planners themselves, they were never truly forced to cross that bridge.

EPILOGUE: THE END OF SOCIALISM AND MISES'S STATUE

In his supposedly definitive article of 1936 vindicating economic calculation under socialism, Oskar Lange delivered a once-famous gibe at Ludwig von Mises. Lange began his essay by ironically hailing Mises's services to socialism:

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[40]Mises, *Human Action*, pp. 698–99.

[41]Peter J.D. Wiles, "Changing Economic Thought in Poland," *Oxford Economic Papers* 9 (June 1957): 202–03. Also see Murray N. Rothbard, "Ludwig von Mises and Economic Calculation Under Socialism," in Lawrence Moss, *The Economics of Ludwig von Mises*, pp. 67–77; included in this volume as chapter 44.

> Socialists have certainly good reason to be grateful to Professor Mises, the great *advocatus diaboli* of their cause. For it was his powerful challenge that forced the socialists to recognize the importance of an adequate system of economic accounting . . . the merit of having caused the socialists to approach this problem systematically belongs entirely to Professor Mises.

Lange then went on to taunt Mises:

> Both as an expression of recognition for the great service rendered by him and as a memento of the prime importance of sound economic accounting, a statue of Professor Mises ought to occupy an honorable place in the great hall of the Ministry of Socialization or of the Central Planning Board of the socialist state.

Lange went on to say that "I am afraid that Professor Mises would scarcely enjoy what seemed the only adequate way to repay the debt of recognition incurred by the socialists." For one thing, Lange concluded, to complete Mises's discomfiture

> a socialist teacher might invite his students in a class on dialectical materialism to go and look at the statue, in order to exemplify the Hegelian *List der Vernuft* [cunning of Reason] which made even the staunchest of *bourgeois* economists unwittingly serve the proletarian cause.[42]

Curiously enough, Lange, during his years as socialist planner in Poland, never got around to erecting the statue to Mises at the Ministry of Socialization in Warsaw. Perhaps socialist planning was not successful enough to accord Mises that honor—or perhaps there were not enough resources to build the statue. In any case, the opportunity has been lost. The countries of Eastern Europe now stand in the rubble wrought by what used to be called in the 1930s "the great socialist experiment." Emerging gloriously out of the rubble of the collapse of socialism are a myriad of Misesian economists, to whom socialism is little more than a grisly joke. Even as early as the 1960s it was a common quip among economists that, at international economic conferences, "the Western economists talk about the glories of planning while the Eastern economists talk about the virtues of the free market." Now Misesian economists are springing

[42]Lange, "The Economic Theory of Socialism," p. 53.

out of the ruins of socialism in Poland, Lithuania, Czechoslovakia, Hungary, Yugoslavia (especially Croatia and Slovenia) and the Soviet Union. Neither socialist planning nor Marxism-Leninism hold any charms for the economists of the once-socialist nations.

In all of these countries, the giant statues of Lenin are being unceremoniously toppled from the public squares. Whether or not the coming free societies of Eastern Europe choose to replace them with statues of Ludwig von Mises, as the prophet of their liberation, one thing seems certain: there will be no statues erected to Oskar Lange in Cracow or Warsaw. It is hard to see how even the cunning of Reason and the Hegelian dialectic can make Lange out to be a prophet or an important contributor to the *laissez-faire* Polish economy of the future. Perhaps the closet approach was a bitter quip pervading Eastern Europe during the revolutionary year of 1989: "Communism can be defined as the longest route from capitalism to capitalism."

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The Myth of Free Banking in Scotland

"Free Banking" in Scotland

Professor White's *Free Banking in Britain* has already had a substantial impact on the economics profession. The main influence has been exerted by one of the book's major themes: the "wonderful" results of the system of free banking in Scotland, a system that allegedly prevailed from 1716 (or 1727) until suppressed by the Peel Act in 1845.[1] White's Scottish free-banking thesis consists of two crucial propositions. The first is that Scottish banking, in contrast to English, was free during this era; that while the English banking system was dominated by the Bank of England, pyramiding their notes and deposits on top of the liabilities of that central bank, the Scottish system, in stark contrast, was free of the Bank of England. In White's words, Scotland "rather maintained a system of 'each tub on its own bottom.' Each bank held onto its own specie reserves."[2]

The second part of the syllogism is that this free system in some way worked much better than the English. Hence, the triumphant conclusion: that free banking in Scotland was far superior to centrally controlled banking in England. White claims that the salutary effects of free banking in Scotland have been long forgotten, and he raises the hope that current public policy will heed this lesson.

Originally appeared in *The Review of Austrian Economics* 2, no. 1 (1988): 229–45. This is a review of Lawrence H. White, *Free Banking in Britain: Theory, Experience, and Debate, 1800–1845* (Cambridge: Cambridge University Press, 1984).

[1]On "wonderful" results, see White, *Free Banking*, p. xiii.

[2]Ibid., p. 43.

The influence of White's thesis is remarkable considering the paucity of his research and the thinness of his discussion. In a brief book of less than two hundred pages, only 26 are devoted to the Scottish question, and White admits that he relies for facts of Scottish banking almost solely on a few secondary sources.[3] And yet, White's thesis on Scottish banking has been hastily and uncritically accepted by many diverse scholars, including the present writer.[4] This has been particularly unfortunate because, as I shall demonstrate, both parts of Professor 'White's syllogism are wrong. That is, the Scottish banks were (1) not free—indeed, they too pyramided upon the Bank of England—and (2) not surprisingly, they worked no better than the English banks.

Let me take the second part of Professor White's syllogism first. What is his basis for the conclusion that the Scottish banks worked significantly better than the English banks? Remarkably, there is not a word that they were significantly less inflationary; indeed, there is no attempt to present any data on the money supply, the extent of bank credit, or prices in England and Scotland during this period. White does say that the Scottish banks were marked by greater "cyclical stability," but it turns out that he does not mean that they generated less inflation in booms or less contraction during recessions. By cyclical stability, 'White means solely that the extent of Scottish bank failures was less than in England. Indeed, this is Professor White's *sole* evidence that Scottish banking worked better than English.

But why should lack of bank failure be a sign of superiority? On the contrary, a dearth of bank failure should rather be treated with suspicion, as witness the drop of bank failures in the United States

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[3]Most of the White book, indeed, is devoted to another question entirely—a discussion and analysis of free-banking theorists in Britain during the first half of the nineteenth century. I shall deal with that part of his book subsequently.

[4]Murray N. Rothbard, *The Mystery of Banking* (New York: Richardson and Snyder, 1983), pp. 185–87. Also see the report on a forthcoming *Journal of Monetary Economics* article by Milton Friedman and Anna Jacobson Schwartz in *Fortune* (March 31, 1986): 163. I did have grave preliminary doubts about his Scottish thesis in an unpublished comment on Professor White's paper in 1981, but unfortunately, these doubts did not make their way into the *Mystery of Banking*.

since the advent of the FDIC. It might indeed mean that the banks are doing better, but at the expense of society and the economy faring worse. Bank failures are a healthy weapon by which the market keeps bank credit inflation in check; an absence of failure might well mean that that check is doing poorly and that inflation of money and credit is all the more rampant. In any case, a lower rate of bank failure can scarcely be accepted as any sort of evidence for the superiority of a banking system.

In fact, in a book that Professor White acknowledges to be the definitive history of Scottish banking, Professor Sydney Checkland points out that Scottish banks expanded and contracted credit in a lengthy series of boom-bust cycles, in particular in the years surrounding the crises of the 1760s, 1772, 1778, 1793, 1797, 1802–03, 1809–10, 1810–11, 1818–19, 1825–26, 1836–37, 1839, and 1845–47.[5] Apparently, the Scottish banks escaped none of the destabilizing, cycle-generating behavior of their English cousins.

Even if free, then, the Scottish banking system worked no better than central-bank-dominated English banking. But I turn now to Professor White's central thesis on Scottish banking: that it, in contrast to English banking, was free and independent, with each bank resting on its own specie bottom. For Scottish banking to be "free," its banks would have to be independent of central banking, with each redeeming its notes and deposits on demand in its own reserves of gold.

From the beginning, there is one embarrassing and evident fact that Professor White has to cope with: that "free" Scottish banks suspended specie payment when England did, in 1797, and, like England, maintained that suspension until 1821. Free banks are not supposed to be able to, or want to, suspend specie payment, thereby violating the property rights of their depositors and noteholders, while they themselves are permitted to continue in business and force payment upon *their* debtors.

White professes to be puzzled at this strange action of the Scottish banks. Why, he asks, did they not "remain tied to specie and let their currency float against the Bank of England note?" His puzzlement would vanish if he acknowledged an evident answer: that Scottish

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[5]Sydney G. Checkland, *Scottish Banking: A History, 1695–1973* (Glasgow: Collins, 1975).

banks were *not* free, that they were in no position to pay in specie, and that they pyramided credit on top of the Bank of England.[6] Indeed, the Scottish banks' eagerness for suspension of their contractual obligations to pay in specie might be related to the fact, acknowledged by White, that specie reserves held by the Scottish banks had averaged from 10 to 20 percent in the second half of the eighteenth century, but then had dropped sharply to a range of less than 1 to 3 percent in the first half of the nineteenth. Instead of attributing this scandalous drop to "lower costs of obtaining specie on short notice" or "lower risk of substantial specie outflows," White might realize that suspension meant that the banks would not have to worry very much about specie at all.[7]

Professor Checkland, indeed, presents a far more complete and very different account of the suspension crisis. It began, not in 1797, but four years earlier, in the banking panic that struck on the advent of the war with France. Representatives of two leading Scottish banks immediately went to London, pleading for government intervention to bail them out. The British government promptly complied, issuing Treasury bills to "basically sound" banks, of which £400,000 went to Scotland. This bailout, added to the knowledge that the government stood ready to do more, allayed the banking panic.

When the Scottish banks followed the Bank of England in suspending specie payments in 1797, White correctly notes that the suspension was illegal under Scottish law, adding that it was "curious" that their actions were not challenged in court. Not so curious, if we realize that the suspension obviously had the British government's tacit consent. Emboldened by the suspension, and by the legality of bank issue of notes under £1 after 1800, a swarm of new banks entered the field in Scotland, and Checkland informs us that the circulation of bank paper in Scotland doubled from 1793 to 1803.

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[6]In a footnote, Professor White grudgingly hints at this point, while not seeming to realize the grave implications of the facts for his own starry-eyed view of Scottish banking. Note, then, the unacknowledged implications of his hint that London was "Britain's financial centre," that the Scottish banks depended on funds from their correspondent banks and from sales of securities in London, and that Britain was an "optimal currency area." White, *Free Banking*, p. 46 and 12*n*.

[7]White, *Free Banking*, pp. 43–44, 9*n*.

Before the Scottish banks suspended payment, all Scottish bank offices were crowded with depositors demanding gold and small-note holders demanding silver in payment. They were treated with contempt and loathing by the bankers, who denounced them as the "lowest and most ignorant classes" of society, presumably for the high crime of wanting their money out of the shaky and inherently bankrupt banking system. Not only the bankers, but even elite merchants from Edinburgh and throughout Scotland complained, in 1764, of "obscure people" demanding cash from the banks, which they then had the effrontery to send to London and profit from the rate of exchange.[8] Particularly interesting, for more than just the twenty-four years of the British suspension, was the reason the Scottish banks gave for turning to suspension of specie payments. As Checkland summed up, the Scottish banks were "most gravely threatened, for the inhibitions against demanding gold, so carefully nurtured in the customers of Scottish banks, was rapidly breaking down."[9]

Now I come to the nub: that, as a general rule, and not just during the official suspension period, the Scottish banks redeemed in specie in name only; that, in substance, depositors and note holders generally could not redeem the banks' liabilities in specie. The reason that the Scottish banks could afford to be outrageously inflationary, i.e., keep their specie reserves at a minimum, is that, in practice, they did not really have to pay.

Thus, Professor Checkland notes that, long before the official suspension, "requests for specie [from the Scottish banks] met with disapproval and almost with charges of disloyalty." And again:

> The Scottish system was one of continuous partial suspension of specie payments. No one really expected to be able to enter a Scots bank . . . with a large holding of notes and receive the equivalent immediately in gold or silver. They expected, rather, an argument, or even a rebuff. At best they would get a little specie and perhaps bills on London. If they made serious trouble, the matter would be noted and they would find the obtaining of credit more difficult in future.[10]

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[8]See Charles A. Malcolm, *The Bank of Scotland, 1695–1945* (Edinburgh: R. & R. Clark, n.d.).

[9]Checkland, *Scottish Banking*, p. 221.

[10]Ibid., pp. 184–85.

At one point, during the 1750s, a bank war was waged between a cartel of Glasgow banks, which habitually redeemed in London bills rather than specie, and the banks in Edinburgh. The Edinburgh banks set up a private Glasgow banker, Archibald Trotter, with a supply of notes on Glasgow banks, and Trotter demanded that the banks of his city redeem them, as promised, in specie. The Glasgow banks delayed and dragged their feet, until Trotter was forced to file a law suit for damages for "vexatious delay" in honoring his claims. Finally, after four years in court, Trotter won a nominal victory, but could not get the law to force the Glasgow banks to pay up. *A fortiori*, of course, the banks were not shut down or their assets liquidated to pay their wilfully unpaid debts.

As we have seen, the Scottish law of 1765, providing for summary execution of unredeemed bank notes, remained largely a dead letter. Professor Checkland concludes that "this legally impermissible limitation of convertibility, though never mentioned to public inquiries, contributed greatly to Scottish banking success."[11] No doubt. Of one thing we can be certain: this condition definitely contributed to the paucity of bank failures in Scotland.

The less-than-noble tradition of nonredeemability in Scottish banks continued, unsurprisingly, after Britain resumed specie payments in 1821. As the distinguished economic historian Frank W. Fetter put it, writing about Scotland:

> Even after the resumption of payments in 1821 little coin had circulated; and to a large degree there was a tradition, almost with the force of law, that banks should not be required to redeem their notes in coin. Redemption in London drafts was the usual form of paying noteholders. There was a core of truth in the remark of an anonymous pamphleteer [writing in 1826] "Any southern fool [from south of the Scottish-English border] who had the temerity to ask for a hundred sovereigns, might, if his nerves supported him through the cross examination at the bank counter, think himself in luck to be hunted only to the border."[12]

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[11]Ibid., p. 186.

[12]Frank W. Fetter, *Development of British Monetary Orthodoxy, 1797–1875* (Cambridge, Mass.: Harvard University Press, 1965), p. 122. The anonymous pamphlet was *A Letter to the Right Hon. George Canning* (London, 1826), p. 45. Also see Charles W. Munn, *The Scottish Provincial*

If gold and silver were scarcely important sources of reserves or of grounding for Scottish bank liabilities, what was? Each bank in Scotland stood not on its own bottom, but on the very source of aid and comfort dear to its English cousins—the Bank of England. As Checkland declares: "the principal and ultimate source of liquidity [of the Scottish banks] lay in London, and, in particular, in the Bank of England."[13]

I conclude that the Scottish banks, in the eighteenth and first half of the nineteenth centuries, were neither free nor superior, and that the thesis to the contrary, recently revived by Professor White, is but a snare and a delusion.

THE FREE-BANKING THEORISTS RECONSIDERED

The bulk of *Free Banking in Britain* is taken up, not with a description or analysis of Scottish banking, but with analyzing the

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Banking Companies, 1747–1864 (Edinburgh: John Donald Pubs., 1981), pp. 140ff.

A similar practice was also prevalent at times in the "free-banking" system in the United States. After the "resumption" of 1817, obstacles and intimidation were often the fate of those who tried to ask for specie for their notes. In 1821, the Philadelphia merchant, economist and state Senator Condy Raguet perceptively wrote to David Ricardo:

> You state in your letter that you find it difficult to comprehend why persons who had a right to demand coin from the Banks in payment of their notes, so long forebore to exercise it. This no doubt appears paradoxical to one who resides in a country where an act of parliament was necessary to protect a bank, but the difficulty is easily solved. The whole of our population are either stockholders of banks or in debt to them. It is not in the interest of the first to press the banks and the rest are afraid. This is the whole secret. An independent man, who was neither a stockholder or debtor, who would have ventured to compel the banks to do justice, would have been persecuted as an enemy of society. (Quoted in Murray N. Rothbard, *The Panic of 1819: Reactions and Policies* [New York: Columbia University Press, 1962], pp. 10–11)

There is unfortunately no record of Ricardo's side of the correspondence.

[13]Checkland, *Scottish Banking*, p. 432. Also see S.G. Checkland, "Adam Smith and the Bankers," in A. Skinner and T. Wilson, eds., *Essays on Adam Smith* (Oxford, England: Clarendon Press, 1975), pp. 504–23.

free-banking controversies in the famous monetary debates of the two decades leading up to Peel's Act of 1844. The *locus classicus* of discussion of free versus central banking in Europe is the excellent work by Vera C. Smith, *The Rationale of Central Banking*.[14] While Professor White makes a contribution by dealing in somewhat more depth with the British controversialists of the era, he unfortunately takes a giant step backward from Miss Smith in his basic interpretation of the debate. Miss Smith realized that the Currency School theorists were hard-money men who saw the evils of bank credit inflation and who tried to eliminate them so that the money supply would as far as possible be equivalent to the commodity standard, gold or silver. On the other hand, she saw that the Banking School theorists were inflationists who favored bank credit expansion in accordance with the "needs of trade." More importantly, Miss Smith saw that for both schools of thought, free banking and central banking were contrasting means to arrive at their different goals. As a result, she analyzes her monetary writers according to an illuminating 2 x 2 grid, with "Currency School" and "Banking School" on one side and "free banking" and "central banking" on the other.

In *Free Banking in Britain*, on the other hand, Professor White retreats from this important insight, misconceiving and distorting the entire analysis by separating the theorists and writers into three distinct camps, the Currency School, Banking School, and Free-Banking School. By doing so, he lumps together analysis and policy conclusions, and he conflates two very distinct schools of free bankers: (1) those who wanted free banking in order to promote monetary inflation and cheap credit and (2) those who, on the contrary, wanted free banking in order to arrive at hard, near-100 percent specie money. The Currency School and Banking School are basically lumped by White into one group: the pro-central-banking faction. Of the two, White is particularly critical of the Currency

[14]Vera C. Smith, *The Rationale of Central Banking* (London: P.S. King and Sons, 1936). This book was a doctoral dissertation under F.A. Hayek at the London School of Economics, for which Miss Smith made use of Hayek's notes on the subject. See Pedro Schwartz, "Central Bank Monopoly in the History of Economic Thought: A Century of Myopia in England," in Pascal Salin, ed., *Currency Competition and Monetary Union* (The Hague: Martinus Nijhoff, 1984), pp. 124–25.

School, which supposedly all wanted central banks to levy "arbitrary" restrictions on commercial banks. While White disagrees with the pro-central-banking aspects of the Banking School, he is clearly sympathetic with their desire to inflate bank credit to supply the "needs of trade." In that way, White ignores the substantial minority of Currency School theorists who preferred free banking to central bank control as a way of achieving 100 percent specie money. In addition, he misunderstands the nature of the inner struggles to find a correct monetary position by *laissez-faire* advocates, and he ignores the vital differences between the two wings of free bankers.

On the Currency School, it is true that most currency men believed in 100 percent reserves issued either by a central bank monopoly of note issue or by an outright state bank monopoly. But, as Smith pointed out, the aim of the currency men was to arrive at a money supply equivalent to the genuine free market money of a pure specie commodity (gold or silver). And furthermore, since currency men tended to be *laissez-faire* advocates distrustful of state action, a substantial minority advocated free banking as a better political alternative for reaching the desired 100 percent gold money than trusting in the benevolence of the state. As Smith notes, Ludwig von Mises was one of those believing that free banking in practice would approximate a 100 percent gold or silver money. Free banking and 100 percent metallic money advocates in the nineteenth century included Henri Cernuschi and Victor Modeste in France, and Otto Hübner in Germany.[15] Mises's approach was very similar to that of Otto Hübner, a leader of the German Free Trade Party. In his multivolume work, *Die Banken* (1854), Hübner states that his ideal preference would have

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[15]After quoting favorably Thomas Tooke's famous dictum that "free trade in banking is free trade in swindling," Mises adds:

> However, freedom in the issuance of banknotes would have narrowed down the use of banknotes considerably if it had not entirely suppressed it. It was this idea which Cernuschi advanced in the hearings of the French Banking Inquiry on October 24, 1865: "I believe that what is called freedom of banking would result in a total suppression of banknotes in France. I want to give everybody the right to issue banknotes so that nobody should take banknotes any longer." (Ludwig von Mises, *Human Action: A Treatise on Economics*, 3rd rev. ed. [Chicago: Henry Regnery, 1966], p. 446)

been a state-run monopoly 100 percent specie reserve bank, along the lines of the old Banks of Amsterdam and Hamburg. But the state cannot be trusted. To quote Vera Smith's paraphrase of Hübner's position:

> If it were true that the State could be trusted always only to issue notes to the amount of its specie holdings, a State-controlled note issue would be the best system, but as things were, a far nearer approach to the ideal system was to be expected from free banks, who for reasons of self-interest would aim at the fulfilment of their obligations.[16]

Henri Cernuschi desired 100 percent specie money. He declared that the important question was not monopoly note issue versus free banking, but whether or not bank notes should be issued at all. His answer was no, since "they had the effect of despoiling the holders of metallic money by depreciating its value." All bank notes, all fiduciary media, should be eliminated. An important follower of Cernuschi's in France was Victor Modeste, whom Vera Smith erroneously dismisses as having "the same attitude" as Cernuschi's. Actually, Modeste did not adopt the free-banking policy conclusion of his mentor. In the first place, Modeste was a dedicated libertarian who frankly declared that the state is "the master . . . the obstacle, the enemy" and whose announced goal was to replace all government by "self-government." Like Cernuschi and Mises, Modeste agreed that freely competitive banking was far better than administrative state control or regulation of banks. And like Mises a half-century later (and like most American currency men at the time), Modeste realized that demand deposits, like bank notes beyond 100

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[16]Smith, *Rationale*, p. 101. Mises, after endorsing the idea of 100 percent reserves to gold of banknotes and demand deposits (the latter unfortunately overlooked by the Currency School in Britain), decided against it because of the "drawbacks inherent in every kind of government interference with banking." And again:

> Government interference with the present state of banking affairs could be justified if its aim were to liquidate the unsatisfactory conditions by preventing or at least seriously restricting any further credit expansion. In fact the chief objective of present-day government interference is to intensify further credit expansion. (Mises, *Human Action*, pp. 443, 448)

percent reserves, are illicit, fraudulent, and inflationary as well as being generators of the business cycle. Demand deposits, like bank notes, constitute "false money." But Modeste's policy conclusion was different. His answer was to point out that "false" demand liabilities that pretend to be but cannot be converted into gold are in reality tantamount to fraud and embezzlement. Modeste concludes that false titles and values, such as false claims to gold under fractional-reserve banking, are at all times

> equivalent to theft; that theft in all its forms everywhere deserves its penalties . . . that every bank administrator . . . must be warned that to pass as value where there is no value . . . to subscribe to an engagement that cannot be accomplished . . . are criminal acts which should be relieved under the criminal law.[17]

The answer to fraud, then, is not administrative regulation, but prohibition of tort and fraud under general law.[18]

For Great Britain, an important case of currency men not discussed by Smith are the famous *laissez-faire* advocates of the Manchester School. Hobbled by his artificial categories, Professor White can only react to them in total confusion. Thus, John Benjamin Smith, the powerful president of the Manchester Chamber of Commerce, reported to the chamber in 1840 that the economic and financial crisis of 1839 had been caused by the Bank of England's contraction, following inexorably upon its own earlier "undue expansion of the currency." Simply because Smith condemned Bank of England policy, White chides Marion Daugherty for putting J.B. Smith into the ranks of the Currency School rather than the free bankers. But then, only four pages later, White laments the parliamentary

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[17]Victor Modeste, "Le Billet des banques d'emission est-il fausse monnaie?" [Are bank notes false money?] *Journal des economistes* 4 (October 1866): 77–78 (translation mine). Also see Henri Cernuschi, *Contre le billet de banque* (1866).

[18]This policy conclusion is completely consistent with Mises's objective: "What is needed to prevent any further credit expansion is to place the banking business under the general rules of commercial and civil laws compelling every individual and firm to fulfill all obligations in full compliance with the terms of the contract." Mises, *Human Action*, p. 443.

For more on fractional-reserve banking as embezzlement, see Rothbard, *Mystery of Banking*, pp. 91–95.

testimony during the same year of Smith and Richard Cobden as revealing "the developing tendency for adherents of *laissez-faire*, who wished to free the currency from discretionary management, to look not to free banking but to restricting the right of issue to a rigidly rule-bound state bank as the solution." So what were Smith, Cobden, and the Manchesterites? Were they free bankers (p. 71) or—in the same year—currency men (p. 75), or what? But how could they have been currency men, since White has defined the latter as people who want total power to accrue to the Bank of England? White avoids this question by simply not listing Smith or Cobden in his table of Currency-banking–Free-Banking School adherents (p. 135).[19]

White might have avoided confusion if he had not, as in the case of Scottish banking, apparently failed to consult Frank W. Fetter's *Development of British Monetary Orthodoxy*, although the book is indeed listed in his bibliography. Fetter notes that Smith, in his parliamentary testimony, clearly enunciates the currency principle. Smith, he points out, was concerned about the fluctuations of the commercial banks as well as of the Bank of England and flatly declared his own Currency School objective: "it is desirable in any change in our existing system to approximate as nearly as possible to the operation of a metallic currency; it is desirable also to divest the plan of all mystery, and to make it so plain and simple that it may be easily understood by all."[20] Smith's proposed solution was the scheme derived from Ricardo, of creating a national bank for purposes of issuing 100 percent reserve bank notes.

The same course was taken, in his testimony, by Richard Cobden, the great leader of the Manchester *laissez-faire* movement. Attacking the Bank of England and any idea of discretionary control over the currency, whether by the Bank or by private commercial banks, Cobden declared:

> I hold all idea of regulating the currency to be an absurdity; the very terms of regulating the currency and managing the currency I

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[19]White, *Free Banking*, pp. 71, 75, 135. Also see Marion R. Daugherty, "The Currency-Banking controversy, Part I," *Southern Economic Journal* 9 (October 1942): 147.

[20]Quoted in Fetter, *Development*, p. 176.

> look upon to be an absurdity; the currency should regulate itself; it must be regulated by the trade and commerce of the world; I would neither allow the Bank of England nor any private banks to have what is called the management of the currency. . . . I would never contemplate any remedial measure, which left it to the discretion of individuals to regulate the amount of currency by any principle or standard whatever.[21]

In short, the fervent desire of Richard Cobden, along with other Manchesterians and most other Currency School writers, was to remove government or bank manipulation of money altogether and to leave its workings solely to the free-market forces of gold or silver. Whether or not Cobden's proposed solution of a state-run bank was the proper one, no one can deny the fervor of his *laissez-faire* views or his desire to apply them to the difficult and complex case of money and banking.

Let me now return to Professor White's cherished free-banking writers and to his unfortunate conflation of the very different hard-money and soft-money camps. The Currency School and the free bankers were both launched upon the advent of the severe financial crisis of 1825, which, as usual, was preceded by a boom fueled by bank credit. The crisis brought the widespread realization that the simple return to the gold standard, as effected in 1821, was not enough and that something more had to be done to eliminate the instability of the banking system.[22]

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[21]Ibid.

[22]One measure of partial reform accomplished by the British government was the outlawing, in 1826, of small-denomination (under £5) bank notes (an edict obeyed by the Bank of England for over a century), which at least insured that the average person would be making most transactions in gold or silver coin. Even Adam Smith, the leading apologist for Scottish "free" banking, had advocated such a measure. But it is instructive to note, in view of Professor White's admiration for Scottish banking, that political pressure by the Scottish Tories gained the Scottish banks an exemption from this measure. The Tory campaign was led by the eminent novelist, Sir Walter Scott. Hailing the campaign, the spokesman for Scottish High Toryism, *Blackwood's Edinburgh Magazine*, published two articles on "The Country Banks and the Bank of England" in 1827–28, in which it wove together two major strains of archinflationism: going off the gold standard and praising the country banks. *Blackwood*'s also attacked the Bank of England as overly

Among four leading free-banking advocates of the 1820s and early 1830s—Robert Mushet, Sir John Sinclair, Sir Henry Brooke Parnell, and George Poulett Scrope—Professor White sees little difference. And yet they were split into two very different camps. The earlier writers, Mushet and Parnell, were hard money men. Mushet, a long-time pro–gold-standard "bullionist" and clerk at the Royal Mint, set forth a currency-principle–type of business cycle theory in 1826, pointing out that the Bank of England had generated an inflationary boom, which later had to be reversed into a contractionary depression. Mushet's aim was to arrive at the equivalent of a purely metallic currency, but he believed that free rather than central banking was a better way to achieve it. Once again, White's treatment muddies the waters. While admitting that Mushet took a Currency School approach toward purely metallic money, White still chooses to criticize Daugherty for classifying Mushet with the Currency School, since he opted for a free- rather than a central-banking method to achieve currency goals (p. 62*n*). The more prominent Parnell was also a veteran bullionist writer and Member of Parliament, who took a position very similar to Mushet's.[23]

Sir John Sinclair and George Poulett Scrope, however, were horses of a very different color. White admits that Sinclair was not a pure free-banking man, but he characteristically underplays Sinclair's

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restrictionist (!), thus helping to inaugurate the legend that the trouble with the bank was that it was too restrictive instead of being itself the major engine of monetary inflation. In contrast, the *Westminster Review*, the spokesman for James Mill's philosophic radicals, scoffed at the Scots for threatening "a civil war in defense of the privilege of being plundered" by the banking system. See Fetter, *Development*, pp. 123–24.

[23]Professor White has performed a valuable service in rescuing Parnell's work from obscurity. Parnell's tract of 1827 was attacked from a more consistent hard-money position by the fiery populist radical, William Cobbett. Cobbett averred that "ever since that hellish compound paper-money was understood by me, I have wished for the destruction of the accursed thing: I have applauded every measure that tended to produce its destruction, and censured every measure having a tendency to preserve it." He attacked Parnell's pamphlet for defending the actions of the country banks and for praising the Scottish system. In reply, Cobbett denounced the "Scottish monopolists" and proclaimed that "these ravenous Rooks of Scotland . . . have been a pestilence to England for more than two hundred years."

fervent lifelong views as being concerned with "preventing deflation" and calls Sinclair a "tireless promoter of agricultural interests" (p. 60 and note). In truth, Sinclair, a Scottish nobleman and agriculturist, was, all his life, a determined and fanatical zealot on behalf of monetary inflation and government spending. As soon as the pro-gold-standard, anti-fiat paper Bullion Committee Report was issued in 1810, Sir John wrote to Prime Minister Spencer Perceval urging the government to reprint his own three-volume proinflationist work, *History of the Public Revenues of the British* (1785–90), as part of the vital task of rebutting the Bullion Committee. "You know my sentiments regarding the importance of paper circulation," Sinclair wrote the Prime Minister, "which is in fact the basis of our prosperity." In fact, Sinclair's *Observations on the Report of the Bullion Committee*, published in September 1810, was the very first of many pamphlet attacks on the Bullion Report, most of them orchestrated by the British government.

When Britain went back to the gold standard in 1819–21, Sinclair, joining with the proinflationist and pro-fiat money Birmingham School, was one of the most energetic and bitter critics of resumption of specie payments. It is no wonder that Frank Fetter should depict Sinclair's lifelong enthusiasm: "that more money was the answer to all economic problems."[24] It is also no wonder that Sinclair should have admired the Scottish "free" banking system and opposed the currency principle. But one would have thought that Professor White would feel uncomfortable with Sinclair as his ally.

Another of Professor White's dubious heroes is George Poulett Scrope. While Scrope is also characterized as not a pure or mainstream free-banking man, his analysis is taken very seriously by White and is discussed numerous times. And he is mentioned prominently in White's table as a leading free banker. Scrope's inveterate inflationary bent is handled most gently by White: "Like Sinclair, he [Scrope] placed higher priority on combating deflation" (p. 82*n*). In fact, Scrope not only battled against the return to the gold standard

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[24]Fetter, *Development*, p. 22. Among his other sins, Sinclair, an indefatigable collector of statistics, in the 1790s published the twenty-one volume *A Statistical Account of Scotland* and actually introduced the words statistics and statistical into the English language.

in 1819–21, he was also the leading theorist of the fortunately small band of writers in Britain who were ardent underconsumptionists and proto-Keynesians. In his *Principles of Political Economy* (written in 1833, the same year as his major pro-free-banking tract), Scrope declared that any decline in consumption in favor of a "general increase in the propensity to save" would necessarily and "proportionately diminish the demand as compared with the supply, and occasion a general glut."

Let us now turn to the final stage of the Currency School—Banking School—free-banking controversy. The financial crisis of 1838–39 touched off an intensified desire to reform the banking system, and the controversy culminated with the Peel Acts of 1844 and 1845.

Take, for example, one of Professor White's major heroes, James William Gilbart. Every historian except White has included Gilbart among the members of the Banking School. Why does not Professor White? Despite White's assurance, for example, that the Free-Banking School was even more fervent than the Currency School in attributing the cause of the business cycle to monetary inflation, Gilbart held, typically of the Banking School, that bank notes simply expand and contract according to the "wants of trade" and that, therefore, issue of such notes, being matched by the production of goods, could not raise prices. Furthermore, the active causal flow goes from "trade" to prices to the "requirement" for more bank notes to flow into circulation.

Thus said Gilbart: "if there is an increase of trade without an increase of prices, I consider that more notes will be required to circulate that increased quantity of commodities; if there is an increase of commodities and an increase of prices also, of course, you would require a still greater amount of notes."[25] In short, whether prices rise or not, the supply of money must always increase! Putting aside the question of who the "you" is supposed to be in this quote, this is simply rank inflationism of the Banking School variety. In fact, of course no increase of money is "required" in either case. The genuine causal chain is the other way round, from increased bank notes to increased prices, and also to increased money value of the goods being produced.

[25] Quoted in White, *Free Banking*, p. 124.

Professor White may not be alive to this distinction because he, too, is a follower of the "needs of trade" (or "wants of trade") rationale for bank credit inflation. White's favorable discussion of the needs-of-trade doctrine (pp. 122–26) makes clear that he himself is indeed a variant of Banking-School inflationist. Unfortunately, White seems to think all this to be consonant with the "Humean-Ricardian" devotion to a purely metallic currency (p. 124). For one thing, White does not seem to realize that David Hume, in contrast to his Banking-School friend Adam Smith, believed in 100 percent specie reserve banking.

While Professor White, in the previous quote from Gilbart, cites his Parliamentary testimony in 1841, he *omits* the crucial interchange between Gilbart and Sir Robert Peel. In his testimony, Gilbart declared not only that country bank notes Increase solely in response to the wants of trade and, therefore, that they could never be overissued. He *also* claimed—in keeping with the tenets of the Banking School—that even the Bank of England could never overissue notes so long as it only discounted commercial loans! So much for Professor White's claims of Gilbart's alleged devotion to free banking! There followed some fascinating and revealing colloquies between Peel and the alleged free banker (i.e., pro-free-banking pro-gold-standard) James Gilbart. Peel sharply continued his questioning: "Do you think, then, that the legitimate demands of commerce may always be trusted to, as a safe test of the amount of circulation under all circumstances?" To which Gilbart admitted: "I think they may." (Note: nothing was said about exempting the Bank of England from such trust.)

Peel then asked the critical question. The Banking School (followed by Professor White) claimed to be devoted to the gold standard, so that the "needs of trade" justification for bank credit would not apply to inconvertible fiat currency. But Peel, suspicious of the Banking School's devotion to gold, then asked: In the bank restriction [fiat money] days, "do you think that the legitimate demands of commerce constituted a test that might be safely relied upon?" Gilbart evasively replied: "That is a period of which I have no personal knowledge"—a particularly disingenuous reply from a man who had written *The History and Principles of Banking* (1834). Indeed, Gilbart proceeded to throw in the towel on the gold standard: "I think the legitimate demands of commerce, even then, would be a sufficient guide to go by." When Peel pressed Gilbart further on that point, the latter began to back and fill, changing and rechanging his views, finally once more falling back on his lack of personal experience during the period.[26]

Peel was certainly right in being suspicious of the Banking School's devotion to the gold standard—whether or not Professor White was later to reclassify them as free bankers. In addition to Gilbart's revelations, Gilbart's fellow official at the London & Westminster Bank, J.W. Bosanquet, kept urging bank suspensions of specie payment whenever times became difficult. And in his popular tract of 1844, *On the Regulation of Currencies*, John Fullarton—a banker in India by then retired in England and a key leader of the Banking School—gave the game away. Wrote Fullarton:

> And, much as I fear I am disgracing myself by the avowal, I have no hesitation in professing my own adhesion to the decried doctrine of the old Bank Directors of 1810, "that so long as a bank issues its notes only on the discount of good bills, at not more than sixty days' date, it cannot go wrong in issuing as many as the public will receive from it.[27]

Fullarton was referring, of course, to the old antibullionist position that so long as any bank, even under an inconvertible currency,

[26]The interchange between Peel and Gilbart may be found in the important article by Boyd Hilton, "Peel: A Reappraisal," *Historical Journal* 22 (September 1979): 593–94. Hilton shows that Peel (far from being the unprincipled opportunist he had usually been portrayed as by historians) was a man of increasingly fixed classical liberal principles, devoted to minimal budgets, free trade, and hard money. Not understanding economics, however, Hilton characteristically brands Peel's questioning of Gilbart as "inept" and sneers at Peel for scoffing at Gilbart's patent dodge of lacking "personal knowledge."

Moreover, not being a classical liberal, Hilton ridicules Sir Robert Peel's alleged inflexible dogmatism on behalf of *laissez-faire*. It is most unfortunate that White, in his eagerness to censure Peel's attack on inflationary bank credit, praises Hilton's "insightful account of Peel's little-recognized dogmatism on matter of monetary policy" (p. 77*n*). Does White also agree with Hilton's denunciation of Peel's "dogmatism" on free trade?

[27]Quoted in Fetter, *Development*, p. 193.

sticks to short-term real bills, it cannot cause an inflation or a business-cycle boom. It is no wonder that Peel suspected all opponents of the currency principle to be crypto-Birmingham men.[28]

The only distinguished economist to take up the free-banking cause is another one of Professor White's favorites: Samuel Bailey, who had indeed demolished Ricardian value theory in behalf of subjective utility during the 1820s. Now, in the late 1830s and early 1840s, Bailey entered the lists in behalf of free banking. Unfortunately, Bailey was one of the worst offenders in insisting on the absolute passivity of the British country and joint-stock banks as well as in attacking the very idea that there might be something worrisome about changes in the supply of money. By assuring his readers that competitive banking would always provide a "nice adjustment of the currency to the wants of the people," Bailey overlooked the fundamental Ricardian truth that there is never any social value in increasing the supply of money, as well as the insight that bank credit entails a fraudulent issue of warehouse receipts to nonexistent goods.

Finally, Professor White ruefully admits that when it came to the crunch—the Peel Acts of 1844 and 1845 establishing a Bank of England monopoly of note issue and eliminating the "free" banking system of Scotland—his free-banking heroes were nowhere to be found in opposition. White concedes that their support of Peel's acts was purchased by the grant of cartelization. In short, in exchange for Bank of England monopoly on note issue, the existing English and

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[28]Neither is the example of James Wilson reassuring. Wilson, founding editor of the new journal, *The Economist*, was dedicated to *laissez-faire* and to the gold standard. He entered the monetary debate quite late, in spring 1845, becoming one of the major leaders of the Banking School. Though of all the Banking School, Wilson was one of the friendliest to free banking and to the Scottish system, he also claimed that the Bank of England could never overissue notes in a convertible monetary system. And though personally devoted to the gold standard, Wilson even made the same damaging concession as Gilbart, though far more clearly and candidly. For, of all the major Banking School leaders, Wilson was the only one who stated flatly and clearly that no banks could ever overissue notes if they were backed by short-term, self-liquidating real bills, even under an inconvertible fiat standard. See Lloyd Mints, *A History of Banking Theory in Great Britain and the United States* (Chicago: University of Chicago Press, 1945), p. 90.

Scottish banks were "grandfathered" into place; they could keep their existing circulation of notes, while no new competitors were allowed to enter into the lucrative note-issuing business. Thus, White concedes:

> He [Gilbart] was relieved that the [Peel] act did not extinguish the joint-stock banks' right of issue and was frankly pleased with its cartelizing provisions: "Our rights are acknowledged—our privileges are extended—our circulation guaranteed—and we are saved from conflicts with reckless competitors." (p. 79)

Very well. But White avoids asking himself the difficult questions. For example: what kind of a dedicated "free-banking" movement is it that can be so easily bought off by cartel privileges from the state? The answer, which White sidesteps by avoiding the question is precisely the kind of a movement that serves simply as a cloak for the interests of the commercial bankers.

For, with the exception of the older, hard-money free-banking men—such as Mushet (long dead by 1844) and Parnell (who died in the middle of the controversy in 1842)—virtually all of White's free bankers were themselves officials of private commercial banks. Gilbart had been a bank official all his life and had long been manager of the London & Westminster Bank. Bailey was chairman of the Sheffield Banking Company. Consider, for example, the newly founded *Bankers' Magazine*, which White lauds as a crucial organ of free-banking opinion. White laments that a writer in the June 1844 issue of *Bankers' Magazine*, while critical of the currency principle and monopoly issues for the Bank of England, yet approved the Peel Act as a whole for aiding the profits of existing banks by prohibiting all new banks of issue.

And yet, Professor White resists the realization that his entire cherished free-banking movement—at least in its later inflationist "need of trade" manifestation—was simply a special pleading on behalf of the inflationary activities of the commercial banks. Strip away White's conflation of the earlier hard-money free-banking theorists with the later inflationists, and his treasured free-banking movement turns out to be merely special pleaders for bank chicanery and bank credit inflation.