Mises and Hayek Dehomogenized

Joseph T. Salerno*

A Man of Principle: Essays in Honor of Hans F. Sennholz. John W. Robbins and Mark Spangler, eds. Grove City, Pennsylvania: Grove City College Press, 1992.

An important contributing factor to the resurgence of Austrian economics in the 1970s was the appearance of a handful of articles which drew the attention of the economics profession to the distinctiveness of the tradition of economic theorizing founded by Carl Menger.[1] Arguably the most influential of these articles was written by the eminent Walras scholar, William Jaffé, and entitled "Menger, Jevons and Walras Dehomogenized."[2] In this article, Jaffé argued persuasively that the three founders of marginalism, whose contributions up to that point had tended to be conflated due to an exclusive focus on their contemporaneous discoveries of the marginal principle, each initiated a separate and distinct tradition of economic method and analysis. Taken in conjunction with the 1974 award to F. A. Hayek of the Nobel Prize in Economics and

*Joseph T. Salerno is professor of economics in the Lubin Graduate School of Business at Pace University, New York.

I wish to gratefully acknowledge comments on an earlier draft of this essay by Murray N. Rothbard, David Gordon, Israel M. Kirzner, and Lawrence H. White for helping me to rectify errors and ambiguities in, as well as to generally improve upon, my original exposition. This acknowledgement does not imply that these individuals bear any shred of responsibility for the remaining imperfections in the essay or that the latter two concur in any of its arguments regarding their respective works.

[1]For example, Erich Streissler, "To What Extent Was the Austrian School Marginalist?," *History of Political Economy* 4 (Fall 1972): 426–41; William Jaffé, "Menger, Jevons and Walras De-Homogenized," *Economic Inquiry* 14 (December 1976): 511–24; and the articles in the Special Issue on Carl Menger and the Austrian School of Economics, *Atlantic Economic Journal* 6 (September 1978).

[2]Jaffé, "Menger, Jevons and Walras De-Homogenized."

The Review of Austrian Economics Vol.6, No. 2 (1993): 113–46
ISSN 0889-3047

the scholarly conferences on Austrian economics held annually between 1974 and 1976, this article and the others mentioned above broadened and reinforced recognition of and interest in contemporary Austrian economics as an alternative to the prevailing neoclassical paradigm.

But the Mengerian tradition was developed in very different directions by his brilliant followers, Eugen von Böhm-Bawerk and Friedrich von Wieser, and by their own students and followers. Without tracing out this doctrinal development in any detail, suffice it to say that today the term "Austrian economics" is used to designate two very different paradigms. One derives from Wieser and may be termed the "Hayekian" paradigm, because it represents an elaboration and systematization of the views held by F. A. Hayek, a student of Wieser's at the University of Vienna. Although it is yet to be generally recognized by Austrians, Wieser's influence on Hayek was considerable and is especially revealed in the latter's early work on imputation theory, which sought to vindicate the Wieserian (as against the Böhm-Bawerkian-Misesian) position that the imputation problem must be solved within the context of an exchangeless economy subject to the control of a single will yet somehow able to calculate using (subjective) value as the "arithmetic form of utility."[3]

[3]See, especially, F. A. Hayek, "Some Remarks on the Problem of Imputation," in idem *Money, Capital, and Fluctuations: Early Essays*, Roy McCloughry, ed. (Chicago: University of Chicago Press, 1984), pp. 33–54. That there is no possibility of economic calculation and rational or purposeful allocation of resources within an economy based on division of labor where one will alone acts is, of course, the essence of Mises's critique of socialism. Perceiving the unbridgeable gulf between his own and Wieser's position on the possibility of directly imputing values to higher-order goods in the absence of monetary exchange, Mises, in his *Notes and Recollections* ([Spring Mills, Ill.: Libertarian Press, 1978], p. 36), wrote that "[Wieser's] imputation theory is untenable. His ideas on value calculation justify the conclusion that he could not be called a member of the Austrian School, but rather was a member of the Lausanne School." Also, Hayek, explicitly following Wieser, conceives the main problem of capital theory to be to explain how it is that the nonpermanent resources constituting the capital stock can yield a permanent net (physical) return (F. A. Hayek, *The Pure Theory of Capital* [Chicago: University of Chicago Press, 1952], pp. 54–55). This Wieser-Hayek method of describing the *quaesitum* of capital theory loads the dice in favor of explaining the interest return on capital in terms of productivity (rather than time-preference) considerations and, at the same time, diverts attention from what Böhm-Bawerk brilliantly perceived to be the fundamental question that must be satisfactorily answered by a correct theory of interest and was so answered by Mises's pure time-preference theory: What is the cause of the difference in value between goods which differ only in their temporal availability? In theorizing on capital, moreover, Hayek (ibid., pp. 27, 156) makes significant use of the Wieserian device of a communist society subject to the control of an omniscient dictator, a device which reflects a paradigmatic lack of concern with problems of monetary appraisement and calculation. Finally, we have Hayek's revelation that his neutral-money doctrine represents a development, albeit "unconscious," of Wieser's remarks on the

The Hayekian paradigm stresses the fragmentation of knowledge and its dispersion among the multitude of individual consumers and producers as the primary problem of social and economic cooperation and views the market's price system as the means by which such dispersed knowledge is ferreted out and communicated to the relevant decision-makers in the production process.[4]

The other paradigm is the "Misesian" paradigm, so called because Ludwig von Mises was the first to systematically expound it. This paradigm represents a development of Böhm-Bawerk's thought and focuses on monetary calculation using actual market prices as the necessary precondition for the rational allocation of resources within an economic system featuring specialization and division of labor.[5]

Unfortunately, the majority of those who currently regard themselves as "Austrian economists" have failed to recognize the considerable differences between these two paradigms. And because Mises was the main influence on Hayek's early writings on business cycle theory and on socialist calculation, the most important manifestation of this failure is the tendency to attribute to Mises positions originated by Hayek or independently developed by those working within the Hayekian paradigm. This tendency is reinforced by what may be called the "Whig presumption," still inexplicably prevailing among many Austrians despite the publication of Thomas Kuhn's book three decades ago, that since Hayek "came after" Mises he must have incorporated in his own work all that was worthwhile in his

---

effects of "a one-sided supply of money" (Hayek, "On Neutral Money," in idem, *Money, Capital, and Fluctuations*, p. 160).

[4]Thus, for example, Wieser's critique of central planning rests on a proto-Hayekian view of the market as the means for solving knowledge problems. Writes Wieser (*Social Economics*, A. Ford Hinrichs, trans. [New York: Augustus M. Kelley, 1967], pp. 396–97): "The one will and command which, in war and for legal unity, is essential and indispensable as the connecting tie of the common forces, detracts in economic joint action from the efficacy of the agency. In the economy, though it has become social, work is always to be performed fractionally. . . . Part-performances of this sort will be executed far more effectively by thousands and millions of human beings, seeing with thousands and millions of eyes, exerting as many wills: they will be balanced, one against the other, far more accurately than if all these actions, like some complex mechanism, had to be guided and directed by some superior control. A central prompter of this sort could never be informed of countless possibilities, to be met with in every individual case, as regards the utmost utility to be derived from given circumstances or the best steps to be taken for future advancement and progress." I am indebted to Peter Boettke, of New York University, or calling my attention to this passage.

[5]On the crucial significance of monetary calculation in the Misesian paradigm see Joseph T. Salerno, "Ludwig von Mises as Social Rationalist," *Review of Austrian Economics* 4 (1990): 36–41. Also see idem, "Two Traditions in Modern Monetary Theory: John Law and A. R. J. Turgot," *Journal des Economistes et des Etudes Humaines* 2 (June/September 1991): 368–70.

predecessor's.[6] The result is that attention has been deflected from the Misesian paradigm, and those seeking to deepen and extend it have found it increasingly difficult to gain recognition for their own efforts or to channel the interests and efforts of younger Austrian scholars into the same endeavor. There thus currently exists a pressing need, especially for Misesians, to undertake the task of a courageous and thoroughgoing doctrinal dehomogenization of Hayek and Mises.

Evidence of this need is presented in some of the contributions to this Festschrift honoring Hans Sennholz—ironically, a student of Mises's whose writings on most topics fall squarely within the Misesian paradigm. While this volume contains many informative, instructive, or inspiring papers by individuals who have been associated with Dr. Sennholz in various capacities or who have been profoundly influenced by his prodigious and insightful writings on a broad range of politico-economic subjects, I am mainly interested in a handful of contributions from academic Austrian economists. Rather than offering a critical analysis of these papers, I will restrict myself to demonstrating that, in each case, the author imputes to Mises implicit or explicit support for or authorship of one or more positions originated by Hayek or rooted in a Hayekian view of the market's pricing process.

Let me begin with Israel M. Kirzner's contribution on "Human Action, Freedom and Economic Science" (pp. 241–49), which deals with the evolution of his own understanding of the Misesian concept of human action from the publication of his first book in 1960[7] to 1991, the year the essay under review was completed. In this essay, Kirzner explicitly repudiates the position he took in the concluding chapter of his 1960 book that the defining element of human action is "purposefulness" narrowly construed as expressed in economizing and choice and that the entire structure of Misesian economics, including its adumbration of the dynamic market process, can be logically deduced from insight into the "power of reason to guide purposeful behavior" (p. 244). Now, Kirzner informs us, he has come to realize that his earlier understanding of Mises's position is "inadequate," because it can only yield conclusions about "decisions made in given situations"

[6]This recrudescence of the "Whig presumption" among members and observers of the current Austrian school was recently brought to light in Murray N. Rothbard, *The Present State of Austrian Economics*, Working Paper from the Ludwig von Mises Institute, Auburn, Alabama (November 1992), pp. 4–5.

[7]Israel M. Kirzner, *The Economic Point of View: An Essay in the History of Economic Thought*, 2nd ed. (1960; Kansas City: Sheed and Ward, 1976).

and is thus incapable of analyzing "those systematic market processes which are so central to Misesian economics" (p. 244).

While Kirzner still ascribes a central role to the concept of purposefulness in his reinterpretation of Mises, it is a concept purged of explicit reference to economizing and choice and completely redefined in terms of alertness and discovery. Thus for Kirzner, "the purposefulness of human action . . . is the essential key to the discovery by agents that they are in fact *not* in the 'given situations' which they had hitherto assumed to be relevant," and it is the "purposefulness which defines and identifies conscious human action" that motivates "alertness to the dynamic world in which we live" (pp. 245, 247). These essential attributes of purposefulness are summed up elsewhere by Kirzner in the statement that "purposive human action involves a posture of alertness toward the discovery of as yet *unperceived* opportunities and their exploitation."[8] To be sure, in proposing this definition, it is not Kirzner's intention to completely ignore the aspect of purposefulness that is expressed in human choice.[9] However, he offers no argument establishing a logical link between these two aspects of purposefulness and merely asserts a predominating "propensity," inherent in human action, "to sniff out opportunities lurking around the corner," "to discover what is useful," to be alert to opportunities," "to notice what may be useful," etc. By this procedure, Kirzner hopes to provide a praxeological foundation for the *empirical* tendency of the market process toward equilibrium that is alleged by Hayek.[10] Thus Kirzner dismisses what he calls "any programmed pattern of allocative maximization" or "static decision making," i.e., choice, as a trivial expression of purposefulness that is unable to illuminate the equilibrating tendencies of the dynamic market process. In its stead he proposes "discovery," i.e., "man's entrepreneurial propensity to discover changes which can redound to his benefit," as the hallmark of purposive human action (p. 245).

It is important to reiterate at this point that Kirzner is not faulting Mises's conception of purposeful behavior but his own earlier failure to fully comprehend this conception, thereby imputing to Mises the origination of the discovery perspective which Kirzner has so elegantly elaborated in his later works. Thus when confronting the question of why Mises apparently endorsed Kirzner's earlier, mistaken interpretation of his position by writing a laudatory Foreword

[8]Israel M. Kirzner, *Perception, Opportunity, and Profit: Studies in the Theory of Entrepreneurship* (Chicago: University of Chicago Press, 1979), p. 109.

[9]Ibid., pp. 28, 30–31.

[10]Ibid., pp. 13–33.

to Kirzner's 1960 book, Kirzner responds that Mises did not "explicitly articulate" the insights yielded by this perspective and therefore may well have believed that what was implicit in his own position was also implicit in Kirzner's "superficial exposition" of that position. Or, alternatively and even less plausibly, Kirzner speculates that Mises himself may not have been consciously aware of these momentous implications of his own thought (p. 249, n. 1).

I would like to suggest however that the simplest and most plausible explanation for Mises's uncensorious Foreword is the correct one: Kirzner's concluding chapter gave a full and accurate explication of what Mises knew to be his own "economic point of view," whose central element Mises himself repeatedly and explicitly characterized as purposive human action describable in terms of choice and the efficient allocation of scarce resources. Moreover, contrary to Kirzner's contention, Mises did indeed succeed in deducing from this restricted notion of purposeful behavior catallactic theorems relevant to the analysis of the dynamic market process. Preliminary to arguing this point, I will demonstrate that Kirzner's emphasis on discovery as the essence of purposiveness leaves him unable to logically account for the choice process and, ultimately, for the very existence of acting man.

For Mises, human action, whether isolated or involving monetary exchange, is always motivated by the eagerness of the actor to enhance his welfare and consists of choosing among alternative employments of resources whose necessarily future results are not known with certainty. Because the choice process logically implies uncertainty—choice and action would be obviously futile in a world where humans are predestined to endure a rigidly unchangeable sequence of future events known with perfect certainty—the prerequisite of any specific act of choice is the acquisition of knowledge, via direct experience or from other sources of information, about the events and prevailing circumstances of the recent past that may be relevant in formulating an "understanding" of the future conditions upon which the actions under consideration will impinge. For example, if the actor is choosing among alternative investments of resources for producing goods intended for sale on the market, then information about "current" prices, i.e., realized prices of the immediate past, in addition to qualitative knowledge concerning the most recent technical conditions of production and conditions underlying consumer demands, is an almost indispensable guide to forecasting future market conditions. It is only upon the basis of such knowledge and forecasts that the actor is able to appraise and estimate the future prices of the various products which enter into his calculations

of monetary profit. These calculations permit his ranking of the alternative investments under consideration, which then enables him to purposefully and efficiently allocate his resources at the moment of choice.

Thus, for Mises, the moment of choice coincides with the emergence of a value scale that is the *raison d'etre* and consummation of the actor's previous "discovery" activities and that provides the framework for purposive behavior. Choice and action can only be conceived as occurring within such a "a given situation." Contrary to Kirzner's later interpretation of Mises, discovery cannot serve as the core of the central axiom in a praxeological system, precisely because there is no possibility of inferring from it the "given situation" prerequisite to the moment of choice. A being who is ever seeking to "discover changes that have occurred" in his situation can never *act* on those discoveries because he is incapable of creating the framework for choosing. In the newer Kirznerian interpretation, therefore, the Misesian *homo agens* has been transformed into *homo quaerens*, a perpetual and aimless seeker of new knowledge who is forever unable to turn it to account in improving his welfare; a shade who has become unstuck in (praxeological) time, having no existence in what Mises calls the "real present," that neverending sequence of "given situations" which is created by purposive entrepreneurial evaluation of past experience and forecasting of the future and in which all action is initiated and all human life is lived.[11]

We have thus established that, according to Mises, "discovery" is logically implied in the very concept of choice and need not be posited as an independent facet of human purposiveness and, furthermore, that the propensity to discover new opportunities, when analyzed in isolation as the essential or predominant feature of purposiveness is incapable of generating any meaningful propositions about human action, not to mention the market process. Or, in other words, from the perspective of Misesian praxeology, entrepreneurial information gathering and forecasting are never autonomous and free-flowing activities directly expressing purposefulness, but are always rigidly governed by the exigencies of choosing under uncertainty. In my interpretation, therefore, it is a significant distortion of Mises's view to say with Kirzner that it is the discovery element in human action rather than "maximizing rationality" that "drives the market" (p. 247); for Mises, it is the fact

[11]For Mises's conception of the "real present," see *Human Action: A Treatise on Economics*, 3rd ed. (Chicago: Henry Regnery, 1966), pp. 100–1. As Mises points out, "The present qua duration is the continuation of *the conditions and opportunities given* for action (ibid., p. 101). I have added the emphases in this quotation.

that the entrepreneur desires to efficiently allocate his resources in service of his goal of maximizing profit (and ultimately, utility) that drives both his quest for understanding of future market conditions and, when this quest culminates in the purposive choice of production processes, the dynamic market process.

But what of Kirzner's claim that a theorematic system derived from a concept of purposefulness lacking an independent discovery dimension is unable to elucidate "those dynamic processes through which the market absorbs and responds to exogenous changes" and which are central to Misesian economics (p. 245). In fact Misesian catallactics is exactly the spinning out of the implications of purposeful behavior engaged in by individuals who perceive the benefits of specialization and exchange described by the law of comparative advantage and whose productive activities are oriented by monetary calculation to satisfying anticipated consumer demands in the cheapest possible way. For Mises one of the most important functions of the market process is to provide the meaningful numerical data, the money prices, that are used in such economic calculations. These computations of monetary profit enable each producer to discern and purposefully choose that pattern of uses for his resources that he expects to maximize his satisfaction from participation in the exchange process. Because of the complexity of the technical interrelationships between the factors of production and the innumerable possibilities of their use and combination within a capital-using economy, without the ability to calculate, producers, no matter how much qualitative knowledge of the economic data they discovered or were endowed with, would never be able to use such knowledge in pursuit of their purposes and would abandon social cooperation under the division of labor as a means for enhancing their welfare.[12] Thus, severing choice from discovery, far from elucidating the nature and operation of the dynamic market process, yields the condition under which it ceases to operate.

Having linked up purposive individual behavior with the market process through the theory of monetary calculation, Mises then

[12]For recent discussions of Mises's contribution to the socialist calculation debate that characterize it as essentially an argument about calculation and not knowledge, see Salerno, "Ludwig von Mises as Social Rationalist," pp. 41–49; idem, "Postscript: Why a Socialist Economy Is 'Impossible'," in Ludwig von Mises, *Economic Calculation in the Socialist Commonwealth* (Auburn, Ala.: Praxeology Press, 1990), pp. 51–71; Murray N. Rothbard, "The End of Socialism and the Calculation Debate Revisited," *Review of Austrian Economics* 5 (2) (1991): 51–76; and idem, "The Present State of Austrian Economics," pp. 19–22. It seems that Richard Ebeling now also interprets Mises's argument along similar lines. See Richard M. Ebeling, "Introduction" in idem, *The Global Failure of Socialism* (Hillsdale, Mich.: Hillsdale College Press, 1992), pp. 6–8.

formulated his catallactic theory, based on Böhm-Bawerkian price theory and his own theory of the promoter-entrepreneur, to analyze the operation of this process. For purposes of arguing that Kirzner's view of the market process has much more in common with Hayek than Mises, allow me to briefly enumerate the most salient features of Mises's understanding of the dynamic market process as the outcome of calculable actions.

I focus first on the characteristics of the prices that are generated by the market process and serve as the data for economic calculation. These are realized prices; or, in other words, they are the actual outcome of the historical market process at each moment in time and are determined by the value scales of the marginal pairs in each market. They are, therefore, also market-clearing prices the establishment of which coincides with a momentary situation, what Mises calls the "plain state of rest" (PSR),[13] in which no market participant, given his existing marginal-utility rankings of goods and money and knowledge of prevailing prices, can enhance his welfare by participating in further exchange. However, despite their character as market-clearing prices, these are also disequilibrium prices. Thus as a consequence of the unavoidable errors of entrepreneurial forecasting and price appraisement under uncertainty, most goods are sold at prices that do not conform to their monetary costs of production, thereby generating realized profits and losses for producers. Nor does the law of one price for commodities and the associated but broader law of the absolute spatial equality of the purchasing power of money hold in the PSR, because market conditions are continually changing, while the information of each transactor

[13]According to Mises (*Human Action*, p. 762), "The notion of the plain state of rest as developed by the elementary theory of prices is a faithful description of what comes to pass in the market at every instant. Any deviation of a market price from the height at which supply and demand are equal is—in the unhampered market—self-liquidating." For further discussion of the PSR, see ibid., pp. 244–45. Arthur Marget also clearly recognizes that all prices that actually emerge in the course of the historical market process are and must be market-clearing prices that create a temporary lull in the process. In Marget's words, "the prices which we must ultimately explain are the prices 'realized' at specific moments in clock time [and] the only demand and supply schedules which are directly relevant to the determination of these 'realized' prices are market demand and supply schedules prevailing at the moment the prices are 'realized'. . . ." (Arthur W. Marget, *The Theory of Prices: A Re-examination of the Central Problem of Monetary Theory*, 2 vols. [New York: Augustus M. Kelley, 1966], 2, p. 253). For an exposition of Marget's view of the pricing process and its relevance to monetary theory, see Joseph T. Salerno, "Ludwig von Mises's Monetary Theory in Light of Modern Monetary Thought," presented at the Austrian Scholars Conference, New York City, October 1992 (unpublished ms), pp. 46–50.

about current conditions is necessarily incomplete and arbitrage processes do not operate instantaneously.[14]

Second, for Mises, the market process is open-ended and entrepreneurial. It is open-ended because the continual exogenous changes in the economic data preclude it from ever reaching a state of long-run equilibrium or what Mises refers to as a "final state of rest" (FSR), in which all commodity prices and the purchasing power of money are perfectly arbitraged, speculative holding of commodity stocks is absent, and profits and losses have been completely eradicated.[15] The FSR is an imaginary construct that enables the economist to isolate and describe the entire sequence of adjustment, including the time-consuming reorientation of the production structure, which results from a given change in the economic data. In FSR analysis, the economist begins with an initial FSR, introduces an alteration in the data, i.e., in tastes, technology, money supply, etc., and then traces out the steps by which the market adjusts to a new FSR, all the while rigidly maintaining a *ceteris paribus* assumption. From this analysis it may be inferred that the reallocation of resources from less profitable to more profitable production processes coincides with an improvement in the satisfaction of consumer wants.

Or the economist may employ FSR analysis to demonstrate that, if at any point in time, all further changes in the economic data were to suddenly cease, the adjustment processes currently operating in response to past changes would eventually culminate in an FSR and, if no further changes intervened, in a state of eternally repetitive robotical activity or "evenly rotating economy" (ERE) in which uncertainty, entrepreneurship, and the demand for a medium of exchange are eliminated and the very conditions of choice and action abolished. This latter mode of employing the analysis is effective in illustrating the point that at any instant in time all purposive behavior aimed at attaining a state of optimum satisfaction is tending toward establishing a state of nonaction. What prevents the emergence of such a state is the neverending flux in the means and ends of action. Thus, from the standpoint of Misesian catallactics, to declare that the market is "equilibrating" can never be taken to mean that the market process ever actually progresses toward a given long-run equilibrium in historical or calendar time. It can mean that

[14]For a Wicksteedian micro analysis of the market's tendency to rapidly establish and maintain interspatial equality in the purchasing power of money, see ibid., pp. 41–45.

[15]Mises's discussion of the nature and uses of the FSR concept can be found in Mises, *Human Action*, pp. 245–46.

the reallocations of productive resources undertaken by entrepreneurs seeking to exploit anticipated profit opportunities—if and when such profits are realized—result in a relatively improved state of want satisfaction for consumers; or it can mean that the complex of autonomous yet coordinated choices and actions that constitute the market process, at any given moment in historical time, is aimed at establishing an optimum state of consumer satisfaction and would eventuate in such a state in the absence of further change in the data.

But despite its usefulness, FSR analysis was never intended by Mises to provide a grasp of the function of the entrepreneur or "promoter," whose activities drive the open-ended market process actually unfolding in time. For Mises, the promoter concept goes beyond the category of the pure entrepreneur derived from the action axiom, and its construction embodies cognition of a fundamental datum of catallactic analysis: that some people are more adept than others at anticipating and adjusting to change.[16] Within the context of the Misesian market process, promoter-entrepreneurs are those who seek to profit by actively promoting adjustment to change. They are not content to passively adjust their catallactic activities to readily foreseeable changes or changes that have already occurred in their circumstances; rather, they regard change itself as an opportunity to meliorate their own conditions and aggressively attempt to anticipate and exploit it. The real market process is thus entrepreneurial in the sense that it is driven by an identifiable, though ever-changing, class of individuals whose productive activities are guided by monetary calculations based upon purposeful and perpetual forecasting of an uncertain and changing future.[17] As noted above, the prices used in such calculation are the appraised prices of the future, i.e., the prices anticipated to be realized at future moments of an open-ended market process that will never cease to be buffeted by changes in the economic data. It should be emphasized that these prices are *not* the same prices which emerge during the

[16]On the "promoter" concept, see ibid., pp. 254–55, 303–11. As Mises (ibid., p. 585) points out, "What distinguishes the successful entrepreneur and promoter from other people is precisely the fact that he does not let himself be guided by what was and is [i.e., by realized prices], but arranges his affairs on the ground of his opinion about the future. He sees the past and present as other people do, but he judges the future in a different way. . . . The impulse of his actions is that he appraises the factors of production and the future prices of the commodities which can be produced out of them in a different way from other people."

[17]It was William H. Hutt (*The Keynesian Episode: A Reassessment* [Indianapolis: Liberty*Press*, 1979], p. 165) who felicitously described entrepreneurial activity as "dominated by perpetual forecasting."

course of a *ceteris paribus* or "systematic" (as Kirzner terms it) market process smoothly progressing toward the FSR.

Third, and finally, Mises conceives the market process as coordinative, "the essence of coordination of all elements of supply and demand."[18] This means that the structure of realized (disequilibrium) prices, which continually emerges in the course of the market process and whose elements are employed for monetary calculation, performs the indispensable function of clearing all markets and, in the process, coordinating the productive employments and combinations of all resources with one another and with the anticipated preferences of consumers. Such "price coordination," by insuring that scarce resources are secured by the entrepreneurs bidding the highest prices, also insures that at each instant Böhm-Bawerk's "Law of Costs" prevails, that is, that the constellation of resource prices that emerges on a market unhampered by legal restrictions *always* reflects the circumstance that existing resources are devoted to their most valuable uses as determined by entrepreneurial appraisements of future output prices.[19] It should be noted that as a concept applicable to the real world of uncertainty and change, Misesian price coordination is consistent with the speculative withholding of labor and other resources from current production in anticipation of the later emergence or discovery of more valuable employments.[20] While such speculative activities may modify the shape of the momentary supply and demand curves and the valuations of the marginal pairs

[18]Ludwig von Mises, "The Position of Money among Economic Goods," in *Money, Method, and the Market Process: Essays in Honor of Ludwig von Mises*, Richard M. Ebeling, ed. (Norwell, Mass.: Kluwer Academic Publishers, 1990), p. 65.

[19]On Böhm-Bawerk's law of costs as an early formulation of the concept of price coordination, see Salerno, "Two Traditions in Modern Monetary Theory," p. 369. Böhm-Bawerk's erroneous characterization of his law of costs as "a law which has only approximate validity and teems with exceptions" resulted from his failure to realize that this law does not depend on the assumption of perfect knowledge and foresight. The law of costs no more requires that entrepreneurs have perfect knowledge of future market conditions than the law of marginal utility requires that consumers are able to perfectly predict their future value scales. Both laws require for their full applicability only that agents, whether allocating resources to achieve final consumption goals or the business goal of pecuniary profit, evaluate and rank the *anticipated* outcomes of the alternative actions under consideration. For Böhm-Bawerk's statement of the law, see Eugen von Böhm-Bawerk, *Capital and Interest*, vol. 2, *Positive Theory of Capital*, George D. Huncke, trans. (Spring Mills, Penn.: Libertarian Press, 1959), pp. 248–56. Böhm-Bawerk's error occurs on pp. 255–56. A more detailed presentation and defense of the law of costs can be found in idem, "The Ultimate Standard of Value," in *Shorter Classics of Eugen von Böhm-Bawerk* (Spring Mills, Penn.: Libertarian Press, 1962), pp. 351–70.

[20]On this point see, Joseph T. Salerno, "Commentary: The Concept of Coordination in Austrian Macroeconomics," in Richard M. Ebeling, ed., *Austrian Economics: Perspectives on the Past and Prospects for the Future* (Hillsdale, Mich.: Hillsdale College Press, 1991), pp. 330–40.

in the affected markets, they do not in any way alter the coordinative quality of the market process.[21]

From the Misesian perspective, price coordination is thus the very essence of the market and a necessary attribute of its real existence. As such it is an *ex post* concept. In the absence of price coordination, e.g., in a regime of all-around price controls, the allocation of scarce resources within the social system of want satisfaction becomes purposeless and chaotic. The concept of equilibration, on the other hand, is an *ex ante* concept expressing recognition that entrepreneurs responding to the lure of expected monetary profits seek to anticipate and remove the continually emerging maladjustments between means and ends and that their success in doing so would culminate in a state of optimum satisfaction, i.e., nonaction. Equilibration therefore presupposes price coordination in the same way that, in a nonsocial process of individual want satisfaction, purposeful allocation of resources presupposes the existence of a unitary value scale by means of which resources can be meaningfully evaluated and ranked.[22]

Let me now contrast this interpretation of Mises's view of the market process as deduced from the axiom of purposeful behavior with the Kirznerian interpretation that ascribes the axiomatic position in Mises's praxeological system to the proposition that individuals have a propensity to discover changes that have already occurred in their given situations. In the latter interpretation, Mises does not view the market as an open-ended process, as a complex entwinement of mutually-influencing historical adjustment processes in various states of completion, a process which is constantly shifting direction in response to new changes in the data and never actually temporally approaches a state of final rest and nonaction. Rather, the Kirznerian interpretation emphasizes the market as a "systematic" process, one that really progresses toward equilibrium by effecting an increasing coordination of the plans of market participants. The ultimate goal of this process, the perfect coordination of individual plans, is an attribute of the final equilibrium state. But such "plan coordination" is worlds apart from the concept of price coordination adumbrated

[21]For an analysis of speculation which demonstrates that, whether successful or not, it does not impede the functioning of the coordinative market process, see Murray N. Rothbard, *Man, Economy, and State: A Treatise on Economic Principles*, 2 vols. (Los Angeles: Nash Publishing, 1970), 1, pp. 112–18.

[22]This understanding of equilibration as a strictly *ex ante* concept accords with the "purely logical concept of equilibration" superbly expounded and defended by George Selgin. See G. A. Selgin, "Praxeology and Understanding: An Analysis of the Controversy in Austrian Economics," *Review of Austrian Economics* 2 (1988): 33–43.

above. The latter concept, as I have argued, refers to a realized coordination of all the disparate and contingent individual buying and selling plans underlying the market demand and supply curves that actually exist at any given moment in a changing and uncertain world. Plan coordination, on the other hand, describes an imaginary situation in which automatons endlessly repeat a logically consistent pattern of actions, a situation that is akin to the perfect adaptation of the elements of a completely robotized factory to one another.

In fact, Kirzner's discovery perspective does not originate in Mises's concept of human action but in Hayek's conception of the market as a means for disseminating the knowledge which systematically guides decentralized and initially ignorant decision-makers toward a full, *ex ante* coordination of their various production and consumption plans.[23] But since *ex ante* plan coordination can only be achieved in long-run equilibrium—is a condition defining such equilibrium—as both Hayek and Kirzner recognize, Kirzner is forced to shift his analytical focus from the real-world, open-ended market process to a hypothetical market process which is generated by initial ignorance among market participants of the full range of exchange opportunities afforded by the prevailing and *fixed* configuration of the economic data and which must therefore eventually terminate in an FSR.

With the possibility of exogenous change and genuine uncertainty thus banished from its purview, Kirzner's analysis of the market process has no use for the concept of the dynamic promoter-entrepreneur who is perpetually forecasting and appraising the future in quest of anticipated profit opportunities. The market process is now characterized as driven toward its fixed and final goal of perfect-plan coordination by discoverer-entrepreneurs alert to "changes that have occurred in their very market situations," i.e., to contemporaneously emerging discrepancies between prices of the same good available at different locations or in different forms (virtual products, i.e., resources and actual products). In these quasi-static conditions, production loses its temporal dimension and may be conceived of as a matter of pure arbitrage, i.e., of simultaneously buying and selling the same good in spatially diffuse markets. It is only under these circumstances, where producers may be characterized as arbitrageurs, that the Hayekian proposition that information about prices of the immediate past

[23]Hayek (*Pure Theory of Capital*, p. 23) referred to this state of affairs as "a state of complete compatibility of *ex ante* plans." Adopting the preferred terminology of current Hayekians, I refer to it alternatively as "*ex ante* coordination of plans."

substitutes for detailed qualitative knowledge of past and future market conditions in guiding the production process holds true. As producer-arbitrageurs act to exploit newly-discovered discrepancies between prevailing input and output prices, ignorance of mutually beneficial exchange opportunities among market participants measurably diminishes, the buying and selling plans of individuals are progressively coordinated (in the *ex ante* sense), and prices are systematically driven toward their final equilibrium values.

Once we drop the assumption of an absence of exogenous change in analyzing the market process, Kirzner's characterizations of the entrepreneur as an alert discoverer of existing opportunities, of the market process as the means for plan coordination, and of realized prices as a surrogate for qualitative knowledge about the economic data all fall to the ground. And this we indeed must do in interpreting Mises, because he does not employ such an assumption for analyzing the function of the entrepreneur or deducing conclusions about the dynamic market process. As I pointed out above, for Mises, FSR analysis, which utilizes this assumption, is primarily useful for demonstrating that the consequences of a change in the economic data are not restricted to the initial adjustment of the market price but also involve longer-run adjustments in resource allocation and the production structure.

Hayek, on the other hand, even in his earliest writings on business-cycle theory, in which he was most heavily under Mises's influence, envisaged the economy as actually departing from and rapidly returning toward a "static state" under impact of changes in the data. Thus, in *Monetary Theory and the Trade Cycle*, for instance, Hayek wrote that "For so long, at least, as disturbing monetary influences are not operating, we have to assume that the price which entrepreneurs expect to result from a change in demand or from a change in the conditions of production will more or less coincide with the equilibrium price. For the entrepreneur . . . will generally be in a position to estimate the price that will rule after the changes have taken place [i.e., in the new FSR]."[24]

While in later writings Hayek emphasized that the state of equilibrium and *ex ante* plan coordination is "an admittedly fictitious construction" never to be observed in the real world, he still insisted that the efficiency of the economic process is to be gauged by its observed proximity to such a state. Accordingly, in the *Pure Theory*

[24]F. A. Hayek, *Monetary Theory and the Trade Cycle*, N. Kaldor and H. M. Croome, trans. (New York: Augustus M. Kelley, 1966), p. 29.

of Capital, he argued that the "justification" of the concept of equilibrium "is not that it allows us to explain why real conditions should ever in any degree approximate towards a state of equilibrium, but that observation shows that they do to some extent so approximate, and that the functioning of the existing economic system will depend on the degree to which it approaches such a condition."[25] Affirming the "tendency" of market prices to conform to their equilibrium levels, Hayek clearly indicates that he considers the historical market to usually operate in close proximity to the equilibrium state. Thus he defines "tendency" in the following terms: "A given phenomenon may tend to [approximate towards] a certain magnitude if in a great number of cases it may be expected to be fairly near that magnitude, even if there is no reason to expect that it will ever actually reach it, however long the time allowed for the adjustment."[26]

Indeed, as Hayek points out, in order for prices to fulfill their knowledge-disseminating and plan-coordinating functions, the economy must subsist in a state of what I will call "proximal equilibrium," wherein realized prices are always fairly accurate indicators of future prices. Writes Hayek:

> successful economic action [or the fulfillment of the expectations which prompted it] depends largely on the approximately correct predication of future prices. These predictions will be based on present prices and their trends. . . . Indeed the function of prices is precisely to communicate, as rapidly as possible, signals of changes of which the individual cannot know but to which his plans must be adjusted. This system works because on the whole current prices are fairly reliable indications of what future prices will probably be.[27]

Kirzner evidently rejects the Hayekian concept of proximal equilibrium as a realistic description of the operation of the market economy, arguing that "the market is in a continual state of flux and is never in or near a state of equilibrium." He then goes on to argue that "the [endogenous] layer of change, consisting of systematic equilibrating tendencies (which never do manage to become fully completed before being disrupted by new exogenous change) is responsible for the degree of allocative efficiency and of growth potential that market

[25]Hayek, *Pure Theory of Capital*, pp. 27–28.

[26]Ibid., p. 27, n. 2.

[27]F. A. Hayek, *Denationalization of Money—The Argument Refined: An Analysis of the Theory and Practice of Concurrent Currencies*, 2nd ed. (London: Institute of Economic Affairs, 1978), p. 82.

economies display."[28] But, if this is the case, Kirzner must logically conclude, which he does not, that market economies are not very efficient at all, because he has already argued that the market process never proceeds very far toward the ideally efficient state of perfect plan coordination.[29] This point aside, Kirzner's theory of the discoverer-entrepreneur, whose activities systematically drive market prices toward their equilibrium configuration, can be viewed as an attempt to liberate Hayek's notion of catallactic efficiency as the *ex ante* coordination of decentralized plans from its dependence upon the vague and untenable assumption of proximal equilibrium as the normal state of the historical market economy. However, Kirzner's attempt itself implicitly invokes the ideas of quiescent calendar periods which separate successive exogenous shocks and during which equilibrating endogenous changes are given scope to work themselves out to some extent.

But there is no more basis in Mises's work for Kirzner's idea of real-time equilibration than there is for Hayekian proximal equilibrium. As Mises emphasized, it is impossible to determine and meaningless to suggest that the real economy is closer to the FSR, and therefore manifests a superior coordination of plans and greater allocative efficiency, at one instant of time than it was at a previous instant. For Mises, each moment that passes introduces fresh exogenous changes into the system which impinge upon and reorient the ongoing market process toward a new FSR. As a result, very little can be established about the progress of any one of the host of individual adjustment processes that compose the market process. In fact the very idea of a single, compartmentalized adjustment process is no more than a useful analytical fiction which permits the economist to make sense of the overwhelmingly complex phenomena of the unitary market process. In Mises's words, "The various adjustment processes are in reality not isolated. Synchronously an indefinite number of them take their course, their paths intersect, and they mutually influence one another. To disentangle this intricate tissue and to observe the chain of actions and reactions set into motion by a definite change of the data is a difficult task for the historian's understanding and the results are mostly meager and questionable."[30]

[28]Israel M. Kirzner, *The Meaning of the Market Process: Essays in the Development of Modern Austrian Economics* (New York: Routledge, 1992), pp. 38–39.

[29]However, if Kirzner's standards for efficiency are relatively undemanding and are met by even small movements of the market process toward his ideal of perfect plan coordination, then this criticism loses its force. I am indebted to David Gordon for enlightening me on this point.

[30]Mises, *Human Action*, p. 653.

In the alternative interpretation of Mises's view of the market process that I have been expounding, the notion of allocative efficiency has nothing to do with the Hayekian criterion of plan coordination. Rather, it derives from an analysis of principles of purposeful behavior. Thus, from the *ex ante* standpoint, the market economy is perfectly efficient, because entrepreneurial decisions based upon monetary calculation always result in the appraisement and allocation of resources in strict accordance with anticipated consumer preferences, in the same manner in which the choices of an individual actor produce a pattern of resource use reflecting his value ranking of expected satisfactions. Thus the Böhm-Bawerkian law of costs, according to which the money price of each and every resource always corresponds to the lowest appraised of the employments for which its available quantity just suffices, i.e., its expected marginal revenue product, is the perfect catallactic equivalent of the law of marginal utility that governs autistic exchange. Far from being trivial, this concept of *ex ante* efficiency is indispensable for distinguishing the unhampered market economy from other conceivable methods of organizing social cooperation under a division of labor. Thus a completely centrally-planned industrial economy is impossible of realization because, in the absence of actual exchange of productive factors and genuine factor prices, the planners are unable to "cost" and therefore purposefully or efficiently allocate the given resources under their control in accordance with even their own known scale of ends valuation.

The criterion of social welfare that is implicit in Misesian catallactics is therefore "Böhm-Bawerk efficiency," which emphasizes the role of monetary calculation in enabling individuals to rationally evaluate and allocate the means at their disposal when pursuing their goals through social action, i.e., action that makes use of voluntary exchange and the social division of labor to realize its aims. Whereas Pareto efficiency and its Hayek-Kirzner plan coordination variant represent unrealizable standards—because based on perfect information and foresight—for evaluating the social *outcomes* of the choice process, Böhm-Bawerk efficiency invokes an ideal but attainable standard, i.e., the efficient *ex ante* allocation of resources by an individual choosing under uncertainty, and indicates the day-to-day coordinated functioning of the economy that results when the institutional *preconditions* of monetary calculation and, therefore, of rational social action are fulfilled. Judged by this criterion, the erroneous forecasts and malinvestments that sometimes characterize entrepreneurial choices are not proof against the efficiency of the real-world market; the market is efficient

because it enables individuals to calculate and therefore to make meaningfully choices to reap the overwhelming benefits described by the law of comparative advantage and not because it yields absolute or approximate certitude about the outcomes of these choices (which is, in any event, also denied to autarkic choosers). In sum, the unhampered market is *socially* efficient because it provides the incentive for social action by establishing a tight producer-consumer nexus that gives full sway to consumer choice in determining the allocation of resources.[31] On the other hand, any coercive intervention into the market, which necessarily distorts or annuls its intricate calculational nexus coordinating consumer preferences and entrepreneurial choices, *ipso facto* generates a less efficient allocation of resources, i.e., one that does not completely and exclusively reflect the anticipated preferences of the participants in the social division of labor, and lowers social welfare. We may thus conclude that every act of intervention unambiguously lowers social welfare.[32]

Regarding *ex post* efficiency, the market economy is once again on all fours with the autarkic economy, with entrepreneurial errors and inefficiencies in production the inevitable product of uncertainty and change. However the market economy does embody a process which operates to minimize such errors and efficiencies. This is what Mises calls the "selective process," which is continuously and actually operating in calendar time via monetary profits and losses to weed out

[31]Mises, of course, vigorously upheld "consumer sovereignty" as the operating principle of the unhampered market economy, while demonstrating the coordinative property of the market's price structure and its indispensability to economic calculation and rational social action. However, curiously, he never attempted to derive a formal criterion of social welfare from these elements.

[32]Murray N. Rothbard (*Toward a Reconstruction of Utility and Welfare Economics* [Burlingame, Calif.: Center for Libertarian Studies, 1977]) has ably demonstrated on purely scientific grounds that government intervention always fails to increase social welfare. In advancing to our more radical conclusion, we are able to completely discount any gains, in terms of direct utility or exchangeable goods, that accrue to the interveners and their beneficiaries, while remaining safely within the bounds of strict *Wertfreiheit*. The concept of Böhm-Bawerk efficiency is only concerned with the utility that derives from actions that take place completely within the social nexus, that is, the utility of "productive" consumers who earn income—and only to the extent that they earn this income—through voluntary exchange. Since it is the prospective or *ex ante* utility to be derived from acts of consumption that provides the rationale for individuals to participate in the social division of labor, it is their preferences and demands that must serve as the sole and ultimate standard of socially efficient resource use. Thus, for example, the redistribution of income to "nonproductive" consumers may be represented as a net siphoning off of resources from society that reduces the utility of at least some of its members and weakens their incentives for social action. The market demands of the nonproductive recipients of these resources then can be treated as falsifying monetary calculation and fostering a socially inefficient reallocation of productive resources.

from the market the relatively unastute and inefficient entrepreneurs while transferring the power to choose the best uses and technical combinations of productive resources to the more farsighted and technically proficient entrepreneurs.[33]

In the Kirznerian interpretation there is no clear and meaningful distinction drawn between *ex ante* and *ex post* efficiency because the entrepreneur as *homo quaerens* never confronts the moment of choice, which would involve him in the purposeful allocation of resources or "Robbinsian economizing." Nor, for the same reason, can the historical market process in this interpretation possess a means of systematically eliminating less successful entrepreneurs and shifting control over productive processes to the more successful. Never burdened with the necessity of *choosing*, discoverer-entrepreneurs need never place any resources at risk of loss in *deciding* to seize a profit opportunity. In criticizing the term "decision-making" which had come into vogue along with other technocratic jargon in the 1950s, Mises pointed out that the term is "designed to divert attention from the fact that what matters is not simply to make a choice but to make the best possible choice. This means: to proceed in such a way that no less urgently desired end should be satisfied if its satisfaction prevents the attainment of a more urgently desired end."[34] Given the obvious importance that Mises attaches to purposeful choice in his praxeology and catallactics, it is difficult to fathom that he would have acquiesced in an interpretation of his view of the market process that assigns the central role to a nonchoosing entrepreneur.

Perhaps one of the more unfortunate consequences of the homogenization of Mises's and Hayek's thought is manifested in the common tendency of current Austrian economists to formulate their entire research program in terms of a dictum uttered by Hayek, while uncritically attributing support for such a program to Mises. The dictum to which I refer is Hayek's oft-quoted remark that "it is probably no exaggeration to say that every important advance in economic theory during the last hundred years was a further step in the consistent application of subjectivism."[35] For Mises, however, the goal of theoretical research in economics was not to simply "extend subjectivism," but to elucidate the crucial link between the subjective realm of individual purpose and valuation and the social pricing

[33]On the selective process, see Mises, *Human Action*, pp. 311–15.

[34]Ludwig von Mises, *The Ultimate Foundations of Economic Science: An Essay on Method*, 2nd ed. (Kansas City: Sheed Andrews and McMeel, 1978), p. 69.

[35]F. A. Hayek, *The Counter-Revolution of Science: Studies on the Abuse of Reason*, 2nd ed. (Indianapolis: Liberty*Press*, 1979), p. 52.

process that provides the objective data for economic calculation. According to Mises, such an endeavor must begin with "that brilliant achievement of the classical economists . . . essentially a theory of calculated action" and then broaden it into a "a system dealing with all human choices, a general theory of action."[36] Elsewhere Mises wrote that "supply and demand are only the links in a chain of phenomena, one end of which has . . . visible manifestation in the market, while the other is anchored deep in the human mind."[37] A further indication that Mises perceived the task of modern economics to be that of explicating the connection between individual purpose and the objective catallactic foundations of society is Mises's letter to Hayek in which he relates that he was initially undecided whether to entitle his *magnum opus Human Action* or *Social Cooperation*.

Richard M. Ebeling's contribution to the volume "Variations on the Demand for Money Theme: Ludwig von Mises and Some Twentieth-Century Views" (pp. 127–38) exemplifies this confusion of research programs. Ebeling gives a very good account of the essential differences between Mises's cash-balance approach to the demand for money, which derives from Carl Menger, and the Cambridge cash-balance approach as formulated in the writings of A. C. Pigou and drawn from the "oral tradition" which had been initiated by Alfred Marshall. Ebeling then proceeds to analyze the neo-Keynesian and monetarist macroeconomic approaches from the perspective of the methodologically individualistic Misesian approach, criticizing the propensity of both monetarists and Keynesians to argue in terms of the stability or instability of the aggregate demand for money. Unfortunately, in his critique, Ebeling throws out the demand-for-money baby with the stability bathwater, arguing that "from Mises's perspective, it is inappropriate to speak about *the* demand for money and *its* stability" and that "to speak of the community's 'aggregate demand for money' is not only methodologically unsound, but analytically incomplete" (pp. 135, 137).

Contrary to Ebeling's assertion, however, Mises did indeed hold that individual demands for cash balances could and should be aggregated into an overall market demand schedule for money. Thus, while he warned that investigation into the demand for money could not "begin with the demand for money of the community," he fully accepted the legitimacy of aggregating the individual demands into a social demand, declaring that "[t]he demand for money of the

[36]Mises, *Human Action*, p. 231.

[37]Ludwig von Mises, *The Theory of Money and Credit*, H. E. Batson, trans., 2nd ed. (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, 1971), p. 131.

economic community is nothing but the sum of the demands for money of the individual economic agents composing it."[38] While such a seemingly innocuous aggregate of homogeneous quantities may very well violate some unwritten canon of the Hayekian "subjectivist" paradigm, Mises clearly recognized that without reference to *the* demand for and supply of money it would be impossible to carry out the core of his own research program: integrating value and monetary theory to permit the explanation of the unified structure of money prices whose existence is the *sine qua non* for economic calculation and the purposeful allocation of resources within the framework of an economy based upon the division of labor.

In support of his anti-aggregation interpretation, Ebeling adduces Mises's insights that: (1) the purchasing power of money is not a single price but an array of the alternative quantities of the various goods which the monetary unit commands in exchange and (2) changes in the supply of money never affect the elements of this purchasing-power array simultaneously and equiproportionally and therefore invariably result in permanent redistributions of real income and wealth (p. 136). But, as Mises clearly recognized, these important insights establishing the nonneutrality of money are not relevant to the question of whether or not money-demand schedules may be properly aggregated across individuals; rather, they speak to the issue of the shape of the aggregate demand curve for money, leading to the conclusion that such curves can never be rectangularly hyperbolic.[39]

Although reluctance to employ the concept of a social demand for money cannot properly be attributed to Mises, it can be detected in Hayek's early works on business cycle theory. Thus, in *Monetary Theory and the Trade Cycle*, Hayek criticizes Menger and Mises for "including in the theory of the value of money *all* influences of money on prices."[40] In effect, Hayek is reproaching Mises in particular for attempting to provide an integrated analysis of variations in the supply of money in terms of both their systematic effects on relative prices and their effects on the height of overall prices, rather than just concentrating on the former type of analysis which Hayek considers the "far more important task" of monetary theory.[41] In *Prices and Production*, Hayek goes even further to encourage the realization by monetary theorists of "the superfluity of the concept of a general value of money, conceived as the reverse of some price level." He goes

[38]Ibid., pp. 131–32.

[39]On this point, see Salerno, "Mises's Monetary Theory," pp. 19–33.

[40]Hayek, *Monetary Theory and the Trade Cycle*, p. 117, n.

[41]Ibid.

on to write that the type of monetary theory whose development he looks forward to "will be no longer a theory of the value of money in general, but a theory of the influence of money on the different ratios of exchange between goods of all kinds."[42] Lest it be thought that Hayek is here objecting only to the concept of a statistical price level, it should be noted that his critique of Menger and Mises was advanced despite his explicit recognition that their notion of the general value of money ". . . has nothing to do with any measurable value, in the sense of some price level."[43] By challenging the very notion of the general purchasing power of money, Hayek, of course, is implying the uselessness of the concept of an aggregate demand for money.[44]

In contrast to the Wieser-Hayek position,[45] however, Mises held that the social appraisement of productive factors via entrepreneurial competition in resource markets, which is the very basis of economic calculation and purposive action, can only proceed in monetary terms.[46] Thus, in the course of estimating the expected marginal revenue products of the various inputs into his planned production processes and determining what prices to bid for them, the entrepreneur cannot help but estimate the absolute height of prices, i.e., the general purchasing power of money, because the exchange ratios between the various present goods and between present and future goods, i.e., Hayek's all-important "relative prices," are and must be embedded in the structure of money prices. Or, to put it another way, money's nonneutral effects on the economy operate only through the medium of *money* prices.

These considerations tend to be lost sight of when focusing on Hayekian proximal equilibrium because, outside of an uncertain and changing world, there is no need for a monetary appraisement process to continually revolutionize and recreate the price structure; in proximal equilibrium, money plays the role of a shadowy *numeraire*, and efficient action depends only on entrepreneurs knowing the currently prevailing configuration of relative prices, which serves as a good, if

[42]F. A. Hayek, *Prices and Production*, 2nd ed. (New York: Augustus M. Kelley, 1967), p. 29.

[43]Hayek, *Monetary Theory and the Trade Cycle*, p. 117, n.

[44]As Hayek ("On Neutral Money," p. 161) concludes, ". . . the theoretical concept of neutral money, which relates to the influence of money upon the price relationships [simultaneous and intertemporal] determined by real factors, cannot bear any relation at all to the concept of some 'price level' [even if this concept is introduced merely implicitly in the form of a 'demand for money' related to a definite price level]."

[45]As set forth in Hayek, "Some Remarks on the Problem of Imputation."

[46]See Mises, *Human Action*, pp. 331–38, for an explanation of the distinction between imputation and appraisement as these processes relate to the valuing of higher-order goods and of the relevance of this distinction for economic calculation.

not perfect, indicator of their likely future configuration. For Hayek, it is only when the money spending stream expands or shrinks that it has a nonneutral impact on the economy by causing reversible changes in the ruling barter rates of exchange and jarring the economy temporarily out of its proximal equilibrium. For Mises, on the other hand, it is only the existence of a real and tangible medium of exchange, with a market and, hence, a driving force all its own, that permits the operation of market processes at all. From Mises's standpoint, then, it is not the inescapable fact of money's inconsistency with an imaginary state approximating equilibrium but monetary intervention misdirecting the dynamic appraisement process that falsifies entrepreneurial calculations, undermines efficient resource allocation, and discoordinates the economy.

Sanford Ikeda's contribution, entitled "The Dynamics of Government Intervention: Theory and Implications" (pp. 201–12), is an interesting and original effort to formulate "a more systematic theory of what can be called the 'interventionist process'" that takes Mises's critique of interventionism as its point of departure (p. 202). What Ikeda seeks is to integrate the Misesian critique with public choice theory as a means of explaining the observed "ebb and flow of government growth," featuring prolonged periods of progressive deregulation alternating with periods of increasing interventionism, with neither the deregulatory phase nor the interventionist phase ever culminating in complete laissez-faire or thoroughgoing socialism, respectively (pp. 203–4).

In analyzing the "Misesian interventionist dynamic" which drives the process, however, Ikeda resorts to the Kirznerian discovery view of entrepreneurship, wherein the entrepreneur "serves a social function by [unintentionally] solving the knowledge problem" (pp. 204–5). By discovering and arbitraging discrepancies between simultaneously existing prices of the same or virtually the same goods, the entrepreneur repairs the gaps in knowledge of decentralized market participants and better coordinates their individual buying and selling plans. As I argued above, however, this view is at odds with Mises's theory of entrepreneurship, which focuses on the entrepreneur's function of *calculating* the most valuable uses of currently available inputs on the basis of *anticipated* output prices.

Ikeda also uses the Hayekian concept of "unintended consequences" to describe the outcome of single acts of intervention, and he characterizes the interventionist process as an "unintended process" (p. 205). From the Misesian perspective, however, the motivation for the various acts of intervention is precisely those immediate benefits that are intended by its proponents. And while Mises admits

that there may be "unforeseen" long-run consequences of any intervention, he attributes them not to an inevitable and irremediable condition associated with the Hayekian "knowledge problem," but to antisocial and deliberately obscurantist ideologies that blind the masses to the conclusions of economic theory.

Moreover, Mises's analysis of the interventionist process does not preclude the possibility that the proponents of an intervention recognize and intend its generally unforeseen consequences. Thus unions support minimum wage laws precisely because these laws price low-skilled workers out of the labor market and increase the demand for skilled union workers, while bureaucrats manning municipal rent-control boards may welcome the growing apartment shortage resulting from rent control because it increases their power, prestige, and the value of the favors they can bestow. Indeed, it is precisely the goal of many radical environmentalists to cripple capital formation and productivity and to bring about a decline of real income and population via environmental regulations. The very crises which regularly recur as the interventionist process proceeds also may be desired by those who are ideologically committed to the extension of political control over the economy.

Finally, I contend that Ikeda is simply incorrect when he asserts that "the reasoning underlying [Mises's] critiques of both socialism and interventionism [is] the same—the existence of the knowledge problem makes the consequences of government intervention nasty and unexpected" (p. 208). First, as Mises emphasizes time and again throughout his writings, "economic calculation," and not knowledge, is the "essential and unique problem of socialism."[47] Thus, according to Mises, even if the central planning board was endowed with full and perfect knowledge of the relevant economic data, without recourse to monetary calculation using genuine market prices, it would not be able to determine the optimal among the infinitude of possible uses and technical combinations of the available factors of production.[48] Second, as I have just pointed out, from the Misesian perspective, the consequences of an intervention are not necessarily "unexpected" to its active promoters and beneficiaries and need not continue to be so to the masses it victimizes.

In his essay on "Mises on Free Banking and Fractional Reserves" (pp. 517–33), Lawrence H. White interprets Mises's advocacy of free banking based on fractional gold reserves as a program for economiz-

[47]Ibid., p. 703.

[48]For a review of Mises's argument on this point, see Salerno, "Postscript: Why a Socialist Economy Is Impossible," pp. 52–54.

ing on the resource costs of supplying the medium of exchange while insuring that the issuance of fiduciary media is regulated in accordance with the desideratum of a neutral money, i.e., a money that does not impinge upon or distort the underlying real processes of the economy. It was Adam Smith, the acknowledged father of free banking, who introduced into monetary theory the proposition that a pure specie money involved a waste of scarce resources, while it was Hayek who originated the concept of, if not the term, "neutral money." According to Hayek in his most mature writings, the "nearest practical approximation" to such an admittedly "fictitious" ideal is a monetary system in which "increased demand for liquidity" is met by increases in the money supply aimed at maintaining stability of an index of raw materials prices that serve as a proxy for the average prices of the original factors of production, land and labor.[49] Assuming no increase in the stocks of the original factors, the practical attainment of Hayek's monetary ideal would result in "constancy of the money stream,"[50] which, not coincidentally, also happens to be the desired goal of modern free bankers.[51]

In his paper, White characterizes Mises as the prototype of modern free bankers, who opposed any ban on competing private banks issuing fiduciary media redeemable in gold on demand on the grounds that ". . . such a ban (1) would make the economy more vulnerable to money demand shocks, and (2) would needlessly increase the cost of supplying the economy with media of exchange" (p. 528). As White notes, this interpretation of Mises's rationale for free banking clashes sharply with Murray Rothbard's argument that Mises favored free banking as a preferred means of suppressing the issuance of fiduciary media, because it circumvents the dangers associated with ceding virtual control over the banking system to government, a result that

[49]Hayek, *Denationalization of Money*, pp. 84.

[50]Ibid., p. 77.

[51]For the free banking argument in favor of maintaining "monetary equilibrium," defined in Hayekian terms as a constant aggregate spending flow, see George A. Selgin, *The Theory of Free Banking: Money Supply under Competitive Note Issue* (Totowa, N.J.: Rowman & Littlefield, 1988), pp. 52–69. I should note that nowhere in his essay does White invoke the Hayekian concept of "neutral money." In fact, in another essay, White expresses mild skepticism about whether a free banking system is fully compatible with any macroeconomic norm including Selginian monetary equilibrium, although he seems to count it as a merit of the system's operation that it comes relatively closer to obeying this norm in practice than the central banking alternative. See Lawrence H. White, "Commentary: Norms for Monetary Policy," in Ebeling, *Austrian Economics*, p. 477 . Nonetheless, as I shall argue below in the text, the goal of "avoiding monetary demand shocks," which White imputes to Mises as a reason for supporting free banking and which White himself is obviously sympathetic to, is tantamount to stabilization of the money-spending stream.

Mises believed might be entailed by an outright legal prohibition of fractional reserves.

In fact, White's interpretation of Mises's views on fractional reserves and free banking is based on his unwarranted, if unintentional, homogenization of Mises with Smith on the question of the criteria of an ideal monetary system. White falls into error because he overlooks important passages in the very works of Mises that he cites, and because he ignores significant developments in Mises's theory of money that occurred between the publication of the first German edition of *The Theory of Money and Credit* in 1912 and the publication of *Nationalökomie* (the German language forerunner of *Human Action*) in 1940. In his 1940 work, Mises tells us, his "monetary theory achieve[d] completion" with the merger of "the theory of indirect exchange with that of direct exchange into a coherent system of human action.[52] These developments resulted in an important modification of Mises's earlier assessment of the relative benefits and costs of fiduciary media that is not acknowledged by White.

As White correctly points out (pp. 520–22), in *The Theory of Money and Credit*, Mises identifies three significant benefits of the issuance of fiduciary media. The first benefit involves the prevention of "convulsions" to economic activity that would have occurred in the absence of an expansion of the money supply caused by the creation of fiduciary media as a result of "an enormous extension of the demand for money" and the consequent increase in its purchasing power that was brought about by the historical extension of the money economy. The second benefit is the familiar Smithian one of reducing the "cost of the monetary apparatus." And the final benefit of fiduciary media is that their issuance sufficiently enhanced the profitability of the credit activities of the banking system early in its history to permit its survival and growth. The only disadvantage of fiduciary media that Mises recognized in this book, according to White, is a relatively minor one: the risk of default by the issuing bank due to mismanagement or bank runs. Thus White concludes that Mises "viewed fractional-reserve banking as a natural and desirable development in a free society" (p. 522).

But White's conclusion is mistaken, attributable to his failure to fully come to terms with one of Mises's most famous contributions to economic theory: his demonstration of the causal link between fiduciary media and the business cycle. White (pp. 524–25) evidently holds that according to Mises business cycles are generated by the

[52]Mises, *Notes and Recollections*, p. 112.

overexpansion of fiduciary media by central banks unrestrained by competitive market forces. However, Mises's chapter on the business cycle, following directly upon the chapter enumerating the benefits of fiduciary media which White cites in support of his own interpretation,[53] makes it pellucidly clear that the necessary and sufficient cause of the cycle is the unsustainable divergence between the "loan" and "natural" rates of interest effected by the creation of fiduciary media. For Mises, then, cyclical discoordination of the economy is indeed a disadvantage to be counted against fiduciary media *per se*. Accordingly, it is only *after* fully discussing both the advantages and disadvantages of fiduciary media, that Mises, in a section comprising the concluding five pages of the book—which is not referred to by White—addresses the "basic questions of future currency policy."[54] Here, Mises reprints the conclusion of the first German edition (the English edition is a translation of the second German edition published in 1924), in which he emphatically urged the suppression of all further creation of fiduciary media, if not the outright banning of fractional-reserve banking. Contrary to White's assertion, Mises was evidently convinced that the disadvantages of issuing fiduciary media, now including their cycle-generating property, far outweighed their earlier enumerated advantages.

Concludes Mises:

> [Fiduciary media] should logically be subjected to the same principles that have been established with regard to money proper; the same attempts should be made in their case as well to eliminate as far as possible human influence on the exchange ratio between money and other economic goods. The possibility of causing temporary fluctuations in the exchange ratios between goods of higher and of lower orders by the issue of fiduciary media, and the pernicious consequences connected with a divergence between the natural and money rates of interest, are circumstances leading to the same conclusion. Now it is obvious that the only way of eliminating human influence on the credit system is to suppress all further issue of fiduciary media. The basic conception of Peel's Act ought to be restated and more completely implemented than it was in the England of his time by including the issue of credit in the form of bank balances within the legislative prohibition.

[53]Mises's discussion of the advantages of fiduciary media occurs on pages 298–99 and 323, while his business cycle theory is presented on pages 339–66 (Mises, *Theory of Money and Credit*).

[54]Ibid., p. 406.

> *It would be a mistake to assume that the modern organization of exchange is bound to continue to exist. It carries within itself the germ of its own destruction; the development of fiduciary media must necessarily lead to its breakdown.* . . . It will be a task for the future to erect safeguards against the inflationary misuse of the monetary system by the government and against the extension of the circulation of fiduciary media by the banks.[55]

It is hardly to be concluded from the passage I have emphasized in the foregoing quotation that Mises looked with equanimity, let alone favor, upon the further creation of fiduciary media by banks, whether "free" or not.

White (p. 520) cites a part of a paragraph from a later, 1928 work of Mises's,[56] in which Mises reiterates the point that a suppression of the issue of fiduciary media would have given rise to historical situations in which the emergence of an excess demand for money resulted in an increase in the purchasing power of money that was temporarily disadvantageous to the economy. However, White does not cite the last sentence of this same paragraph, which identifies an important benefit that would have followed from the prohibition of further emission of fiduciary media: "the economy surely would not then have experienced the stormy upswings followed by dramatic reversals of the upswings into crises and declines."[57]

Mises also makes it clear later in the same work that the benefits of fiduciary media fall far short of their costs in terms of cyclical discoordination of economic activity. He therefore calls for the implementation of a revised Currency school program in the following terms:

> The most important prerequisite of any cyclical policy, no matter how modest its goal may be, is to renounce every attempt to reduce the interest rate, by means of banking policy, below the rate which develops on the market. That means a return to the theory of the Currency school, which sought to suppress all future expansion of circulation credit and thus all further creation of fiduciary media. . . . [I]t means the introduction of a new program based on the old Currency school theory, but expanded in the light of the present state of knowledge to include fiduciary media issued in the form of bank deposits.[58]

[55]*Ibid.*, p. 407–09.

[56]The English translation is Ludwig von Mises, "Monetary Stabilization and Cyclical Policy," in idem, *On the Manipulation of Money and Credit*, Bettina Bien Greaves, trans. (Dobbs Ferry, N. Y.: Free Market Books, 1978), p. 145.

[57]Ibid.

[58]Ibid., pp. 167–68.

Far from rejecting the Currency school program, as White would have us believe, it is clear Mises desired to reformulate it on a sounder theoretical basis in order to strengthen its practical application. Thus, contrary to White, Mises supported a free banking regime precisely because it would eventually result in "extreme restraint in the issue of fiduciary media." Free bankers would learn such restraint from their experiences of the crises and bank runs that would inevitably occur during the historical course of development of fiduciary media. Once such lessons were absorbed by the more astute banking entrepreneurs, policies of extreme caution and restraint would be enforced on the entire banking system as less responsible banks persisting in the further creation of fiduciary media would be immediately confronted by the twin threats of adverse interbank clearings and of loss of confidence by a once or twice chastened and now more sophisticated bank clientele.[59] At this point the program of the Currency school would be fully and properly implemented, as further extension of "circulation credit" by the banks would be checked and any additional accumulation of bank assets would reflect an increase in commodity credit based on time deposits and equity investments of voluntarily saved funds.

Unlike our modern free bankers, Mises emphatically did not foresee the free banking system evolving toward a minuscule reserve ratio of gold to demand liabilities and the progressive transformation of gold into a practically demonetized interbank "clearing asset."[60] For Mises, rather, evolution was all in the opposite direction, with initial entrepreneurial ignorance precipitating an early splurge in the creation of fiduciary media and the resulting cyclical fluctuations leading slowly back to a system of marginal 100 percent reserves while painfully renewing awareness among the public that bank notes and deposits are not money *per se* but merely claims to and substitutes for money, i.e., gold.

In his earlier writings, then, Mises did perceive there to be definite advantages associated with the issue of fiduciary media, but

[59]Ibid., pp. 138–40.

[60]Lawrence H. White and George A. Selgin, "The Evolution of a Free Banking System," in Lawrence H. White, *Competition and Currency: Essays on Free Banking and Money* (New York: New York University Press, 1989), p. 235. At least one prominent member of the modern free banking school, Richard H. Timberlake (*Gold, Greenbacks, and the Constitution* [Berryville, Va.: George Edward Durell Foundation, 1991]) has taken the leap and now forthrightly advocates free banking on a nonspecie standard, although White himself continues to firmly insist upon gold as the proper monetary standard for a free banking regime. For a critique of Timberlake's plan, see Murray N. Rothbard, "Aurophobia: or, Free Banking on What Standard?" *Review of Austrian Economics* 6, no. 1 (1992): 97–108.

he was willing to forego such advantages for the greater advantage of maintaining the integrity of monetary calculation and preventing disruptions of the price-and-interest-rate coordination of the economy. By the time he came to write *Human Action*, however, his views on entrepreneurship, monetary calculation, and money had evolved to the point where he was able to recognize that the benefits he had once attributed to the creation of fiduciary media were largely illusory. In particular, the later Mises abandoned his earlier belief that an increase in the purchasing power of money is somehow disadvantageous for the market economy.

Regarding a world in which there occurs a persistent "goods-induced" rise in the purchasing power of money resulting from secular growth in the supplies of commodities and services in conjunction with a rigidly fixed nominal money supply, Mises argued in *Human Action* that such a state of affairs would not disrupt the moment-to-moment price coordinating function of the market or upset the monetary calculations that lead entrepreneurs to efficiently allocate productive resources in service of anticipated consumer preferences.

As Mises wrote:

> Entrepreneurs and investors . . . do not heed the general movement of all prices. What matters for them is the existence of discrepancies between the prices of the complementary factors of production and the anticipated prices of the product. No businessman embarks upon a definite production project because he believes that *the prices*, i.e., the prices of all goods and services, will rise. He engages himself if he believes that he can profit from a difference between the prices of goods of various orders. In a world with a secular tendency toward falling prices, such opportunities for earning profits will appear in the same way in which they appear in a world with a secular trend toward rising prices. . . .
>
> A secular tendency toward a rise in the monetary unit's purchasing power . . . would certainly not influence substantially the course of economic affairs. It would not remove the urge of people to improve their material well being as far as possible by an appropriate arrangement of production. It would not deprive the economic system of the factors making for material improvement, namely, the striving of enterprising promoters after profit and the readiness of the public to buy those commodities which are apt to provide them the greatest satisfaction at the lowest costs.[61]

[61]Mises, *Human Action*, pp. 469–70.

Nor does the later Mises share with Hayek and the free bankers a dread of "monetary demand shocks," i.e., a "money-induced" increase in the purchasing power of money caused by a shrinkage of the money-spending stream due to hoarding. In particular, Mises denies that an increase in the demand for money at the expense of spending on consumer goods while the money supply remains unchanged will impede the process of transforming the additional real savings thus generated into an accumulation of new capital goods. Monetary calculation, taking into account the relative decline in prices of lower-order and consumer products and of the nonspecific factors of production, will faithfully reflect the increase in the availability of capital goods, and the prospect of higher profits will induce entrepreneurs to employ them in the expansion of their operations. As Mises concludes, "the main thing is that the capital goods resulting from additional savings are not destroyed by coincident monetary changes. . . . Whenever an individual devotes a sum of money to saving instead of spending it for consumption, the process of saving agrees perfectly with the process of capital accumulation and investment. It does not matter whether the individual saver does or does not increase his cash holding."[62] For the Misesian, then, the coordinative and calculative market process can and will respond with perfect (*ex ante*) efficiency to any combination of anticipated changes in the set of consumer preferences, including changes in "liquidity" preferences.[63]

This leaves us, finally, only with the advantage of fiduciary media in reducing the cost of supplying a medium of exchange. Although, as White notes, Mises was inclined to heavily weight this alleged advantage in his earlier writings, in *Human Action*, Mises does not allude to it; however, he does refer to "the expensiveness of gold production" as "the minor evil" when compared to the inflationary potential of paper fiat and credit money.[64]

Of course, in *Human Action*, Mises still adhered to his previous view concerning the overwhelming disadvantage of the creation of fiduciary media associated with its potential for falsifying interest rates and monetary calculation, introducing inefficiency into the

[62]Ibid., pp. 521–22.

[63]For a demonstration of this, see Salerno, "Commentary: The Concept of Coordination in Austrian Macroeconomics," pp. 335–40.

[64]Mises, *Human Action*, p. 422. In fact, when free banks invoke option clauses, post-dated notes, and other devices permitting the contractual suspension of specie payments, their notes and deposits are effectively transformed into a credit money, whose value is determined independently of the value of the original money commodity. For a discussion of Mises's neglected concept of credit money that touches upon this point, see Salerno, "Mises's Monetary Theory," pp. 8–11.

intertemporal allocation of resources, and precipitating the business cycle. This later assessment of the massive imbalance in favor of the disadvantages of fiduciary media may finally have led Mises to overcome his earlier fears of the expansion of political interference with banking that he foresaw as a possible ramification of the ultra-hardcore neo-Currency school program legally debarring all further additions to the outstanding circulation of fiduciary media, including demand deposits as well as notes. Thus, in his 1952 essay on "Monetary Reconstruction," which was included as Part Four in the second English edition of *Theory of Money and Credit*, Mises proposed just such a program as the basis for "the United States return to a sound currency."[65]

I conclude, then, that White's attempt to portray Mises's views on fractional reserves and free banking as prototypical of the modern free banking school, whose members draw their analytical orientation from equilibrium-based Hayekian monetary theory, is untenable. To the extent that Mises advocated the freedom of banks to issue fiduciary media, he did so only because his analysis led him to the conclusion that this policy would result in a money supply strictly regulated according to the Currency principle. Mises's desideratum was not a neutral money, or even a practical approximation thereof, but to completely eliminate the distortive influences of fiduciary media on monetary calculation and the dynamic market process.

As I indicated at the outset, my purpose in writing this review essay has been specifically to illustrate and rebut the common tendency that I believe exists among fellow Austrian economists to conflate the views of Mises and Hayek. Rigid adherence to this purpose has caused the tone of the review to be decidedly negative. However, this should not be construed to mean that I disagree with all or even most of each of the essays under review. Had I reviewed these papers with a broader purpose in mind, the extent of the common ground between myself and the papers' authors, based on the "Mengerian overlap" between the Misesian and Hayekian paradigms, would have been quite evident. Moreover, I regard the contributions by Kirzner and White to this volume to be, each in its own respect, excellent summaries of these authors' pioneering efforts elsewhere to systematize and extend the Hayekian paradigm. In the case of Kirzner, it can be argued that his formidable body of work

[65]Mises, *Theory of Money and Credit*, pp. 448–52.

largely defines this paradigm as it currently stands. And the endeavor by White and the modern free banking school to give this paradigm a contemporary macroeconomic expression rests on the Kirznerian conception of the market process. Ikeda's essay, his attributions to Mises notwithstanding, is a promising initial step in the direction of adumbrating a Hayekian theory of interventionism, and Ebeling's essay, for the most part, does capture the uniqueness and fruitfulness of the Misesian approach to the demand for money. Having said this, I still insist that the homogenization of the views of two brilliant but very different thinkers serves no purpose today but to significantly impede the quest for knowledge and truth among those working within the Mengerian tradition.