

Knowledge, Judgment, and the Use of Property

Jörg Guido Hülsmann

Two Interpretations of the Causes of the Socialist Disaster

In recent years, the socialist calculation debate of the 1920s and 1930s has attracted anew the interest of thinkers in the Austrian tradition. With the breakdown of the Soviet empire Ludwig von Mises's claim that socialism as an economic system is impossible has received a somewhat late empirical confirmation. However, modern Austrian economists are far from sharing a common interpretation of the issue.

Some of them think that the impossibility of socialism stems from its inability to communicate dispersed knowledge.¹ In their eyes, information about the particular circumstances of time and place can never be centralized. It necessarily exists in dispersed form and yet it can be communicated by the market prices of capitalist societies. Only capitalism is thus capable of solving the knowledge problem.

Other authors consider the knowledge-problem to be secondary.² They hold that the absence or presence of private property is the salient point. In socialism

Jörg Guido Hülsmann is instructor of economics at the Verwaltungs und Wirtschaftsakademie, Berlin. This paper was first presented at the Mises Institute's Austrian Scholars Conference in Auburn, Alabama, January 1996. I wish to thank Jeff Tucker for his comments on this paper.

¹ Cf., for example, Peter J. Boettke, *The Political Economy of Soviet Socialism* (Boston: Kluwer, 1990), pp. 23ff; Gerald P.O'Driscoll, *Economics as a Coordination Problem* (Lawrence: University of Kansas Press, 1977), pp. 16ff; Richard M. Ebeling, "Economic Calculation Under Socialism: Ludwig von Mises and His Predecessors," in *The Meaning of Ludwig von Mises*, Jeffrey M. Herbener, ed. (Auburn, Ala.: Ludwig von Mises Institute, 1993), pp. 56ff; Jesús Huerta de Soto, "Entrepreneurship and the Economic Analysis of Socialism," in *New Perspectives on Austrian Economics*, Gerrit Meijer, ed. (London: Routledge, 1995), pp. 228ff; Israel M. Kirzner, *The Meaning of Market Process* (London: Routledge, 1992), pp. 51f, 100f; Don Lavoie, *Rivalry and Central Planning: The Socialist Calculation Debate Reconsidered* (New York: Cambridge University Press, 1985); Karen Vaughn, "Economic Calculation Under Socialism: The Austrian Contribution," *Economic Inquiry* 18 (1980); Leland B. Yeager, "Mises and Hayek on Calculation and Knowledge," *Review of Austrian Economics* 7, no. 2 (1994): 93–109.

² Cf., for example, Jeffrey M. Herbener, "Ludwig von Mises and the Austrian School of Economics," *Review of Austrian Economics* 5, no. 2 (1991): 33–50; idem, "Economic Calculation and the Question of Arithmetic," *Review of Austrian Economics* 9, no. 1 (1996); Hans-Hermann Hoppe, *A Theory*

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there can be no calculation because the latter presupposes market prices. Market prices, however, presuppose exchange and, thus, private property.

This division of opinions goes back to Mises and Hayek. Mises considered the emphasis on the knowledge problem to be insufficient because it merely suggested a *practical difficulty* for the implementation of a socialist regime. What he had in mind was that socialism was, for purely logical reasons, *impossible*.³ Hayek, on the other hand, focused entirely on the problem of dispersed knowledge.⁴ He not only developed this point in the context of the socialist calculation debate but it is the foundation of all of his later social philosophy.

Importance of the Dispute

We are not merely discussing the reasons for the failure of socialism, because the dispute concerns both the understanding of what economics is all about and the practical conclusions that can be inferred from our science. The whole issue is of fundamental importance.

of *Socialism and Capitalism* (Boston: Kluwer, 1989); idem, "Socialism: A Property or Knowledge Problem?" *Review of Austrian Economics* 9, no. 1 (1996): 143–49; Murray N. Rothbard, "Ludwig von Mises and Economic Calculation Under Socialism," in *The Economics of Ludwig von Mises*, Lawrence Moss, ed. (Kansas City: Sheed and Ward, 1976); idem, *Man, Economy, and State*, 3rd ed. (Auburn, Ala.: Ludwig von Mises Institute, 1993), esp. pp. 542ff, 825ff, 830ff; Joseph T. Salerno, "Ludwig von Mises as Social Rationalist," *Review of Austrian Economics* 4 (1990): 25–54; idem, "Mises and Hayek Dehomogenized," *Review of Austrian Economics* 6, no. 2 (1993): 113–46; idem, "Reply to Leland B. Yeager," *Review of Austrian Economics* 7, no. 2 (1994): 111–25.

³Commenting on Hayek's article "The Present State of the Debate" (in *Collectivist Economic Planning*, F. A. Hayek, ed. [London: Routledge, 1935], p. 211), Mises says: "Hayek has shown that the use of equilibrium for economic calculation presupposes knowledge of the future valuations of the consumers. However, he has seen in this merely a problem of the practical application of the equations, not a fundamental and unsurmountable obstacle for their practical use." I am indebted to Dan Cristian Comanescu for bringing this passage to my attention. Consider also the following statement from Mises: "We do not deal with the problem of whether or not the director will be able to anticipate future conditions. What we have in mind is that the director cannot calculate from the point of view of his own present value judgments and his own present anticipation of future conditions, whatever they may be." Ludwig von Mises, *Human Action*, 3rd ed. (Chicago: Regnery, 1966), p. 700, my emphasis. Here Mises stresses the role of calculation, that is, of a method of thought. He explicitly denies the importance of knowledge for the issue under consideration.

⁴Hayek says: "The peculiar character of the problem of a rational economic order is determined precisely by the fact that the knowledge of the circumstances of which we must make use never exists in concentrated or integrated form but solely as the dispersed bits of incomplete and frequently contradictory knowledge which all the separate individuals possess." F. A. Hayek, "The Use of Knowledge in Society," in idem, *Individualism and Economic Order* (Chicago: University of Chicago Press, 1948), p. 77. Moreover, Hayek explicitly contended that economic calculation would be possible without private property: "It is the great contribution of the Pure Logic of Choice that it has demonstrated conclusively that even such a single mind could solve this kind of problem only by constructing and constantly using rates of equivalence (or "values" or "marginal rates of substitution"), that is, by attaching to each kind of resource a numerical index which cannot be derived from any property possessed by that particular thing, but which reflects, or in which is condensed, its significance in view of the whole means-end structure." *Ibid.*, p. 85).

According to Mises, economics is a science that consists of *a priori* propositions about reality. In his eyes these propositions are implied in the conditions of action and are arrived at by an exercise of logic. Whatever is the product of sound discursive reasoning, so the argument goes, must be valid for reality.

This is precisely the point that Hayek wants to oppose. To his understanding, economic theorems are in some way detached from reality. They are mere tautologies. Additional statements about the acquisition of knowledge are necessary to make them relevant for the understanding of our world. Thus, consider the grammatical declaration that he gave in his article on "Economics and Knowledge":

my main contention will be that the tautologies, of which formal equilibrium analysis in economics essentially consists, can be turned into propositions which tell us anything about causation in the real world only in so far as we are able to fill those formal propositions with definite statements about how knowledge is acquired and communicated. In short, I shall contend that the empirical element in economic theory—the only part which is concerned not merely with implications but with causes and effects and which leads therefore to conclusions which, at any rate in principle, are capable of verification—consists of propositions about the acquisition of knowledge.⁵

Formal equilibrium analysis in the sense Hayek uses refers to the mathematical approach. However, it is at least doubtful whether one really has to condemn equilibrium analysis altogether in order to refute socialism. This is an issue beyond our present scope. Rather the focus is on a critique of the Hayekian emphasis on knowledge problems and on a reconstruction of the fashionable expressions of market process and knowledge in terms of property and calculation. The Hayekian approach has been elaborated with delicacy by Israel M. Kirzner. Therefore, the present critique will refer mainly to his works.⁶ The whole knowledge paradigm is a blind alley and its infallibility leads to nihilism of the Shacklean–Lachmannian brand.

The Case Against the Knowledge Paradigm in Economics

Do Prices Communicate Knowledge or Coordinate Actions?

The first thing we have to ask is whether prices do have a communicative function at all. According to Kirzner, there are two quite different communicative functions of prices. He distinguishes between the communicative functions

⁵Ibid., p. 33.

⁶For a statement of some of my criticisms, see Jörg Guido Hülsmann, *Logik der Währungskonkurrenz* (Essen: Management Academie Verlag, 1996), pp. 13ff, 122ff.

of equilibrium and disequilibrium prices, and places particular emphasis on the latter:

It is one thing to recognize the role of equilibrium prices as economic signals which permit instantaneous coordination of decentralized decisions, based on dispersed bodies of knowledge. It is quite another thing to recognize the role of disequilibrium prices in stimulating entrepreneurial discoveries concerning the availability of dispersed information (whose existence had hitherto escaped relevant attention).⁷

Let us consider these functions in turn. This first thesis refers to equilibrium prices. It is, indeed, composed of three distinct sub-theses.

First off, prices are claimed to contain economic information in a condensed form.⁸ This is undoubtedly true if one intends to say that prices give information about exchange ratios of the past. Yet, we have to remark that past prices are the outcome of past conditions. Action, however, is never confronted with past but with future conditions, namely, with all conditions prevailing during its course. Moreover, and this is the crucial point, we should not overlook that prices are always the outcome of an action. Therefore, all information that this action was based upon had to be acquired beforehand. The price itself could not have communicated the knowledge that brought it about. Only in a metaphorical sense could one say that prices reflect or contain information on present conditions. For acting man these conditions of the immediate past are already bygone.

The second sub-thesis says that equilibrium prices permit the communication of dispersed bodies of knowledge.⁹ These particular circumstances of time and place are never known by anyone in their totality. Yet, through the exchange ratios of the market, they are transmitted in abridged form to all market participants. According to these advocates, socialism suffers because it has no equivalent mechanism. The socialist planning board cannot determine the values of the factors of production because these values are determined by facts of supply and demand that are too widely dispersed.¹⁰

⁷ Kirzner, *The Meaning of Market Process*, p. 117. For a forerunner of Kirzner see Otto Conrad, *Der Mechanismus der Verkehrswirtschaft* (Jena, 1931), pp. 36ff. Conrad advocated what he called a "road sign" theory of prices. The first instance of an equilibration process is probably Spencer's law of adaptation. According to this law, "the ultimate development of the ideal man is logically certain." *Social Statics*, 1st ed. (reprint; New York: Robert Schalkenbach Foundation, 1970), p. 55–57. The driving force in the adaptation process is man's moral sense (see *ibid.*, pp. 83ff).

⁸ See Kirzner, *The Meaning of Market Process*, p. 151; and *idem*, *Competition and Entrepreneurship* (Chicago: University of Chicago Press, 1973), p. 10.

⁹ See also Kirzner, *The Meaning of Market Process*, pp. 139ff; and *idem*, *Competition and Entrepreneurship*, p. 228.

¹⁰ Hayek, *Individualism and Economic Order*, pp. 90f: "Only to a mind to which all these facts were

Let us observe that the positive part of this reasoning contains no argument at all. It is asserted that prices communicate abridged relevant information. This, however, is only a metaphorical expression. Each exchange ratio is determined by particular circumstances of time and place. Yet, it is not important *that* this be so but rather—if at all—*how precisely* this determination operates. As long as there exists no theory about the exact determination of our choices, we can infer nothing from the fact that everything must be determined. It is also mere assertion that no mechanism other than prices could communicate those dispersed facts with the same speed.¹¹ However, if we assume, for the sake of the argument, that this was the case, then the market economy would stumble from one crisis into another. The quickest information for the capitalist-entrepreneurs is in the observation of market prices. Only then would they begin to act. In other words, if information really were so important, there would be no use for anticipating the future, yet it is precisely the latter that permits the market to operate smoothly.

Finally, the advocates of the importance of knowledge problems argue that exchange ratios permit the coordination of decentralized decisions. It is difficult to see how coordination as such could ever be a problem that socialism is incapable of solving. Indeed, in a larger sense all actions are somehow coordinated. Our actions are no less coordinated with the actions of milkmen and movie tycoons than with those of robbers, rapists, and murderers. It is not the problem of murder that the Hayekian knowledge theorists have in mind when they speak of coordination, so an additional criterion is required to distinguish “good” from “bad” coordination. This criterion—and not coordination—would then be the cornerstone of economic analysis.¹²

Thus, one is led to wonder whether the word “coordination” is but an unfortunate expression that obscures some valuable insights. We should therefore take a closer look at the illustrations given in support of the knowledge-problem approach. Probably most famous is the tin example that Hayek uses to illustrate the claim that “prices can act to coordinate the separate actions of

simultaneously known would the answer necessarily follow from the facts given to it. The practical problem, however, arises precisely because these facts are never so given to a single mind, and because, in consequence, it is necessary that in the solution of the problem knowledge should be used that is dispersed among many people.”

¹¹“We cannot expect that this problem will be solved by first communicating all this knowledge to a central board which, after integrating all knowledge, issues its orders.” *Ibid.*, p. 84. On this point and its implications see in particular Hoppe, “Socialism: A Property or Knowledge Problem?”

¹²For a critique of coordination as a relevant criterion for economic theory, see also Stephen Shmanske, “On the Relevance of Policy to Kirznerian Entrepreneurship,” *Advances in Austrian Economics* 1 (1994): 204ff.

different people in the same way as subjective values help the individual to coordinate the parts of his plan." Hayek suggests that we:

Assume that somewhere in the world a new opportunity for the use of some raw material, say, tin, has arisen, or that one of the sources of supply of tin has been eliminated. It does not matter for our purpose—and it is significant that it does not matter—which of these two causes had made tin more scarce. All that the users of tin need to know is that some of the tin they used to consume is now more profitably employed elsewhere and that, in consequence, they must economize tin. There is no need for the great majority of them even to know where the most urgent need has arisen, or in favor of what other needs they ought to husband the supply. If only some of them know directly of the new demand, and switch resources over to it, and if the people who are aware of the new gap thus created in turn fill it from still other sources, the effect will rapidly spread throughout the whole economic system and influence not only all the uses of tin but also those of its substitutes and the substitutes of these substitutes, the supply of all things made of tin, and their substitutes, and so on; . . . The whole acts as one market, not because any of its members survey the whole field, but because their limited individual fields of vision sufficiently overlap so that through many intermediaries the relevant information is communicated to all.¹³

There can be no doubt that the effect of the increased scarcity of tin will rapidly spread throughout the whole economic system and influence not only all the uses of tin but also those of its substitutes, etc. This process is, however, not best characterized by a coordinative function of prices.

The fundamental fact of scarcity implies that not every demand for tin can be satisfied. Some people have tin whereas others do not. An increased scarcity of tin implies that some market participants who otherwise could have benefited from tin are now of necessity prevented from using it. If a quantity of tin is sold, then the seller cannot sell it again, *regardless of the exchange rate*. There is simply no more of this tin left. Whether the seller takes notice of this or not is immaterial. He cannot sell what is no longer in his possession. Moreover, tin does not become scarcer and *then* this fact can come to be known to someone and lead to adaptations. Rather it is the other way around. The very fact that demand increases means that someone *already knows* of a more value-productive employment of tin.

It is not prices that coordinate the actions of sellers and buyers of tin; prices are the outcome of (coordinated) action, not its coordinators. It is property,

¹³Ibid., pp. 85f.

rather than knowledge, that coordinates the separate actions of different people. The terms coordination and communication rather obfuscate than adequately express this fact. This is another example of the dangers linked to the use of metaphors in scientific discourse.

The Attraction Theory of Equilibration

Now, let us return to the second of Kirzner's theses. How far is it justified to speak of a communicative function of disequilibrium prices? Previously, we have seen that Kirzner believes them to stimulate entrepreneurial discoveries concerning the availability of dispersed information. The important word in this expression is "stimulate." Does Kirzner intend to say that prices or price spreads are the *causes* of actions? Indeed, this seems to be the position that he advocates. He says: "opportunities for profit can attract and inspire market actions which turn out to reduce market ignorance and misallocation."¹⁴

It is important to realize that this conception does not coincide with entrepreneurial alertness in the definition used by Kirzner. Entrepreneurial alertness is to be "understood as the capacity independently to size up a situation and more correctly reach an imagined picture of the relevant (as yet indeterminate) future. All of us share in this ability to some extent . . . But some have higher degrees of this ability."¹⁵

Indeed, who would venture to deny that each of us, at least to some extent, manages to size up a situation and correctly reach an imagined picture of the relevant future?¹⁶ However, Kirzner's conception of the communicative function of disequilibrium prices relies on something entirely different from alertness in the above sense. He claims that

it is the *prospective gain offered by [future] realities* which "switches on" entrepreneurial alertness.¹⁷

¹⁴Kirzner, *The Meaning of Market Process*, p. 36. He also uses other expressions for this claim. Thus he says, for example, that "opportunities for pure profit [are] able to attract the attention of the most alert entrepreneurs," idem, *Perception, Opportunity, and Profit* (Chicago: University of Chicago Press, 1979), p. 151. See also Israel M. Kirzner, *Discovery and the Capitalist Process* (Chicago: University of Chicago Press, 1985), pp. 27ff, 96, 132. Kirzner also advances Hayek's claim that a mode of organization can generate learning, see, *Perception, Opportunity, and Profit*, p. 147; and Hayek, *Individualism and Economic Order*, p. 95). Esteban Thomson, a student of Kirzner's, puts forth the same argument: "Market prices . . . are not merely an efficient way of aggregating and transmitting information already known by someone but, more important, they are the stimulators of a discovery process." Esteban Thomson, *Prices and Knowledge* (London: Routledge, 1992), p. 37.

¹⁵Kirzner, *The Meaning of Market Process*, p. 26.

¹⁶This point is lucidly stated by Hans-Hermann Hoppe in "On Certainty and Uncertainty, Or: How Rational Can our Expectations Be?" *Review of Austrian Economics* 10, no. 1 (1997): 49–78.

¹⁷Kirzner, *The Meaning of Market Process*, p. 27.

We know very little about the precise way in which pure profit opportunities attract entrepreneurial attention. But there can be little doubt about the powerful magnetism which such opportunities exert.¹⁸

Kirzner has invited us, without supporting argumentation, to share his belief in what could be labelled an attraction or revelation theory. For if action is conscious behavior, what does it mean that price spreads *cause* action? There must be a sort of mechanism that brings price spreads to the attention of some entrepreneurs. Price spreads must then be conceived of as somehow jumping into an entrepreneur's consciousness without requiring any prior action on his part. In general terms, Kirzner's conception implies that we (or some of us) do have information about an object because the object itself puts it somehow in our consciousness. We are passive and the object is active.

Of course, this is not true. The objects in our environment are as they are—whether we know something about them or not. However, without conscious action on our part we will never know anything about them. Or could you even describe the color of the seat you sit upon right now without consciously looking at it once again? Could you even say precisely how many steps one has to climb to get to your hotel room without counting them? There is an infinite number of questions of this kind, and each time the answer is no. It is not the objects that attract our action. We have to act to make them enter into our consciousness.

To be sure, an object must be there to be perceived. Its existence is a necessary condition for its being perceived. Yet a perception is always an action, that is, the manifestation of a choice; and choice is in no known way determined by any object. Thus, without consciously taking notice of the prices that are formed on the market we cannot possibly know about them. As a consequence, we cannot be attracted by prices and price spreads, either.

Price differences in the same market are no exception. Even if there are different prices at the same time and in the same geographical area, entrepreneurs have to consciously look for them. They have to *act* in order to know where to buy and where to sell.

At each moment there is probably an infinite number of undiscovered price spreads. We would all be much better off if Kirzner was right and these price spreads were revealed to some of our fellows. They could stay at home, sit in their armchairs and reap some pretty profits. Unfortunately, this is not how things happen in our world. It is therefore impossible to conclude with Kirzner that

¹⁸Ibid., p. 160.

"this very spread between high and low prices suggests to some alert entrepreneurs that arbitrage profits may be won."¹⁹

Kirzner does not claim that every alert entrepreneur will be attracted by profit opportunities. However, this is no solution to the difficulty that his attraction theory faces. In a sense it rather creates additional difficulties. For one still has to explain *how* an object, by its sole existence, can enter our consciousness. Yet, now, one also has to explain *why* some persons are more susceptible to price spreads than other persons.

However, even if one ignored these objections and even if one assumed, for the sake of argument, that alert entrepreneurs could somehow know the marginal value product of factors of production, the attraction theory would still be contradictory. For either a factor of production has already been sold on the market or not. If it has been sold at a price below its discounted marginal value product then there is a profit opportunity. Yet, in this case, it would be too late for an alert entrepreneur to intervene, for the very reason that it already has been bought by a competitor. If, by contrast, that factor has not yet been sold to anybody then there is no price spread. As a consequence, no alert entrepreneur *can* be attracted to purchase this factor. Thus, the attraction theory is invalid even on its own assumptions.

Kirzner would probably deny that his theory leads him close to the grounds of a somewhat crude materialism. He sometimes emphasizes that one "can never say that alertness rendered its possessor sure that he would successfully discover that which he later discovers."²⁰ However, one should not overlook that his attraction theory is of crucial importance to what he considers to be the central theorem of economics, namely, the theorem that "demonstrates the equilibrative and coordinative tendencies in the market process."²¹ This theorem, as Kirzner understands it, rests on the notion of a systematic learning process that is generated throughout subsequent time periods.²²

¹⁹Ibid., p. 146, emphasis added.

²⁰Israel M. Kirzner, *Discovery, Capitalism, and Distributive Justice* (Oxford: Basil Blackwell, 1989), p. 24; see also idem, *Discovery and the Capitalist Process*, p. 109.

²¹Ibid., p. 160.

²²Kirzner did not always advocate an attraction theory, see *Competition and Entrepreneurship*, p. 227, and idem, *Perception, Opportunity, and Profit*, p. 130. Yet, he always believed that a theory of the market process has to rely on a way to determine choices by the physical environment of action. In his *Competition and Entrepreneurship*, he did not conceive of this determination as running through price spreads. Rather he stressed, in a more general way, that the "newly acquired information concerning the plans of others can be expected to generate, for the succeeding period of time, a revised set of decisions. The overambitious plans of one period will be replaced by more realistic ones; market opportunities overlooked in one period will be exploited in the next." Ibid., pp. 10 and 70ff; also see *The Meaning of Market Process*, pp. 48, 16, 129. To be sure, this is mere assertion as well. Nowhere does Kirzner give an argument as to *why* the plans will be revised and *why* they will be more realistic.

Now such a theorem must of necessity show that discoveries (that is, pertinent judgments) are in some way determined by the objective conditions of action. If discoveries were determined by choice alone, such a demonstration would be impossible, as choice implies that one can err. Hence, Kirzner's central theorem requires that discoveries be explained by factors other than choice. This is precisely what Kirzner attempts to do with his attraction theory. Indeed, it would be insufficient for his purpose to merely stress the "motivation to see relevant facts as they are."²³ For such a motivation alone would, of course, not assure any success. It is not sufficient to claim that entrepreneurs are alert if one wants to prove the existence of a Kirznerian equilibrating process. One has to show *that* they succeed and why. Above we have seen that Kirzner can hardly be said to have solved this problem. The reason is, of course, that one cannot think of action apart from choice. Yet, does this mean that it is vain to look for any tendency of the market toward equilibrium? Be that as it may, even if the analysis of equilibrium or equilibration were defective it could hardly be helpful to supplement it or to replace it with another fallacious theory.

The Consequence: Empiricism

By the way, Kirzner seems not to be very convinced of his proof of equilibration, either. Above we have noted that at the bottom of Kirzner's attraction theory there is nothing but his *belief* in it. This is no exaggeration. Indeed, Kirzner is very conscious that this is the basis of his theory. Consider the following statements:

It can be shown that our confidence in the market's ability to learn and to harness the continuous flow of market information to generate the market process depends crucially on our belief in the benign presence of the entrepreneurial element.²⁴

An assertion that the attempted execution of a set of incompatible plans will set in motion a systematic series of plan changes tending toward equilibrium cannot be made on purely logical grounds. Such an assertion must depend on a postulated propensity on the part of market participants to learn the correct lessons from their experience.²⁵

This reliance on mere assertion and on an appeal to share in his belief indicates that Kirzner has abandoned the idea of praxeology, that is, of a logic of the social phenomena. Indeed, his empiricism has constantly grown over the years.²⁶ In his last book he explicitly says:

²³Kirzner, *Discovery and the Capitalist Process*, p. 83.

²⁴Kirzner, *Competition and Entrepreneurship*, p. 14.

²⁵Kirzner, *Perception, Opportunity, and Profit*, pp. 24 and 33.

²⁶Cf. also Eran Binenbaum, "Kirzner's Core Concepts," in *New Perspectives on Austrian Economics*, Meijer, ed., p. 146ff.

economic science has always proceeded from the important empirical circumstance of economic order. . . . The market obviously works. That the market works is perhaps the most significant lesson of modern history.²⁷

It is the central tenet of market process theory, under the present variant of it, that despite the complexities thus introduced by continually changing UV's [underlying variables], the essential character of the market process, as a matter of historical experience, does remain largely intact.²⁸

This is not the way Mises conceived of the market or of the relationship between the historical and the theoretical branches of the social sciences. It is an open question whether market-process analysis of the Kirznerian variant is not essentially a kind of historical investigation. However, we cannot address this topic at this place as our purpose is more limited.

Robbinsian Economizing and Kirznerian Entrepreneurship

From what has been said so far it follows that Kirzner's whole characterization of entrepreneurial activity as a resourceless discovery²⁹ is unfounded. For if action implies that scarce means are employed in the pursuit of ends, and if one has to act in order to perceive anything whatever, then there can be no such thing as a discovery—or better: a judgment—without the disposition of one's brains and sensory apparatus. There can be virtually no activity at all without at least *some* property.³⁰ As a consequence, it would be equally impossible to realize any judgment on the market without becoming a capitalist. Likewise it is inconceivable to be simply a capitalist lending funds to an alert idea man. For doing this, one would at least have to make the discovery that this credit is at the moment the best way to use one's property.³¹

We have seen that the root of Kirzner's errors concerning entrepreneurial discoveries lies in his attempt to determine choice—if only implicitly. Choice is

²⁷ Kirzner, *The Meaning of Market Process*, p. 35.

²⁸ *Ibid.*, p. 43.

²⁹ "What the introduction of the pure entrepreneur means, however, is that for our analysis we create a decisionmaker who starts without any means whatsoever." Kirzner, *Competition and Entrepreneurship*, pp. 40, and 16, 22, 44, 47ff, 53f, 83.

³⁰ Even though Mises advocated a functional distinction between capitalists and entrepreneurs he emphasized that "it is impossible . . . to imagine an entrepreneur without any resources" and that entrepreneurial risks "are inseparable from the ownership of the material means of production" (my translation). "Les hypothèses de travail dans la science économique," in *Cournot, nella economia e nella filosofia*, Padora, ed. (Venice: Facoltà de economia e commercio, 1939), p. 118. See also Shmanski, "The Relevance of Policy in Kirznerian Entrepreneurship," pp. 214–19.

³¹ Cf. Murray N. Rothbard, "Professor Hébert on Entrepreneurship," *Journal of Libertarian Studies* 7, no. 2 (1985): 283ff. It is remarkable that nowhere does Kirzner address this critique.

the universal problem with which acting man is confronted. At each moment he has to choose the supposedly most important action that can be executed. This kind of judgment is the cornerstone of economic science. It is well known that Kirzner tends to qualify this. All of his work—virtually all of his articles—starts from a critique of what he calls the “Robbinsian economizer.”³²

Kirzner claims that the problems of real life are disfigured if one considers the economic data to be given to the market participants. In Kirzner’s eyes, if a datum is given this means that it is *known* to some or all market participants.³³ As a consequence, he emphasizes that the market participants have to discover the data. If the latter are only incompletely perceived, there can be something like “sheer ignorance” of the present data. It is through the market process that the data become known as they are discovered. Kirzner further argues that what counts is not equilibrium and perfect knowledge but equilibration and discovery. Let us not waste our time, so the argument goes, with the never-never land of the evenly-rotating economy and perfect knowledge. Let us rather focus on our way to acquire knowledge and thus approach equilibrium in a process of equilibration.

One cannot deny that not all data are given to us in the sense that we know them. However, it is a different question whether this was claimed in Lionel Robbins’s *The Nature and Significance of Economic Science*. And it is also a different question whether, if Robbins did do so, the Kirznerian entrepreneur would be a viable alternative.

An impartial reader of Robbins’s above-mentioned book cannot help but wonder what Kirzner’s critique is based upon. Kirzner rarely gives quotations to support this argument, and it is only in his work *The Economic Point of View* that he quotes at length from Robbins.³⁴ Yet even in these quotations nothing can be found which could possibly support his claim against Robbins. To avoid any misunderstandings: I do not intend to say that nothing can be found in these quotes that would not be worthwhile criticizing. However, it is obvious that Robbins does not consider the ends of action to be *known*. Rather, he explicitly states that, for economic theorems to be valid, the concrete means-ends frameworks are irrelevant.³⁵

³² Cf., Kirzner’s *Competition and Entrepreneurship*, pp. 33f and 71ff; idem, *Perception, Opportunity, and Profit*, pp. 5ff and 167; idem, *Discovery and the Capitalist Process*, pp. 81f, 153ff; and idem, *The Meaning of Market Process*, pp. 124ff.

³³ Cf., Kirzner *Competition and Entrepreneurship*, pp. 29, 108, 118; idem, *Perception, Opportunity, and Profit*, pp. 14f; idem, *Discovery and the Capitalist Process*, p. 154; and idem, *The Meaning of Market Process*, p. 154f.

³⁴ Israel M. Kirzner, *The Economic Point of View* (New York: D. Van Nostrand, 1960), pp. 108ff.

³⁵ Lionel Robbins, *An Essay on the Nature and Significance of Economic Science*, 2nd ed. (London: Macmillan, 1935), pp. 24ff.

Perhaps Kirzner's purpose is not to criticize Robbins but some contemporary microeconomic textbooks featuring a caricature of acting man. Thus, he points out "that the purely allocative decision never does occur, and that in fact it is sheer illusion to imagine that economic science can ever provide the kind of precision suggested in microeconomic textbooks."³⁶ However, in this case it would be inadequate to charge Robbins with the fallacies of some writers who are (or can be considered to be) inspired by his work. And still the question remains, then, whether the emphasis on discovery and knowledge represents any conceivable advance over the emphasis on choice.

Of course, we do not know everything in our environment in the sense that we have already experienced it. But this is completely irrelevant for the problem of choice. For to choose correctly does not mean that one has experienced all relevant data, but that one acts according to a correct *judgment* upon these data.³⁷ That data are given does not mean that they are known. It means rather, that our action is confronted with them, be they means or obstacles. Yet they *are* means and obstacles independently of the question whether we know them or not. It is also irrelevant whether a datum does already exist at the moment of our decision. If it comes into existence only in the future it is no less a datum than any other. For our action, it is then given in the same sense as the presently-existing data are given, too. Entrepreneurial appraisements of the factors of production do not presuppose information about the future. They are judgments based on estimates, that is, judgments about the future.³⁸

Does all this mean that knowledge has no bearing on action whatever? Indeed, one cannot avoid this conclusion by saying that most of our past knowledge can successfully be applied in the future. For the very question is *why* this is so. The validity of empirical knowledge has been established by experience, and all our experiences are determined by the totality of their conditions. Yet,

³⁶Kirzner, *Discovery and the Capitalist Process*, p. 83.

³⁷This is regularly pointed out by Kirzner's critics. See Jack High, "Alertness and Judgment: Comment on Kirzner," in *Method, Process, and Austrian Economics*, Israel M. Kirzner, ed. (Lexington, Mass.: Lexington Books, 1982), p. 165; and Emile Wubben, "Austrian Economics and Uncertainty," in *New Perspectives on Austrian Economics*, Meijer, ed., p. 130f.

³⁸This crucial fact has already been stated by Henry Hazlitt: "It is not enough that the entrepreneur be 'alert' and that he 'perceive' an opportunity; he must *act* on his alertness and perception. . . . By omitting this link [Kirzner] tends to overstress the entrepreneur's alertness and perception while under-emphasizing his courage in taking risks. . . . It is not always true that the entrepreneur perceives an opportunity. He *thinks* he perceives it. He perceives an *apparent* opportunity. In fact, he is *betting on an assumed future condition*. What he acts on may not be a perception but a *guess*. . . . Every entrepreneur is pitting his own guess or 'perception' against the composite guess or perception of all the rest." Hazlitt, "Review of *Competition and Entrepreneurship*," *The Freeman* (December 1974): 759.

the conditions of action are not immutable. Rather, they change from day to day. Here lies the problem of the application of past knowledge. We have to *judge* whether the same conditions will prevail in the future as well. To this task all our empirical knowledge is of no help.

Therefore, there can be no such thing as a "generation of knowledge" through disequilibrium prices. The latter do not "reveal, to alert market participants, how altered decisions on their part . . . may be wiser for the future."³⁹ No past experience tells us what we should expect for the future to come. Neither can it tell us which actions we should choose.

Each action presupposes an ingredient that is entirely distinct from knowledge and information, namely, a judgment upon the conditions prevailing in the future. Why, then, do we need the Kirznerian entrepreneur at all?⁴⁰ Even Kirzner himself sometimes describes the Robbinsian economizers as "decision makers [that] are passive price-takers, simply optimizing against the background of assumed data."⁴¹ Thus Robbinsian economizers do not behave as mechanically as Kirzner would have us believe them to be. At least they anticipate the future. They thus cannot be simple price-takers. Kirzner would surely retort that nothing in their behavior assures equilibration. However, as we have seen, nothing in his concept of an entrepreneur can assure this, either. Kirzner's argument, therefore, boils down to saying that "some assumptions about the future prove to be profitable whereas others do not; *therefore* the former are 'entrepreneurial discoveries' whereas the latter are the 'data' assumed by Robbinsian economizers." True enough, but this kind of wisdom would not require an economist.

Searching for Knowledge of the Future: the Road to Shackleanism

Kirzner's emphasis on discovery and equilibration is not necessary to give meaning to any sound economic doctrine. As we have already noted, in its attraction-theory version it merely leads to additional problems. Now we have to focus on another area of difficulty that inevitably follows from considering knowledge problems as the cornerstone of economics. For the talk of knowledge and sheer ignorance leads ultimately to what is erroneously called extreme or radical subjectivism (erroneously, because it is rather a spurious subjectivism). If

³⁹ Kirzner, *The Meaning of Market Process*, p. 146.

⁴⁰ Roger Garrison remarks perceptively that it is a "fundamental point of logic" that at "some points in the analysis . . . an entrepreneurial function lying outside the supply-and-demand framework is necessary." "Equilibrium and Entrepreneurship," *Advances in Austrian Economics* 2 (1995): 68 and 76. However, it is not alertness that fulfills this function but action based on a judgment about the future.

⁴¹ Kirzner, *Competition and Entrepreneurship*, p. 42, emphasis added. See also idem, *The Meaning of Market Process*, p. 129.

knowledge can only be acquired after perception, then economics (and all other social sciences, too) can only be an empirical, *ex post* science of human action. Now, strictly speaking, *all* knowledge that we ever acquire is acquired *ex post*, i.e., after a perception.⁴² We always have to advance additional reasons to argue for the more or less universal validity of a perception. Yet, the spurious subjectivists just claim (correctly) that there can be no present experience of future events. From this they infer that there can be no scientific statements about the future, either. For them, the future is kaleidoscopic, veiled and, in principle, unknowable.

Emphasis on discovery and equilibration cannot avoid these conclusions at all. It is vain to think that there is a kind of knowledge-producing mechanism called equilibration. Despite all claims to the contrary, this kind of a mechanism is the very core of Kirzner's comprehension of the market. One may discuss the question whether it is really a mechanism that is at stake. But it is hardly possible of denying that Kirzner's theory of equilibration aims at and relies upon statements about the systematic nature of entrepreneurial discoveries. Call this systematic nature of discoveries a mechanism or call it something else—the crucial point is that there must be a constancy that links perceptible events and their perception, that is, their discoveries. Otherwise, one could not speak of a theory at all, for a theory always aims at the establishment of general rules. There cannot be such a rule without constancy.

Of course, neither Kirzner nor anybody else has succeeded in elaborating such a theory. However, we have to address the question of whether it is at least conceivable that such a theory can be constructed. For in this case, Kirzner's attempts could be considered to be a quite normal failure but not without some merit. Unfortunately this is not the case. The notion of a constant relationship between perceptible objects and their perception, which must be rejected. It is not a viable approach to economics at all. We know nothing about the precise reasons for perceptions.

This criticism has already been noted above. The only way to counter it is to claim that, in the course of time, acting man discovers more and more of the environment of his actions. Once we have discovered an object, we learn each day to deal a little bit better with it. As time goes by, we can better discern what kind of perceptions it does permit under what circumstances.

⁴²This point is stressed by all subjectivists. Cf., for example, Ludwig Lachmann, *Expectations and the Meaning of Institutions*, Don Lavoie, ed. (London: Routledge, 1994), esp. chaps. 16 and 17; Brian J. Loasby, "Economics of Dispersed and Incomplete Information," in *Method, Process, and Austrian Economics*, Kirzner, ed., pp. 122f; G.L.S. Shackle, *Epistemics and Economics* (Cambridge, England: Cambridge University Press, 1972), p. 91.

Even if this is true, let us note three points. First of all, it does not concern the lack of a viable perception theory. The proposition that, once we know something, we know it for all time does not answer the question of how we came to know it. Furthermore, this proposition ignores the fact that the conditions of action do not cease to change. Therefore, the knowledge that we acquired through an *ex post* evaluation of the past cannot simply be applied again in the future.⁴³ Yet most importantly, it merely refers to objects different from human action. But what about action itself? What about choice and perception? Can choice and its offspring, prices and price spreads, be studied with the same results as the dead matter around us? The answer to this question is no. Not only is it impossible to deduce choice from any other conditions of action, there also *can* be no theory featuring the causes of choice. Such a theory would have to assume that there was something like constancy in the thought of acting man. In other words, such a theory would have to presuppose that man cannot learn; this, however, is self-defeating.⁴⁴

To be sure, no entrepreneur can base his judgments on the sole analysis of conditions of action other than choice. He has to analyze choice as well. Yet, this he must do in the way of thymological understanding.⁴⁵ Thus, he can never arrive at any general conclusions. There is no possibility to say in a general manner under which conditions our discovered knowledge about price spreads will be valid.

The emphasis on knowledge and discovery cannot avoid the pitfalls of spurious subjectivism. However, the latter doctrine is definitely not the position Kirzner advocates. In *The Meaning of Market Process*, he emphatically refutes the case of spurious subjectivism. He tries to defend what Roger Garrison calls the Austrian middle ground.⁴⁶ However, on the basis of his own account of economic doctrine, this would be an impossible undertaking. If equilibrium analysis presupposes that all data are *known* to each market participant, one cannot counter the arguments of the spurious subjectivists. Yet, in his refutation of the latter, Kirzner does not try to show that they have given a wrong account of the allegedly-important problems of knowledge and sheer ignorance. Rather, he makes an excellent case for common sense, and this case he states without recourse to knowledge and ignorance, but with emphasis on action and choice. He says:

⁴³ Cf. on this point Salerno, "Mises and Hayek Dehomogenized": 126f.

⁴⁴ Cf. Hans-Hermann Hoppe, *Kritik der kausalwissenschaftlichen Sozialforschung* (Opladen: Westdeutscher Verlag, 1983), and idem, *A Theory of Socialism and Capitalism* (Boston: Kluwer, 1989), chap. 6.

⁴⁵ Cf. Ludwig von Mises, *Theory and History* (Auburn, Ala.: Ludwig von Mises Institute, 1985).

⁴⁶ Cf. Roger W. Garrison, "Austrian Economics as the Middle Ground," in *Method, Process, and Austrian Economics*, Kirzner, ed., pp. 131ff.

The usual, layman's, perception of human decisions is that some of them are taken wisely, judiciously, successfully. These are the decisions which, in retrospect, one recognizes as having been crucial to the achievement of some desirable outcome. Other decisions, the usual perception has it, turn out to have been unsuccessful; in retrospect, at least, they are seen to have been mistakes. . . . Here we have the nub of our apparent disagreement with the radical subjectivists: is it or is it not meaningful to describe a decision as having been appropriate, in the light of subsequent events, or as having been inappropriate?⁴⁷

What are these statements other than an implicit acknowledgement of the irrelevance of knowledge problems? In any case, they do not mark a new turn in Kirzner's thought on these problems. In a revealing passage from his *Competition and Entrepreneurship*, he made the following remarks:

My discussion of entrepreneurial alertness has deliberately avoided its speculative character. I have of course recognized that in a world of uncertainty every entrepreneurial decision, no matter how much alertness it reflects, must to some extent constitute a gamble. But it has been my purpose to point out that the entrepreneur's decision—despite its unavoidably speculative character—represents his judgment that an opportunity for profit *does* exist. All human action is speculative; my emphasis on the element of alertness in action has been intended to point out that, far from being numbed by the inescapable uncertainty of our world, men *act upon their judgments* of what opportunities have been left unexploited by others.⁴⁸

This is the common ground of sound economics. However, with regard to Kirzner's theory of discovery and equilibration we are unconvinced. As will be seen in the next section, Kirzner's contributions are defective where one would least suspect them to be so, namely, in their account of the market process as it was conceived by Böhm-Bawerk and Mises.

The Case for Property and Calculation

Does Market Process Analysis Rely on Knowledge Problems?

In this section it will be argued that the problems of action that underlie the fashionable expressions of market process and knowledge can be entirely analyzed in terms of property and choice. Let us first take a look at the way in which prices for capital goods are formed on the market. This process has found its

⁴⁷Kirzner, *The Meaning of Market Process*, pp. 23f.

⁴⁸Kirzner, *Competition and Entrepreneurship*, pp. 86f.

first statement in Böhm-Bawerk's *Positive Theory of Capital*⁴⁹; Mises called it the market process.⁵⁰ The advocates of the alleged importance of knowledge problems claim that the market process is beneficial because it is a device to *diffuse and communicate* knowledge. However, this is not what a sober analysis reveals.

There are two steps that have to be distinguished in the market process, namely, the formation of prices for consumer goods and the formation of prices for capital goods. The former depends entirely on the individual values of the consumers. The more they appreciate a product the more they will be ready to give in exchange for it. This has direct repercussions on the market for capital goods. The higher the proceeds of a product the more can be successfully given in exchange for its factors of production. Now, what is implied in the fact that each capital good will be exchanged against the highest price its owner can obtain? It means that only the supposedly most-value-productive enterprises can be realized. All other entrepreneurs simply cannot bring the needed capital goods into their possession. They cannot pay prices as high as their competitors.

What role does the knowledge of the market participants play in this analysis? In particular, is any communication or diffusion of knowledge necessary in order to bring the above result? The answer to the latter question clearly is in the negative. The competing entrepreneurs may know nothing at all about other possibilities to employ the factor of production they all want to buy. However, this does not alter in the least the conclusion that, as a consequence of the formation of market prices, only the supposedly most-value-productive enterprises are realized. Out of the available alternatives known to each partner in exchange, none is, at this moment, more beneficial than the exchange itself. This conclusion is a necessary implication of any exchange. Thus, even if every single market participant just knows how to realize his own project and rests ignorant about all other opportunities, the market process still leads to beneficial results.⁵¹

The distinguishing feature of the market process does not lay in the communication of knowledge. The formation of prices rather implies a *comparison* of projects in value terms. This comparison has nothing in common with a dissemination of knowledge. It is through action that the competing projects are com-

⁴⁹ See in particular Eugen von Böhm-Bawerk, "The Law of Cost," in idem, *Capital and Interest*, vol. 2 (South Holland, Ill.: Libertarian Press, 1959), pp. 248–56.

⁵⁰ Cf. Mises, *Human Action*, pp. 333ff. He also uses the expression "pricing process" and "process which makes the prices of the factors of production spring from the prices of products." Ibid., p. 338.

⁵¹ See Hayek's brilliant article on "The Meaning of Competition," in idem, *Individualism and Economic Order*, pp. 92ff.

pared. *Because* an entrepreneur pays higher prices for the factors of production, his project must realize higher (discounted) proceeds.

The market process is thus inextricably linked to choice and action. Knowledge and communication, on the other hand, are secondary.⁵² This is the core of the analytical problems of Kirzner and his followers. To be sure, from each of Kirzner's articles we learn about another facet of market process. However, what we learn about is a Kirznerian market process the central idea of which is some mystical revelation through prices. This revelation theory has nothing in common with Misesian market-process analysis. It is, therefore, nothing short of ironic when Kirzner regrets "a certain tendency, present in a number of recent expositions of Mises's work, to de-emphasize (or flatly to deny) the centrality of the idea of the market as a process in the Misesian system."⁵³ Indeed, nobody has probably done more harm to this idea than Kirzner himself.

It is one thing to note Kirzner's noble modesty in emphasizing that his own work is but an elaboration of Mises's writings. It is another question whether this "elaboration" does not, as a matter of fact, amount to negation of the theory. Kirzner claims that, in regard to market process analysis, there is no difference between Mises and Hayek whatever.⁵⁴ Nothing could be more contrary to truth, though. What Hayek and Kirzner have in mind is a learning process. Ultimately, this is a process leading to perfect knowledge, that is, to equilibrium. In other terms, Kirzner as well as Hayek try to explain *why and how* we learn about the truth and thus about true prices. They believe that such an explanation can be provided because this "process by which facts are hammered into human consciousness is not wholly ungoverned by the logic of human action; it fits naturally in the tendency for alert acting human beings to notice what is likely to be of service to them."⁵⁵ Kirzner's solution to this problem is that the necessary information is revealed through "wrong" actual prices. Mises, however, was not concerned about this problem at all. To Mises, the analysis of the market process was meant to uncover the implications of human action for the formation of prices on the market:

In supplying the market with those consumers' goods in the sale of which the highest profits can be earned, they create a tendency toward a fall in their prices.

⁵²For an excellent exposition of the meaning of the market process see Salerno, "Mises and Hayek Dehomogenized": 124ff.

⁵³Israel M. Kirzner, "Reflections on the Misesian Legacy in Economics," *Review of Austrian Economics* 9, no. 2 (1996): 144–45.

⁵⁴*Ibid.*: 146–47.

⁵⁵Kirzner, *Perception, Opportunity, and Profit*, p. 30.

In restricting the output of those consumers' goods the production of which does not offer chances for reaping profit, they bring about a tendency toward a rise in their prices. All these transformations go on ceaselessly and could stop only if the unrealizable conditions of the evenly rotating economy and of static equilibrium were to be attained.⁵⁶

Mises makes no attempt to solve the problem that Hayek and Kirzner are eager to solve, namely, why equilibrium is likely to come about. Rather he does not bother about this question at all. In Mises's eyes equilibrium is a necessary tool of *analysis*. Yet the validity of economic theorems does not depend at all on the question why and how equilibrium should ever be realized. It is precisely this point that is denied both explicitly (Hayek⁵⁷) or implicitly (Kirzner) by all would-be market process theorists. Despite all their disdain for mathematical equilibrium theorists they are arguing on the very same grounds. They endlessly repeat the term "market process." Yet, they strongly believe that the reality of equilibrium has to be proven and explained.

All this is of no relevance for Mises's market process analysis. From the Misesian perspective there may be equilibrium and disequilibrium prices. One might even follow Kirzner and say that the market process consists in the continual "correction" of disequilibrium prices that occurs in the course of entrepreneurial competition.⁵⁸ Yet, it is important to see clearly what that means. The correction is in fact an implication of any successful action on the market. The point is that prices are always formed according to the best knowledge available to property owners. Hence, the sole fact that I sell my tomatoes to A and not to B implies that, *ex ante* at least, this use of my property, and thus the price being established on the market, is better than any other possible use of it (and thus any other price) that could have been realized otherwise. This holds true for disequilibrium and for equilibrium prices. There are no separate explanations for them. All prices are market prices, and as such they have to be explained.

It can hardly be emphasized enough that these different views of the market process have momentous implications. The most important one concerns the very dynamics of market process analysis. The word process means that this kind of analysis is supposed to explain the succession of events in time. This in turn

⁵⁶ Mises, *Human Action*, p. 336. There are, of course, countless other statements on how Mises saw the market process. However, this quote has been given by Kirzner ("Reflections on the Misesian Legacy in Economics": 145) to show that Mises also had in mind a corrective learning process. However, no such interpretation can be inferred from it.

⁵⁷ Cf. Hayek, *Individualism and Economic Order*, p. 33.

⁵⁸ Kirzner, "Reflections on the Misesian Legacy in Economics": 144ff.

presupposes that one is able to establish a causal link between the events that follow one another. Kirzner's basic error consists in his attempts to link discoveries (or true judgments) to former events. As no such links can, without inner contradiction, be claimed to be necessary, that is, generally and apodictically valid, Kirzner makes assertions of alleged empirical evidence to make his case at all. Thus, the theorems that he is able to derive must inevitably be empirical. It is for these reasons that Kirzner now considers economics to be based on empirical postulates or empirical facts. On the other hand, the Misesian view on the dynamics of the market process starts from the recognition of the universal fact of scarcity. This alone suffices to arrive at *a priori* theorems about the succession of real events in time. Some examples are: if I consume more now I shall of necessity be unable to consume as much in the future as I would if I saved more; or: if I overestimate the quantity of means at my disposal I shall nevertheless be led to discover my error sooner or later in the future.

Hence, there doubtlessly is no approach to market-process analysis that is commonly shared by Böhm-Bawerk and Mises on the one hand and by Hayek and Kirzner on the other hand. Most importantly, however, only Mises's analysis is a viable option to build upon. It does not contain the fallacies of the Hayek-Kirzner approach that have been identified above.

Property and Knowledge

Above we have argued that the advocates of the pre-eminence of knowledge problems in economics cannot adequately deal with the fact that there can be no present experience of future events. However, there is still a more fundamental condition of action. This is the fact that knowledge as such is never scarce. Knowledge problems thus do have a place in economics only insofar as knowledge has to be selected for application. Yet the selection of knowledge depends entirely on the property of the acting person.

At each moment we dispose of a myriad of information, and we often know of many ways to achieve any given end. For example, if my apartment is cold, I could keep my body warm through gymnastics or additional sweaters. I could also burn parts of my furniture or simply turn on the heating and pay higher bills. I could also sit down in my armchair and invent a new technology permitting one to heat my apartment at half of the present cost.

To be sure, the latter alternative is the most elegant one. In any case, as conditions do not cease to change, we constantly have to acquire new knowledge if only to conserve our present standard of living. However, economic science does not have to deal with the factors conditioning the acquisition of knowledge. We may also leave the question open whether economics *can* deal with them. This

is of no importance for the issue at hand. For the moment we are entirely unconcerned with the creation of knowledge, that is, of judgments that prove to be successful in action. We do not bother about the way we reduce our sheer ignorance. Rather we have to consider the principles that govern the selection of the judgments that we actually apply in our actions.

Consider the problem of lighting your cigarette. Do you use a flame-thrower, matches, heat your coke-oven until it is red-hot, or wait until the next lightning-flash strikes a piece of wood? Any solution could be most appropriate under certain conditions. Or, consider the myriad of technically-possible ways to get from Harlem to downtown Manhattan. You can take the subway, the express subway, a taxi, your car, rent a bus, rent a helicopter, buy an F-16 and two personal airports, etc. Of course, one would say that the latter alternative is absurd under *normal* conditions. It is always the conditions of action that we deem reasonable or absurd, not the action as such.

The quantities of means we can dispose of—our property—are always limited. Thus, choice implies that some of our ends must remain unfulfilled. We steadily run the danger of pursuing ends that are less important than the ends that could have been pursued. We have to choose the supposedly most important action, though what we choose is how we use our property. Action means to employ our property in the pursuit of what appears to be the most important ends.

In choosing the most important action we implicitly select some parts of our technological knowledge for application. In other terms, our choices imply a judgment upon the *importance* of our technological knowledge under the expected conditions of our action. This economic judgment is our only concern. Technological knowledge *as such* is immaterial for economics. Even if information on particular circumstances of time and place was communicated through prices this would be of secondary importance. Yet, without reference to our property we could not possibly select knowledge in terms of importance. Moreover, once we own property we then know which kind of knowledge could be useful. It is this property that directs our learning toward useful channels.

Property in this sense encompasses the disposition of goods. However, there is a more fundamental sense in which economic knowledge is linked to property, namely, to appropriation. This is because the creation of any good is more fundamental than the disposition of this good. Appropriation is at the core of property itself.⁵⁹ Thus, the question which kind of technology serves the supposedly most

⁵⁹"Appropriation is a natural phenomenon given by providence, essential to life; property is nothing but an appropriation that has become a right through labor." Frederic Bastiat, "Propriété et loi," in *Les libéraux*, Pierre Manent, ed. (Paris: Hachette, 1986), p. 230.

important end under prevailing conditions cannot be answered independently of the property regime. This is of utmost importance.

It is clear that in *all* property regimes the ultimate end of action is to enjoy the services of consumers' goods. And in *all* property regimes consumers' goods can only originate from human productivity, that is, from original appropriation, from production, and from exchange.

However, in capitalism there is but one way to enjoy the goods of our neighbors. One has to acquire them through exchange on the market, that is, one has to give to its owner some other good that he prefers to the one we desire. Yet this good must of necessity have been produced beforehand. Exchange thus implies mutual production of goods or values. It implies further that only value-productive actions prove to be successful. Therefore, only value-productive knowledge is selected and sought.

Of course there can be error and failure. Our technological judgments can be wrong. We can also discover after our action that we have not sought the most important ends under prevailing conditions. However, all this is irrelevant for the question at stake. Under private property, all of our judgments concern the production of goods. Producing goods is the unique occupation of all members of society. In this endeavor they select the knowledge they want to apply.

The case is different in a system featuring a coercive agency. Here, by definition, a knowledge different from value-productive knowledge is, at least sometimes, more important. (The extent of "sometimes" depends on the range of activities and on the permanence of the coercive agency.) There is, for example, the knowledge of how to reap the fruits of other persons' labor without provoking their resistance. There is also the knowledge of how to acquire control and ownership of the coercive agency. And there is the knowledge of how to persuade one's neighbors about the utility of this system, too.⁶⁰ One can add an infinite number of items to this list. The result, in general terms, remains the same: a violent agency necessarily affects the knowledge structure of the society upon which it is imposed.⁶¹

⁶⁰ Murray N. Rothbard, *Man, Economy, and State*, p. 776: "In the market, the fittest are those most able to serve the consumers. In government, the fittest are either (1) those most able at wielding coercion or (2) if bureaucratic officials, those best fitted to curry favor with the leading politicians or (3) if politicians, those most adroit at appeals to the voting public." See also idem, *Power and Market*, 2nd ed. (Kansas City: Sheed Andrews and McMeel, 1970), pp. 18ff.

⁶¹ Leonard E. Read has analyzed this effect under the heading of "unnatural specialization." See Leonard E. Read, "How Socialism Harms the Economy," in idem, *Anything That's Peaceful*, 2nd ed. (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, 1992), pp. 78ff. With great clarity he states: "Take, for example, the moon project . . . putting aside personal prejudices against this multibillion dollar project, it is obvious that it would not, at this time, emerge from the free market. Now, consider the countless specializations that this single government project call into

Property, Calculation, and the Structure of Production

Yet, this is not all that private property implies for the selection of knowledge. The greatest benefits accrue to those who participate in the division of labor. Most of our knowledge is valuable only because there is a market. As we have noted above, the market process is essentially a selection procedure. All investment projects are compared in terms of value productivity, and only the most value-productive ones are selected (*ex ante*) for execution. On the market, *the totality of individual knowledge is continually compared in value terms.*

The value of the knowledge that the property owners venture to apply is compared through the anticipated exchanges on the market. A calculated profit means that one's knowledge is valuable under prevailing conditions. A calculated loss means that one's knowledge is not of value. Its application would take means away from more value-productive enterprises and thus prevent the application of more valuable knowledge.

To be sure, this comparison does not run in terms of freely-floating bits of knowledge that are detached from private property. Rather, each entrepreneur tries to use his property in the most value-productive way that is known to him. Through the pricing process, this value, productivity is compared to the value productivity that can be achieved by the action of other property owners. The entrepreneur makes an estimate of the proceeds that he will realize through his venture. Then, by means of calculation, the entrepreneur knows how much of his property he can give in exchange for a capital good. He cannot give more than the discounted marginal value product that the capital good will earn. And he can appropriate it only if no other entrepreneur knows of a way to realize a higher discounted marginal value product of this capital good. Thus, each single factor of production accrues to him who knows of the supposedly most value-productive way to use it. This knowledge is marginal value knowledge. It is the knowledge about the most value-productive employment of each of the exchanged goods which, at the time of the exchange, is known to their owners.

It might be objected that one could conceive of market participants who had more value-productive ideas than their fellows but who unfortunately lacked the capital to realize their endeavors. There is no use in discussing the probability of

existence. Take only one of them: finding out how to cushion the landing of a TV set on the moon. . . . This project qualifies as an unnatural specialization." Ibid., p. 78. He adds: "the fact is that tens of millions of American citizens are now engaged and wholly dependent on *unmarketable* specializations [and] more and more millions are becoming dependent on such forced exchange of their unwanted specializations for those goods and services without which they cannot live." Ibid., p. 80. Cf. also the analogous remarks of Hans-Hermann Hoppe on the effects of socialism on the character structure of society and the evolution of nonproductive personality types in his *A Theory of Socialism and Capitalism*, esp. chap. 3.

such an event. Indeed, the wealth of a man is often indicative of his expertise. Yet, for the sake of the argument, let us assume the above case to be given. The first thing that such persons could do is to try to convince some of their fellows to lend them the funds necessary for their projects. If they do get the capital, then everything is fine for them and the rest of mankind. However, what if they find nobody willing to support them? Would this not be to the great disadvantage of all the other market participants who are now deprived of the most value-productive investment? Those who argue in this way fail to see that one cannot divide the market at will. A person's property is not only the fund out of which he buys capital goods; it is the fund for his consumption as well. The very fact that our would-be promoter does not obtain the necessary funds means that all other market participants do think other investments to be more value productive. One cannot separate property from the possibility of error; nobody can be free only to succeed. If one fails to use one's property in a value-productive manner, then one consumes it in one's errors.⁶²

Let us recall that *ex ante* calculation does not consist of computation based on past market prices; it is a judgment in quantitative terms that relies on an expectation of future prices. However, and this is the important point, *calculation is the source of present market prices* as they are continually formed in the market process. Present prices are starting points for our estimates. We regard them as the products of all prevailing conditions of action. Considering the intervening changes of these conditions we form, by way of *Verstehen*, a judgment upon the prices of the future. Without the basis provided by present money prices, this procedure would be impossible.⁶³ It is indirectly that present prices permit calculation and thus the selection of the most value-productive technology under prevailing conditions. They can have no communicative function because they are only the, if indispensable, starting point for our understanding of the future. If any prices could have a communicative function it would be future prices, but tomorrow's prices can never be known today.

Moreover, since without private property there could be no successful calculation, marginal value knowledge could not be recognized, either. Property and calculation are clearly prior to the recognition of the knowledge that should be applied.⁶⁴

⁶²For analogous reasoning see Murray N. Rothbard, "Toward a Reconstruction of Utility and Welfare Economics," in *On Freedom and Free Enterprise: Essays in Honor of Ludwig von Mises*, Mary Sennholz, ed. (Irvington-on-Hudson, N.Y.: Foundation for Economic Education, 1995).

⁶³For the regression theorem see Mises, *Human Action*, pp. 408ff. Of course in the case of barter, Mises realized that past exchange ratios are not necessary to the forecasting of future ones. *Ibid.*, p. 336. On economic calculation and the regression theorem, see also Hülsmann, *Logik der Währungskonkurrenz*, pp. 133ff, 166ff.

⁶⁴It is therefore futile to claim that "the circumstance that in fact current market prices do

This fact illustrates the most important problem of socialist planning, namely, knowing what to do next. Even if it knew the ends that should be attained, it would be incapable of identifying marginal value knowledge. Hence, it would not know which actions were, at each point of time, most value productive in bringing those ends about. Private property is required to recognize these actions; without it, no capital structure can be built.

Conclusion

We now come back to the question of why "socialist planners would be stymied by inability to perform calculations in the narrow arithmetic sense"⁶⁵ even if they possessed all the information conveyed by genuine market prices.

Only past market prices can be perceived and could thus convey any information at all. However, it is not past but future prices that are of any interest to the market participants. Furthermore, as there exists no general relationship between past and future prices one cannot deduce the latter from the former. Thus, it is not knowledge but entrepreneurial *judgment* that drives the market process.

Most importantly, all relevant information (in the economic sense) about technology is *not the cause but the outcome* of action. The market process is not a learning but essentially a selection process. The competition for the factors of production permits only the realization of those technological ideas which, under given circumstances, are supposedly most value productive. This competition, however, relies on calculations. Without them, the marginal value knowledge could not be identified.

Why is it that market prices are superior to the prices that central planners are dealing with? Hayek, Kirzner, and their followers believe that market prices are better because of their *function*, namely, that of communicating information. Mises, in contrast, showed that the primary virtue of market prices is attributable to their *origin*. Genuine market prices originate from voluntary cooperation; they can never be simulated. *They can never be grasped by intellectual inquiries because their significance does not relate to truth or knowledge.* They can only be brought about by entrepreneurial actions. For only the unhampered use of private property assures a selection that is inspired by value productivity.

reflect that corrective market process . . . should convince us that an appreciation of the role of market prices stated in terms of the 'Hayekian' knowledge problem is simply a somewhat differently articulated appreciation for the calculative properties Mises taught us to understand to exist in those market prices." Kirzner, "Reflections on the Misesian Legacy in Economics": 153-54.

⁶⁵Leland B. Yeager, "Mises and Hayek on Calculation and Knowledge": 94.