

Austrian Economics
and the Political Economy of Freedom

by

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The revival of the modern Austrian School of Economics may be dated from thirty years ago, when during the week of June 15-22, 1974, the Institute for Humane Studies sponsored a conference on "Austrian Economics" for about forty participants in the small New England town of South Royalton, Vermont.

In 1974, the Austrian School had been in hiatus for almost a quarter of a century. During the more than sixty years before the 1940s, the Austrian Economists had been considered one of the most original groups of thinkers and contributors to economic theory and policy. They were among the leading developers of the theory of marginal utility, opportunity cost, value and price, capital and interest, market theory and competition, monetary and business cycle theory, and comparative economic systems – capitalism versus socialism versus the interventionist-welfare state.

But the rise and then triumph of Keynesian Economics in the late 1930s and 1940s as an explanation of and policy prescription for events like the Great Depression in the early 1930s eclipsed all competing theories of and practical solutions to the problems of high unemployment and economic depressions. This included the eclipsing of the

Austrian theory of the business cycle, which in the first half of the 1930s had been a leading alternative to the emerging Keynesian conception of macroeconomics.¹

At the same time, there developed what came to be called the Neo-Classical approach in microeconomics. The study of the logic of individual decision-making, the allocation of scarce resources among competing uses, and the distribution of income among the factors of production – land, labor and capital – became increasingly an exercise in mathematical optimization under conditions of various quantitative constraints. The focus of attention was on the specification and determination of the narrow and often highly artificial conditions under which a market economy as a whole would be in a state of full and complete general equilibrium.

This, too, was in stark contrast to the approach of almost all of the Austrian Economists, who attempted to explain the logic and processes of market competition in a world of constant change. The Austrians, unlike their Neo-Classical rivals, emphasized imperfect knowledge, the pervasive role of time in all market decision-making, and the nature of market coordination through continual adaptation to changing circumstances.²

Eight months before that conference in South Royalton, in October 1973, the most important contributor to Austrian Economics in the twentieth century, Ludwig von Mises, had died at the age of ninety-two.³ The second most prominent member of the Austrian School at that time, Friedrich A. Hayek, had been invited to attend the conference, but had declined due to health problems that made it impossible for him to travel to America from Europe. No one at the conference anticipated that only four months later, in October 1974, Hayek would be awarded the Nobel Prize in Economics.⁴

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The speakers at the conference were three of the leading figures in Austrian Economics: Ludwig M. Lachmann, who had studied with Hayek at the London School of Economics in the 1930s; Israel M. Kirzner, who had studied with and written his dissertation under Mises at the New York University in the late 1950s;⁵ and Murray N. Rothbard, who had attended Mises' New York University seminar for many years beginning in the late 1940s, and had received his doctoral degree in economics from Columbia University.

One evening during the conference, Milton Friedman came from his summer home in Vermont to join us for dinner and make a few remarks after the meal. Friedman commented that he was delighted to be with us and recalled he had long known both Mises and Hayek, having himself been one of the founding members of the Mont Pelerin Society in April 1947 when it met for the first time in Switzerland.⁶ But what stood out in his remarks for many of us in attendance was his statement that there is no such thing as different schools of thought in economics. There is only good economics and bad economics. Clearly, therefore, in Friedman's mind, we were on a fool's errand attending a conference on something called "Austrian" economics.

Acting Man as the Core of Austrian Economics

Yet most of us attending that conference in South Royalton three decades ago this year did not consider ourselves on a fool's errand. We just considered Austrian Economics to be "good economics."⁷ At its most fundamental level, Austrians see the individual as "acting man." This was already clearly stated by Ludwig von Mises in 1933 when he said:

In our view the concept of man is, above all else, also the concept of the being who acts. Our consciousness is that of an ego which is capable of acting and does act. The fact that our deeds are intentional makes them actions. Our thinking about men and their conduct, and our conduct toward men and toward our surroundings in general presuppose the category of action.⁸

The Austrian view of man rejects and refutes the positivist, historicist and Neo-Classical conceptions of man as a mere physical, quantitative object, or as a passive subject controlled by the dark forces of history, or as a "dependent variable" in a system of mathematical equations. Positivism tried to reduce man and his mind to merely measurable magnitudes to be studied and manipulated like the inanimate matter experimented upon in the natural sciences. Historicism claimed that man is determined and molded by external laws of history that shape his thoughts, actions and destiny, with little latitude for the individual to design and guide his own future and fate.⁹ Neo-Classical Economics treats man as a mathematical function possessing given tastes and preferences, which are themselves induced by his surrounding environment and on the basis of which he responds in predictable ways when confronted with various constraining and objective trade-offs in the form of market prices.¹⁰

For Austrians, on the other hand, man is an intentional and purposeful being. He thinks, plans and acts. Man may be made up of matter, but he possesses consciousness. He has the capacity to imagine, create and initiate. His mind is not simply reducible to lifeless matter. He has spirit and will. Man reflects upon the circumstances in which he finds himself. He finds aspects of his physical and social surrounds less than satisfactory.

He imagines states of affairs that would be more to his liking. He creates in his mind plans of action that would bring those preferred states of affairs into existence. He discovers that things in his world that could be used as means to the achievement of his desired ends are insufficient to serve all the purposes for which he could apply them. He has to weigh the alternatives and decide in his own mind which of those possible states of affairs he prefers more and which he prefers less, since some of them, in the face of scarcity, will have to be foregone for today or forever. He, therefore, has to decide on the trade-offs he is willing to make, and as a result he determines the costs of his own choices in the form of desired goals he is willing to give up so as to pursue others that he considers more important.

Those "ends" and "means" that Neo-Classical Economics take as "given" in their analysis of a logic of choice are, in fact, created and compared in the actor's mind. They change and are modified as man experiences successes and failures. They are not static or constant. Nor is man a hopeless victim or captive of history. He makes his own history by reflecting on what has happened in the past and mentally projecting himself into the future. He decides what is worth trying to continue along the lines he has been following up to now, and what he thinks might be a better and different course of action as he looks ahead.

Imperfect Knowledge and Market Opportunities

This is the reason for Mises' insistence that in every man is the element of entrepreneurship. Man, in all his actions, searches for and creates profitable opportunities to improve his lot and tries to avoid situations that would generate a loss in the form of

changed circumstances that would make his situation worse than it needs to be. By necessity, man is therefore a speculator in everything he does.¹¹

Creating profitable opportunities and avoiding losses are concepts that have no meaning in the traditional Neo-Classical conception of "perfect competition" in which every market participant is assumed to possess perfect or sufficient knowledge of all possibilities that might be relevant to his decisions. What is the meaning to "opportunities discovered" or "losses avoided" when the actors already know from the beginning what are the best and indeed the only optimal options that should be followed, given that perfect and sufficient knowledge of all relevant circumstances?¹²

From the Austrian perspective, to choose means to select from alternatives, and to select from alternatives must mean that, at least from the individual's perspective, the future is not preordained. If that future is not preordained but can be influenced by the choices he makes, then perfect knowledge is logically inconsistent with the very concept of acting and choosing man. Otherwise, man would know already all the decisions he will make and the outcomes that will have to be forthcoming. But what then remains of any commonsensical notion of what it means for man to choose? Even if we assume only knowledge of objective probabilities and not absolute certainties about the future, then every man would still know what is the precise set of options from which he has to choose and the exact weight he should assign to each possible outcome; then, given his tastes and preferences for risk, he would again know from the start the only courses of action he could and should logically follow.

Many Neo-Classical Economists may despair of a world in which imperfect knowledge and uncertainty prevail, and therefore a world in which their mathematically

deterministic models lose their force. But for Austrians, this reality of the human condition is a reason for optimism about man and his world. The fact that man does not know for certain what the future holds in store, including what his own future actions may be, means that the world in which he lives is one of wondrous possibility. Individuals have motives and incentives to experiment with new ideas and creative possibilities precisely because they don't know for sure or with any probabilistic degree of certainty how they may actually turn out. It is this element of uncertainty about the future and the direction that it must take that opens a vista for imagination and action to influence the shape of things-to-come – and through them all the advancements in the social, economic and cultural condition of mankind.¹³

For the Neo-Classical Economists, the market is reduced to a series of simultaneous equations of supply and demand functions, the properties of which specify whether a general equilibrium "solution" exists for the market as a whole, and whether that solution is "unique" and "stable." Prices are the quantitative ratios of exchange at which goods may be bought and sold, and which "objectify" the trade-offs at which alternatives in the market may be obtained. Likewise, the theory of comparative advantage, in this Neo-Classical framework, merely determines the relative opportunity costs of potential trading partners for determination of their optimal specializations in the division of labor. In addition, property rights, money, and the social and political institutions are usually treated as "givens," in Neo-Classical analysis. They are merely the background context on the basis of which the supply and demand functions interact.¹⁴

Minds, Markets and the Entrepreneur

For Austrians, the essence of the meaning of the market is lost when reduced to a skeletal representation in the form of mathematical functions. The market is where the minds and the meanings of men meet. It is the place where the plans of multitudes of individuals overlap and find the potentials for mutual improvement through discovered and created gains from trade. It is where the wants of men find greater degrees of fulfillment and satisfaction than under isolated self-sufficiency, and where opportunities for achieving things never conceived of before possible and practicable. In the Austrian conception of the market, prices are not simply quantitative ratios of exchange; they are the encapsulation of the valuations and appraisements of the market participants resulting from their activities as buyers and sellers.¹⁵ As Carl Menger, the founder of the Austrian School expressed in 1871,

Prices. . .are by no means the most fundamental feature of the economic phenomenon of exchange. This central feature lies rather in the better provision of two persons can make for the satisfaction of their needs by trade. . .Prices are only incidental manifestations of these activities, symptoms of an economic equilibrium between the economies of individuals, and consequently are of secondary interest for the economic subjects. . .The force that drives [prices] to the surface is the ultimate and general cause of all economic activity, the endeavor of men to satisfy their needs as completely as possible, to better their economic positions.¹⁶

In Neo-Classical theory prices are usually taken as "given," with any changes in prices coming, somehow, from the "outside" and to which the market participants then respond. In the Austrian approach, prices emerge out of the interactions of the market

actors. They initiate price bids and offers, and competitively move prices up or down. In Eugen von Bohm-Bawerk's famous horse market, any resulting equilibrium between suppliers and demanders arises out of their, respective, activities on both sides of the market to attract trading partners by offering better terms of exchange than their rivals.¹⁷

Thus, the Austrians focus is on *the logic and sequential process of price formation*, rather than only on any final equilibrium price that may result from this active market rivalry. It is why one prominent member of the Austrian School, in the period between the two World Wars, referred to the Austrian theory of price as *the causal-genetic approach*: the purpose of the theory is to explain the process by which prices emerge, change and adjust to bring about a final equilibrium out of the their "causal origin" in the valuations and actions of the market actors, themselves.¹⁸

It is also the basis for the later Austrian emphasis on the role and significance of the entrepreneur. In the division of labor, the entrepreneurs are not only the "undertakers of enterprise," who imagine the patterns of future consumer demand, who conceive of ways of organizing production processes to better satisfy those consumer demands, who oversee the stages of production to the completion of a finished good finally ready for sale, and then who bring the goods to market. They also set and change the market prices that consumers find on the market, based on their discovery that they may have over or under estimated the actual intensity that those consumers may have for the goods offered to them.¹⁹

It is the "promoting and speculating entrepreneurs" who are "the driving force of the market," as Mises expressed it. Their "social function" is to coordinate the use of the resources capital and labor of the society with the demands of the consuming public

through the rewards of profits and the penalties of losses.²⁰ Again, as Mises concisely put it, "It is the entrepreneurial decision that creates either profit or loss. It is mental acts, the mind of the entrepreneur, from which profits ultimately originate. Profit is a product of the mind, of success in anticipating the future state of the market. It is a spiritual and intellectual phenomenon."²¹ The intentionality of entrepreneurship, the creative mental processes that are the essence of the enterpriser's activities, is drained of all understanding if the market is reduced to a simplified and barren mathematical functional form.

Economic Calculation and the Market Process

The social institutions of private property and monetary exchange are not simply conceptual backdrops to the determination of equilibrium prices and outputs, as has tended to be the view in Neo-Classical Economics. In the standard textbooks, from which most economists learn the core concepts of their discipline, private property is described as an "incentive mechanism" for work, effort and the conserving of scarce resources; and money is explained to be a "unit of account" that serves as a common denominator for comparing the value of goods bought and sold in the market. Both of these are true and important. But these descriptions and explanations of the role of private property and monetary exchange fail to capture their profundity for the functioning and coordinating of the complex and ever-changing market order.

They are, instead, the core of the market economy and the civilization that develops with it, and are impossible without them. The evolution of private property rights and a medium of exchange has facilitated the development and use of economic

calculation in all exchange relationships, without which rational market decision-making would have been impossible. And, again, it is Mises who has articulated this most clearly:

Monetary calculation is the guiding star of action under the social system of division of labor. It is the compass of the man embarking upon production. He calculates in order to distinguish the remunerative lines of production from the unprofitable ones. . . Monetary calculation is the main vehicle of planning and acting in the social setting of a society of free enterprise directed and controlled by the market and prices. . . We can view the whole market of material factors of production and of labor as a public auction. The bidders are the entrepreneurs. Their highest bids are limited by their expectation of the prices the consumers will be ready to pay for the products. . . The competition between the entrepreneurs reflects these prices of consumers' goods in the formation of the prices of the factors of production. . . To the entrepreneur of capitalist society a factor of production through its price, sends out a warning: Don't touch me, I am earmarked for the satisfaction of another, more urgent need.²²

Only the existence of private property enables all marketable commodities and means of production to be open for sale and purchase in the haggling process of exchange. Only a medium of exchange provides the means by which all the heterogeneous commodities and supplies on the market may be reduced to a valuational common denominator. Only the open competitive market enables every participant in the society to make his contribution to the formation of prices through their bids to buy and offers to sell.²³ Only economic calculation enables the integration of the actions of billions of people around the globe into a network of interdependent market relationships of mutual plan coordination for the advancing benefit of all mankind.

Yet every man is free to make his own decisions, guided by his own hopes and dreams and goals and plans. The money prices of the market that facilitates, indeed, makes possible the process of economic calculation are used by each individual in the context of his own purposes. He weighs and evaluates their significance and relevance for the ends he has in mind. He gives them meaning in terms of his actions accomplished in the past and actions anticipated in the future.²⁴ He is at liberty to integrate himself in the social system of division of labor on the basis of his own evaluations of the costs and benefits of alternative courses of action – while in the free market also bearing the consequences, for good or ill, for the choices he makes.

It is through economic calculation in the free market economy that individual freedom is made compatible with social order. It is through economic calculation in the market economy that billions of individual plans are combined into patterns of rational social coordination. No wonder that Mises concluded that "Our civilization is inseparably linked with our methods of economic calculation. It would perish if we were to abandon this most precious intellectual tool of acting."²⁵

The "Law of Association" as the Foundation of Society

In a similar fashion, the Austrians see more in the theory of division of labor and comparative advantage more than simply the determination of the specialization of tasks at various relative prices, given the quantities of capital and labor available to individuals and nations. And once again, it was Ludwig von Mises who insightfully clarified the implications to be derived from the earlier contributions of the eighteen and nineteenth century Classical Economists on the benefits that are derived from a system of division of labor. The theory of comparative advantage, Mises explained, is really the basis of what he called the *law of human association* and therefore the foundation of a theory of society. Based on Adam Smith's and David Ricardo's expositions of the benefits from specialization of tasks, it was possible to show how society emerged and had taken form

over the centuries as the result of individuals discovering the mutual benefits from trade.²⁶ The additional gains through individuals specializing in particular lines of production resulted in an expanding network of interdependent human relationships. The theory of the division of labor, therefore, is able to serve as the analytical tool for explaining the emergence of society as the result of human action but not of any prior blueprint of human design. As Mises explained this process:

The law of association makes us comprehend the tendencies which resulted in the progressive intensification of human cooperation. We conceive what incentive induced people to not consider themselves simply as rivals in a struggle for the appropriation of limited supplies of means of subsistence made available by nature. We realize what has impelled them and permanently impels them to consort with one another for the sake of cooperation. . . Thus we are in a position to comprehend the course of human evolution.²⁷

The theory of division of labor and comparative advantage become the basis for a "science of society." A foundation is laid for the theory of market relationships, the interconnections between supplies and demands, and the network of market prices for finished goods and the factors of production. The way is opened to an understanding of the "inevitable laws of the market and exchange," which is the "one of the greatest achievements of the human mind."²⁸

Out of the Classical Economists' theory of division of labor there now comes the Classical Liberal "philosophy of peace and social cooperation" that is the basis "for the astonishing development of the economic civilization of [our] age."²⁹ The greater

material productivity of a peaceful division of labor, Mises explained, provides the means for the development of what we call civilization. The means are now provided that enable leisure and the peace of mind for art, literature, and scientific and philosophic reflection.

Men increasingly become differentiated from each other, but not only in the specialized tasks and skills through which they find their place in the division of labor. They differentiate also in the sense that they have the time to develop their distinct individual personalities on the basis of the use they make of the greater means they have at their disposal, and the interests and pursuits they find attractive to devote their available time to cultivate. Individualism, meaning man as distinct from a tribal mass and unique in his character and qualities as a singular human being, becomes one of the products of the evolution of society through the extension and intensification of the system of division of labor.³⁰

At the same time, the division of labor and its law of association becomes the foundation for a social philosophy of world peace. In the collaborative efforts of interdependent specialization and exchange men become allies in the fight against the niggardliness of nature, not enemies that need to fight one another for meager means to men's ends that nature itself provides. No longer are individuals and nations opponents in which the economic improvement of one requires an economic loss to another. Instead, all individuals and nations benefit from the productive capabilities of each other's talents, industry and creativity in devising better and less expensive ways to satisfy each others ends through the competitive processes of the market.

Human competition, both within and between nations, is no longer a life and death struggle for survival. The competitive market process becomes the peaceful

procedure through which each member of society finds his most productive and profitable niche for improving his own circumstances by also furthering the ends of others in society. Again, Ludwig von Mises captured the essence of this great social process:

All collaborate and cooperate, each in the particular role he has chosen for himself in the framework of the division of labor. Competing in cooperation and cooperating in competition all people are instrumental in bringing about the result, viz., the price structure of the market, the allocation of the factors of production to the various lines of want-satisfaction, and the determination of the share of each individual.³¹

The world, therefore, becomes one integrated community of free men who though separated by time, distance and interest are peacefully guided to mutually assist one another through the information and incentives supplied by the global structure of market prices that is generated by their interactions. Their buying and selling determines the patterns of production and the allocation of all the means of production around the entire earth for the better satisfaction of the wants and needs of all of humanity. And the value that all of humanity places on the services that each individual performs for his fellowmen in the market process determines the income he earns so he may obtain from all the others around the world the things that they can do to fulfill his own personal ends. The market economy becomes the means to give reality to the idea and ideal of the peaceful unity of mankind.

The Political Economy of Freedom

None of these Austrian insights about man and the market is compatible with the positivist, historicist and Neo-Classical Economic views of the world. Man reduced to physical object or mathematical functional form is man stripped of his most essential and inherent human qualities. What meaning has intention and imagination, or choice and creativity, when the human mind and its volitional and purposeful qualities are banished from the realm of social and economic analysis? What meaning, therefore, does freedom have when man is merely a measurable magnitude or a dependent variable in a system of simultaneous equations?

It should not be surprising that so many members of the Austrian School of Economics have also been Classical Liberals – defenders of individual liberty, private property and the market economy. Once you see the individual as thinking, creating, and acting man, with so many potentials and possibilities within him, who can tolerate the idea of making him the slave to another's will – to deny him his humanness? Once you comprehend the majesty of the market order in which each man is free to follow his own purposes and plans, and yet at the same time advances the ends and desires of others in society through the free exchanges that interconnect everyone's actions within the system of division of labor, who can want to restrict what men may do to the dictates of a central planner or political intervener? Once one understands the role and significance of prices for social coordination within the market process, who can presume to have the knowledge and ability to control or command the complexity of consumption and production decisions of the mass of humanity?³²

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It is no wonder, therefore, that so many of freedom's friends have been influenced in that direction by the contributions of the Austrian Economists? They more than almost all others in the last one hundred years, have been the true political economists of liberty. And it is what has made Austrian Economics, in so many ways, the "good economics" of our time.

End Notes

¹ For an exposition and contrast of the Austrian and Keynesian explanations of and policy prescriptions for the Great Depression of the 1930s, see, Richard M. Ebeling, "The Austrian Economists and the Keynesian Revolution: The Great Depression and the Economics of the Short-Run" in Richard M. Ebeling, ed., *Human Action: A 50-Year Tribute* (Hillsdale, MI: Hillsdale College Press, 2000) pp. 15-110.

² For an overview of many of the theoretical and policy themes in the writings of the Austrian Economists, see, Richard M. Ebeling, "The Significance of Austrian Economics in 20th Century Economic Thought," *Austrian Economics and the Political Economy of Freedom* (Northampton, MA: Edward Elgar, 2003), pp. 34-60; also, Ludwig M. Lachmann, "The Significance of the Austrian School of Economics in the History of Ideas" [1966] reprinted in, Richard M. Ebeling, ed., *Austrian Economics: A Reader* (Hillsdale, MI: Hillsdale College Press, 1991), pp. 17-39.

³ For expositions of Mises' many contributions to economic theory and policy, see, Richard M. Ebeling, "A Rational Economist in an Irrational Age," *Austrian Economics and the Political Economy of Freedom*, pp. 61-100; Richard M. Ebeling, "Planning for Freedom: Ludwig von Mises as Political Economist and Policy Analyst," in Richard M. Ebeling, ed., *Competition or Compulsion? The Market Economy versus the New Social Engineering* (Hillsdale, MI: Hillsdale College Press, 2001) pp. 1-85; and Richard M. Ebeling, "The Economist as the Historian of Decline: Ludwig von Mises and Austria Between the Two World Wars," in Richard M. Ebeling, ed., *Globalization: Will Freedom or World Government Dominate the International Marketplace?* (Hillsdale, MI: Hillsdale College Press, 2002) pp. 1-68. Also, Murray N. Rothbard, *Ludwig von Mises: Scholar, Creator, Hero* (Auburn, AL: Ludwig von Mises Institute, 1988); and Israel M. Kirzner, *Ludwig von Mises* (Wilmington, DE: ISI Books, 2001).

⁴ For a summary of Hayek's life and contributions to economics, see, Richard M. Ebeling, "Friedrich A. Hayek: A Centenary Appreciation," *The Freeman* (May 1999) pp. 28-32; also, Bruce Caldwell, *Hayek's Challenge: An Intellectual Biography of F. A. Hayek* (Chicago: University of Chicago Press, 2004).

⁵ For a summary of Kirzner's contributions to Austrian Economics, see, Richard M. Ebeling, "Israel M. Kirzner and the Austrian Theory of Competition and Entrepreneurship" *Freedom Daily* (August 2001) pp. 8-14.

⁶ See, R. M. Hartwell, *A History of the Mont Pelerin Society* (Indianapolis, IN: Liberty Fund, 1995).

⁷ For a summary of the conference's events, see, Richard M. Ebeling, "Austrian Economics on the Rise," *Libertarian Forum* (October 1974) pp. 3-6; the lectures delivered by Lachmann, Kirzner and Rothbard at South Royalton were later published in Edwin G. Dolan, ed., *The Foundations of Modern Austrian Economics* (Kansas City, KS: Sheed & Ward, 1976).

⁸ Ludwig von Mises, *Epistemological Problems of Economics* [1933] (New York: New York University Press, 1981) p. 14.

⁹ One of Ludwig von Mises' most insightful but unfortunately highly neglected works was devoted to undermining the assumptions and absurdities in both positivism and historicism; see, Ludwig von Mises, *Theory and History: An Interpretation of Social and Economic Evolution* [1957] (Auburn, AL: Ludwig von Mises Institute, 1985); also, F. A. Hayek, *The Counter-Revolution of Science* [1955] (Indianapolis, IN: Liberty Fund, 1980); and Murray N. Rothbard, *Individualism and the Philosophy of the Social Sciences* (San Francisco, CA: Cato Institute, 1979).

¹⁰ For a contrast of the Austrian and Neo-Classical conceptions of man in relation to action and choice, see, Richard M. Ebeling, *Austrian Economics and the Political Economy of Freedom*, pp. 3-7.

¹¹ Ludwig von Mises, *Human Action: A Treatise on Economics* (Irvington-on-Hudson, NY: Foundation for Economic Education, 1996) p. 254: "Entrepreneur means acting man in regard to the changes occurring in the data of the market." And Mises, *The Ultimate Foundations of Economic Science* [1962] (Irvington-on-Hudson, NY: Foundation for Economic Education, 2002) p. "Every action is a speculation, i.e., guided by a definite opinion concerning the uncertain conditions of the future."

¹² For the classic Austrian criticisms of the Neo-Classical mathematical general equilibrium approach, and the theory of perfect competition, see, Hans Mayer, "The Cognitive Value of Functional Theories of Price" [1932] in Israel M. Kirzner, ed., *Classics of Austrian Economics: A Sampling in the History of a Tradition* (London: William Pickering, 1994), pp. 55-168; F. A. Hayek, "The Meaning of Competition" [1946] *Individualism and Economic Order* (Chicago: University of Chicago Press, 1948) pp. 92-106; Ludwig von Mises, *Human Action: A Treatise on Economics*, pp. 350-357, and Mises, "Comments on the Mathematical Treatment of Economic Problems," [1953] *Journal of Libertarian Studies*, Vo. I No. 2 (1977), pp. 97-100.

¹³ Mises, *Human Action*, p. 105: "The uncertainty of the future is already implied in the very notion of action. That man acts and that the future is uncertain are by no means two independent matters. They are only two different modes of establishing one thing."

¹⁴ It should be pointed out that there has developed what is now referred to as the "new institutional economics" that attempts to explain the emergence, evolution and significance of the underlying institutional order in which market processes actually operate. And some of these economists have consciously incorporated elements of the Austrian perspective in their theories; see, especially, Wolfgang Kasper and Manfred E. Steit, *Institutional Economics: Social Order and Public Policy* (Northampton, MA: Edward Elgar, 1998), and, also, Eirik G. Furubotn and Rudolf Richter, *Institutions and Economic Theory: The Contribution of the New Institutional Economics* (Ann Arbor: University of Michigan Press, 1998).

¹⁵ Mises, *Human Action*, pp. 327-333.

¹⁶ Carl Menger, *Principles of Economics* [1871] (New York: New York University Press, 1981) pp. 191-192; and Menger, *Grundsätze der Volkswirtschaftslehre* (Vienna: Holder-Pichler-Tempsky, 2nd ed., 1923), pp. 182-183.

¹⁷ Eugen von Bohm-Bawerk, *Capital and Interest*, Vol. 2: *The Positive Theory of Capital* (South Holland, Ill.: Libertarian Press, 1959) pp. 115-235.

¹⁸ Hans Mayer, "The Cognitive Value of Functional Theory of Price" [1932], p 57.

¹⁹ See the much neglected analysis on this point by Philip Wicksteed, *The Common Sense of Political Economy* [1910], Vol. 1 (London: Routledge & Kegan Paul, 1933) pp. 212-237.

²⁰ Mises, *Human Action*, p. 328-329.

²¹ Ludwig von Mises, "Profit and Loss," [1951] in *Planning for Freedom* (South Holland, Ill.: Libertarian Press, 1980) p. 120.

²² Mises, *Human Action*, pp. 229-230; Ludwig von Mises, *Bureaucracy* [1944] (New Rochelle, NY: Arlington House, 1969) pp. 28-29.

²³ Ludwig von Mises, *Liberalism in the Classical Tradition* [1927] (Irvington-on-Hudson, NY: Foundation for Economic Education, 1985) pp. 71-72 & 75: "This is the decisive objection that economics raises against the possibility of a socialist society. It must forego the intellectual division of labor that consists in the cooperation of all entrepreneurs, landowners, and workers as producers and consumers in the formation of market prices. But without it, rationality, i.e., the possibility of economic calculation, is unthinkable."

²⁴ Mises, *Human Action*, p. 229: "Monetary calculation is entirely inapplicable and useless for any consideration which does not look at things from the point of view of individuals. . . The premeditation of planned action becomes commercial pre-calculation of expected costs and expected proceeds. The retrospective establishment of the outcome of past action becomes accounting of profit and loss."

²⁵ Mises, *Human Action*, p. 230.

²⁶ Adam Smith, *The Wealth of Nations* [1776] (New York: The Modern Library, 1937) Book I, Chapters 1-3, pp. 3-21; Piero Sraffa, ed., *The Works and Correspondence of David Ricardo*, Vol. I: *On the Principles of Political Economy and Taxation* [1821] (Cambridge: Cambridge University Press, 1951) pp. 128-149; Jean-Baptiste Say, *A Treatise on Political Economy, or the Production, Distribution, and Consumption of Wealth* [1821] (New York: Augustus M. Kelley, 1971) pp. 90-99; John R. McCulloch, *The Principles of Political Economy, with Some Inquiries Respecting Their Applications* [1864] (New York: Augustus M. Kelley, 1965) pp. 37-46 & 85-116.

²⁷ Mises, *Human Action*, pp. 160-161.

²⁸ Ludwig von Mises, *Interventionism: An Economic Analysis* [1941] (Irvington-on-Hudson, NY: Foundation for Economic Education, 1998) p. 24.

²⁹ Ludwig von Mises, *Socialism: An Economic and Sociological Analysis* [1922] (Indianapolis, IN: Liberty Classics, 1981) pp. 55-56 & 268-269.

³⁰ Mises, *Socialism*, pp. 256-272; *Human Action*, 157-174.

³¹ Mises, *Human Action*, p. 338.

³² See, F. A. Hayek, "The Use of Knowledge in Society," [1945] *Individualism and Economic Order*, pp. 77-91; reprinted in Richard M. Ebeling, ed., *Austrian Economics: A Reader*, pp. 247-263.