

# PRAXEOLGY, ENTREPRENEURSHIP AND THE MARKET PROCESS: A REVIEW OF KIRZNER'S CONTRIBUTION

BY

KEITH JAKEE AND HEATH SPONG

The entrepreneur is shorthand for uncertainty, imperfect information, and the unknown. He operates in the shadowy world of intuition, ignorance, and disequilibrium. As a functional agent, he is completely outside the scope of modern orthodox economic analysis because entrepreneurial issues are irrelevant and, more important, inadmissible, in the deterministic, tightly interlocking theoretical environment that is modern microeconomic theory (Barreto 1989, p. 137).

## I. INTRODUCTION

It is surely Israel M. Kirzner who has promoted the role of the entrepreneur more than any other author in the second half of the twentieth century. His description of the market process and entrepreneurship in his *Competition and the Market Process* (1973) represents a seminal contribution to Austrian thinking, although it has been slow to catch on in broader circles. As Humberto Barreto argues above, for example, an entrepreneurial role seems to have disappeared from mainstream economics as the theory of the firm progressed (1989, pp. 95–98). The standard core of microeconomics allows little room for entrepreneurial elements, particularly if the latter are defined in terms of uncertainty, intuition, ignorance, and disequilibrium. In light of this intellectual discord and given his recent retirement, it is timely to reconsider Kirzner's unceasing efforts to resurrect the role of the entrepreneur, and especially his effort to reconcile this role with conventional neoclassical approaches.

We shall see that Kirzner has not avoided criticism even from like-minded

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travelers. Radical subjectivists labeled his early descriptions of the entrepreneurial process as deterministic and questioned their worth in the wider context of market *process* theories. Further developments in his theory (e.g., 1979, 1980, 1982, 1985a, 1992) were instrumental in generating additional academic debate regarding the role of equilibrium. And, while Kirzner has attempted to modify his position over time, for example in describing the equilibrium concept as representative of “market induced tendencies” (see Kirzner 1992, pp. 25–30), we will argue that he has not been entirely convincing.

We intend to re-examine Kirzner’s strong methodological assertions regarding *praxeology*, the study of “human action.” This methodological statement will be examined in the context of the methodological discussions that were dominating the broader discipline at that time. One of the paper’s principal emphases is on Kirzner’s theory of the market process and the entrepreneurial role. We trace its development from its original conception (1967) and the seminal contribution (1973), through to more recent descriptions (i.e., 1992). We will argue that by introducing the entrepreneurial element, Kirzner was able to alleviate a glaring shortcoming in neoclassical theory by explaining the mechanics of arbitrage. We will also attempt to show that while Kirzner may not have always explicitly intended to describe the market process as deterministic, his repeated use of certain economic concepts signaled otherwise. Finally, while identifying the limitations in Kirzner’s notion of entrepreneurial “alertness,” we will also underline the need to build on this valuable contribution.

Section II of the paper investigates Kirzner’s interpretation of praxeology, while Section III examines Kirzner’s earliest descriptions of the entrepreneurial role. In Section IV we explore a further development in Kirzner’s theory that resulted from radical subjectivist critiques. Section V presents an analysis of Kirzner’s contribution, identifying strengths and possible weaknesses. That section will begin by examining the broader historical context of Kirzner’s description of praxeology and it is followed by a more detailed investigation of Kirzner’s market process theory in light of subjectivist criticisms. The section concludes by illustrating some limitations of Kirzner’s “entrepreneurial” concept.

## II. EARLY KIRZNER: ECONOMICS AS PRAXEOLGY

Kirzner’s development as a theoretician clearly incorporated a detailed study of the history of economic thought. His earliest works, including *The Economic Point of View* (1960), illustrate a profound awareness of, and appreciation for, the intellectual contributions upon which he would later build. In this work, Kirzner grapples with the question of what actually defines the focus of economics. He presents a number of differing perspectives on what might constitute the domain of economics, including an analysis of political economy and its early concentration on the creation of wealth. He also discusses the maximization and the catallactic approaches.<sup>1</sup> Money, one of the most fundamental of economic institutions, is considered as a possible focal point of the economic

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<sup>1</sup> Catallaxy is the science and study of exchange.

perspective, while Lionel Robbins' allocationist view of economics is discussed in the penultimate chapter.

The book culminates with a chapter entitled "Economics as a Science of Human Action," wherein Kirzner discusses the concept of praxeology. This chapter sets out Kirzner's view of what economics should be and sets the stage for our own analysis concerning the directions that he would subsequently take. Kirzner draws on the thought of Italian philosopher Benedetto Croce, outlining the latter's position as one that emphasizes action aimed at some purpose (1960, p. 155). He describes Croce's view thus: "An act is economic in so far as it is the consistent expression of a man's will, of his conscious aiming at a perceived goal" (Kirzner 1960, p. 156). Praxeology is the study of this purposeful act.<sup>2</sup>

Having explained the relevance of Croce, Kirzner employs Ludwig von Mises' framework developed in *Human Action* (1949) to explain the nature of praxeology *per se*. Kirzner differentiates Mises' perspective from Lionel Robbins' allocation of scarce resources notion. The essence of Kirzner's view is that market "allocation" does not present an adequate expression of the fact that an acting man operates in an effort to achieve some specific purpose; on the contrary, the allocation of limited resources should be seen as an unintended *consequence* of agents' decisions. Thus, while allocation is surely one potential implication of human action—which may well be of great interest—it does not capture the essence of praxeology, nor does it represent a property that can define economics as a whole (1960, p. 162).

For Croce, Mises, and indeed Kirzner, the rational purposefulness of individual human action provides the defining characteristic of economics as a science. Among other things, this view is a well-stated case for pure *methodological individualism*, as it depicts economic agents in an independent-acting fashion. It is also suggested that a praxeological perspective can distinguish economics from other disciplines. The psychological, physiological, and physical forces that pre-date this action are not, he declares, within the realm of praxeological study (1960, p. 149). Following Mises, Kirzner argues that human reason is able to overcome these antecedent forces in the process of decision-making. Accordingly, it is reason and rational thinking that determine the appropriate ordering of preferences and the subsequent selection of actions for each individual (1960, p. 151).

Kirzner is also critical of theorists who confuse the economic *act* with economic *institutions*, and the individual's interaction with those institutions. The institution of money, for example, while the *raison d'être* of the study of economics for some, is again a *result* of human action, not the essence that should define it. He is clearly not suggesting that such areas are unimportant, but rather is pointing out that such phenomena, in themselves, do not represent the core of economics (1960, pp. 152–53).

### III. MIDDLE KIRZNER: THE RISE OF THE ENTREPRENEUR

We begin our review of Kirzner's theory of the entrepreneurial role by noting a shift in emphasis. It may be surprising to some that Kirzner's earliest work

<sup>2</sup> Kirzner notes: "It has not always been appreciated, however, how closely Croce's view of economics mirrors the praxeological outlook" (1960, p. 155).

(1960) included no mention of the entrepreneurial role that he is to consistently emphasize thereafter, even though he did make a passing reference to it as early as 1963.<sup>3</sup> On the other hand, his later more well-known analyses of the entrepreneur did not include explicit discussions of the earlier praxeological perspective. In each of his early works on entrepreneurship (1967, 1971, 1973) there is reference to the “purposefulness” in human action, but none to praxeology itself.<sup>4</sup> We will return to this shift in emphasis in our Discussion section.

Kirzner’s initial foray into the issues of entrepreneurship needs to be considered in the context of the then-present shortcoming within neoclassical analysis concerning “perfect competition” and “equilibrium.” Hayek, for example, noted as early as 1948 that perfect competition represented the absence of all competitive activities. Kenneth Arrow (1959) identified a similar difficulty with the notion of equilibrium and perfect competition, and he made an attempt to emphasize the competitive nature of *disequilibrium* in the process of price adjustment.

Hayek’s criticisms, as well as those implicit in Arrow, were elaborated upon by Paul McNulty in 1967 and 1968. McNulty (1967) emphasizes the profession’s move away from Smith’s notion of competition, which was based on individuals engaging in *competitive activities for profit*, and toward a static notion of competition in which behavior is a function of *market structure*. McNulty notes that a perfectly competitive market structure is one in which each producer and consumer is a price taker in a market for a homogenous good. Thus, any notion of competition as we commonly observe it—e.g., price competition, product differentiation, advertising, etc.—is precluded. This link between competition and market structure at equilibrium is radically different from the Smithian emphasis on genuine competitive activities in which “competition is essentially one of business behaviour which might reasonably be associated with the verb ‘to compete’” (McNulty 1967, p. 398).

McNulty (1968) further outlines the traditional Smithian description of competition noting two important points. First, Smith’s description of economic competition was essentially one of simple price competition, or as McNulty states: “the effort of the individual seller to undersell, or the individual buyer to outbid, his rivals in the market place” (1968, p. 647).<sup>5</sup> Second, one of Smith’s main contributions was to present competitive activity as a general organizing principle of economic society, since it “would lead self-seeking individuals [to] unconsciously . . . serve the general welfare” (1968, p. 646). These points are significant for our review because they clearly illustrate how closely Kirzner adheres to the Smithian tradition. As we shall see, Kirzner’s model of the

<sup>3</sup> This contribution is essentially a textbook on price adjustment, and while demonstrating his awareness of entrepreneurship as a concept of importance, it does not provide the unique explanation of this concept that he is to focus on thereafter.

<sup>4</sup> It might be noted, we are not arguing that Kirzner abandoned the praxeological perspective. Kirzner’s later work—i.e., after his methodological statement—focuses almost entirely on *markets*, the study of which can surely be classified as an area of catallactics. Catallactics could, furthermore, be considered as a sub-category of praxeology.

<sup>5</sup> McNulty explains that price competition was a standard conception of competition among classical economists during this period, as discussed by theorists such as Cantillon, Turgot, Hume, and Stewart (McNulty 1968, p. 647).

entrepreneur is most powerful in explaining the *process* of price competition, and in providing a depiction of the market as both an organizing and equilibrating mechanism.

The very first of Kirzner's works on entrepreneurship was produced in 1967, but was never formally published.<sup>6</sup> Kirzner begins by addressing the problems associated with the profession's preoccupation with equilibrium, and the forgotten element of economic process and competition:

To equilibrium theorists efficiency is judged against the background of equilibrium states of affairs. "Imperfect" competition, profits, advertising, the "wastes of competition"—all these are frequently attacked by economists on efficiency grounds. It is here being pointed out that all too often these (and other) attacks arise directly out of the exclusive preoccupation with equilibrium, and evaporate completely when introduced in to the framework of the analysis of the market process (Kirzner 1967, p. 789).<sup>7</sup>

In the context of this frustration with the mainstream focus on equilibrium economics, Kirzner revisits the differences between Mises' human action and Robbins' economizer. But Kirzner's attention is, at this point, turned toward illustrating the importance of the entrepreneurial role. For Robbins, the maximizing decision-maker faces a given set of ends and means, and he makes his decision in response to these parameters. If the given ends and means change, then a new decision will dictate some change in the course of action. But the process by which a new decision is made is never accounted for. Kirzner summarizes:

There is nothing in the formulation of the economic problem, that tells us how, in the absence of such unexplained exogenous changes, one pattern of relevant ends-means can be replaced by another. So that where a series of such changes does occur, the corresponding alterations in decisions made, represents a series of disconnected discrete events, not understandable, within the exclusively economizing framework, as a logical sequence constituting a unified process (Kirzner 1967, pp. 793–94).

In other words, Kirzner stresses that nothing in the Robbins' economizing concept explains why buyers should offer higher prices today than yesterday (Kirzner 1967, p. 795). It is here that Kirzner introduces the *entrepreneurial* element that is intended to account for the changing ends-means decision framework. Kirzner uses a simple example of a situation where excess demand for some good exists. Kirzner describes this as an "error" in the market that is "discovered" by some market participant. It is the entrepreneurial element in human decision making that identifies these market errors as opportunities for profit.

The difference between Robbins' and Kirzner's view is critical and eventually becomes one of the cornerstones of recent Austrian perspectives. Kirzner postu-

<sup>6</sup> This paper was originally presented by Kirzner at a conference meeting of the Mont Pelerin Society on September 13, 1967, in Vichy, France.

<sup>7</sup> We should point out that Kirzner does not cite McNulty, and we are unsure as to how widely circulated the latter's (1967) piece was when Kirzner wrote his.

lates that the Austrian approach, through its recognition of *entrepreneurial alertness*, will be able to reconcile Frederick Hayek's hypothesis of unintended "market learning" with the standard notion of equilibrium.<sup>8</sup> That is, it is the exercise of entrepreneurial alertness in the context of market interaction that enables individuals to discover errors or discrepancies in the market; individuals are thus forced to revise their decisions as a result of the newly identified ends-means environment. By resurrecting the role of the entrepreneur in this fashion, Kirzner re-introduced the *subjective* aspect of human decision-making into neoclassical orthodoxy. In doing so, he was able to provide an endogenous explanation of a process left ill-defined in Robbins' maximizing approach.<sup>9</sup> Viewing entrepreneurs as a special category of economic actors, distinct from producers and consumers, is another notable contribution.

In 1971, Kirzner published his first piece examining the role of entrepreneurs. He addresses the same fundamental issues: the missing element in the standard equilibrium story and the inability of Robbins' maximizers to perceive the existence of a profit opportunity. Additionally, this account of entrepreneurship also provides a very careful delineation between Kirzner's own view of the role of entrepreneurs and that of Joseph Schumpeter. For Kirzner, the essence of Schumpeter's view is that the entrepreneur disrupts some market equilibria through the exploitation of new ends-means combinations.

But for Kirzner, this conception is illogical and anathematic to what he viewed as a market tendency *toward* coordination (*à la* Smith), or even equilibrium. By his—and the standard neoclassical—definition, there is no potential to make a profit in the state of market equilibrium. For a profit opportunity to exist in this framework, the market must be in disequilibrium and when an entrepreneur identifies a profit opportunity, his action must be seen as moving the market toward equilibration; in so doing, the market error will be corrected (Kirzner 1971, p. 110).

Kirzner criticizes Schumpeter's account of the market process and draws numerous implications. For example, he argues that Schumpeter does not adequately describe what it is that compels an individual to act within the market. From the latter's perspective, even if an individual were able to calculate the best course of action to be taken, how can the analyst be sure that the individual will actually pursue such a course? For Kirzner, it is the competitive market process that assures that *alert* entrepreneurs are able to identify and act upon errors that will lead to profit opportunities. Such an approach has implications for development economics in that it demonstrates how the market can create growth by ensuring that the optimal decision is identified and subsequently executed.

<sup>8</sup> Hayek's exposition of the role of knowledge in society contends that much of society's stock of knowledge is tacit, localized, and dispersed. The market process enables the dissemination of this knowledge as individuals have an incentive to acquire the knowledge that is relevant to their position (see, e.g., Hayek 1937, 1945).

<sup>9</sup> In standard mainstream analysis, two discrete points in time are isolated, with no account of the process that occurs between those points. By acknowledging the entrepreneurial element or alertness, which allows the individual to recognize a new set of market parameters, Kirzner begins to fill this gap and depict the passage of time as a continuous process. See O'Driscoll and Rizzo (1996 [1985]) for a more thorough-going exposition of real time.



Kirzner argues that Schumpeter's account lacks the social mechanism that will ensure that all potential opportunities are perceived and embraced (Kirzner 1971, p. 118–19).

Kirzner's *Competition and Entrepreneurship* (1973) was seminal in the development of entrepreneurial and Austrian theory. It explains the market process in a way that provides an account of the "tendency" toward equilibrium upon which Kirzner had earlier touched. The alertness to profit opportunities compels individuals to act to capture these gains, while the essence of the market *process* is one where markets generate opportunities that can be identified and acted upon by such entrepreneurial individuals:

For me the changes the entrepreneur initiates are always toward the hypothetical state of equilibrium; they are changes brought about *in response to* the existing pattern of mistaken decisions, a pattern characterized by missed opportunities. The entrepreneur, in my view *brings into mutual adjustment* those discordant elements which resulted from prior market ignorance (Kirzner 1973, p. 73).

#### IV. LATER KIRZNER: THE INFLUENCE OF RADICAL SUBJECTIVISM

Ludwig M. Lachmann, heavily influenced by George Shackle's *Epistemics in Economics* (1972), had a powerful effect on Kirzner's intellectual path. Lachmann stakes out the "radical subjectivist" position in economic theory and is concerned with the conceptual problems inherent in notions of "equilibrating tendencies" and in market process "direction." Lachmann argues that market activity is based upon the aggregation of *subjectively* formed expectations of numerous individuals and, as such, is infinitely complex. This methodological position leads to the conclusion that the market process cannot possibly have any meaningful tendency toward equilibrium. He also draws our attention to the fact that the relationship *between* markets is infinitely complex, which makes the possibility of some overall equilibrating tendency (*viz.* general equilibrium) even more difficult to defend. Given such layers of complexity, Lachmann argues that we should question the value of asserting "direction" in market, or entrepreneurial processes: "No initial set of forces delimits the boundaries of events. Any force from anywhere may at any time affect our process, and forces that impinged on it yesterday may suddenly vanish from the scene. There is no end or final point of rest in sight" (1976, p. 131).

In response to this subjectivist critique, Kirzner was quick to demonstrate what he perceived to be underlying difficulties with the views of Shackle and Lachmann. Kirzner (1976) returns to discussions of methodology, attempting specifically to undermine Shackle and Lachmann's radical subjectivist foundations. Kirzner claims that one of the normative requirements of Austrian analyses is to illuminate unintended social outcomes, such as market coordination, from individual action (1976, p. 41). This objective, Kirzner argues, cannot be adequately pursued under radical subjectivism, because of its emphasis on the "indeterminacy and unpredictability inherent in human preferences, human expectations, and human knowledge" (1976, p. 42).

Kirzner therefore suggests that true or radically subjective uncertainty—which should be clearly differentiated from the standard neoclassical notion of “risk”—is methodologically incompatible with what he sees as a more traditional Austrian focus on social and economic coordination. While Kirzner regards the insights of radical subjectivists as valuable, he refuses to rely too heavily on them at the expense of equilibrating tendencies. In our view, this emphasis on unintended social order is continued evidence that Kirzner’s thought remains grounded in that aspect of the Smithian tradition, which emphasizes the market as a spontaneously organizing process.

On the other hand, Kirzner did begin to incorporate a broader recognition of uncertainty in his own description of the entrepreneurial process some years later. Kirzner (1982) endeavors to demonstrate how entrepreneurial “alertness” is consistent with the state of true uncertainty, as was emphasized earlier by Mises’ in his description of the entrepreneurial element. At this point, Kirzner argues that in “single-period” settings, consistent with his earlier descriptions of the entrepreneurial process (1967, 1971, 1973), the entrepreneurial element can be interpreted as *alertness* to instances of market error and new information. Alertness and entrepreneurial reaction to these market discrepancies give rise to the process of arbitrage, which in turn generates market equilibration.

He contends, moreover, that the relationship between alertness and the bearing of uncertainty is clarified when considering the “multi-period” setting. He claims that in the intertemporal environment, individuals imagine the future as they perceive it will unfold—both in terms of their own, prospective action, and the imagined impact of the actions of others. On the basis of this imagination, the individual formulates a path of action. Kirzner argues that the imagination of the future, and the selection of an appropriate activity, is the uncertainty-bearing facet of entrepreneurial alertness (1982, p. 149). In the end, however, he seems to collapse the multi-period perspective together with his previous, single-period one: “Viewed from this perspective, the tension between the uncertainty-environment in which action occurs, on the one hand, and the discovery-of-error aspect of action, on the other, can be seen to dissolve at a glance. These two aspects of action can be seen immediately as merely two sides of the same entrepreneurial coin” (1982, p. 150).

Indeed, despite Kirzner’s newfound emphasis on imagination and expectation formation, one can detect that many other aspects of his theory remain the same in this multi-period setting. For example, entrepreneurial “error” still exists, but now it is in the form of a divergence in the future imagined by the entrepreneur, and the future as it actually unfolds. Furthermore, while he focuses primarily on the relationship between entrepreneurial alertness and the concept of uncertainty, the notion of equilibration can still be detected. It is, for example, stated repeatedly that the entrepreneurial function brings about market “coordination” (e.g., 1982, p. 152, 154).

The subjectivist perspective, pioneered by Shackle and accentuated by Lachmann, therefore generated pressure on Kirzner to acknowledge the difficulty of the equilibration concept; and the latter, at this point, begins a gradual refinement of his position, paying more careful attention to articulating his description of the equilibration process. His descriptions of the process begin to suggest



“mere tendencies” and “directions” rather than the stronger form equilibrium statements found in his earlier work. The exposition contained in the 1985 *Discovery and the Capitalist Process*, while also providing an outright rejection of the extreme view of uncertainty proposed by Lachmann (1985a, pp. 11–12), clearly illustrates this gradual watering down of his emphasis on strong form equilibration:

Precisely because market decisions at a given time are based in large part on mutual ignorance (as well as on ignorance of physically available opportunities), the configuration of market prices is likely to offer pure profit opportunities for those able to discover where existing decisions were in fact mistaken. Here lies the source for any equilibrating tendencies that markets display (Kirzner 1985a, p. 13).

By 1992, Kirzner devotes his attention to a more nuanced model of market coordination, which takes account of the subjectivist critiques; on the other hand, he remains steadfastly “middle ground” between them and the neoclassical orthodoxy. Kirzner’s *The Meaning of Market Process* (1992) introduces the concept of “underlying variables” and their relationship to “induced variables.” The underlying variables (UVs) refer to the current state of technology, and the availability of resources, as well as subjective preferences. In contrast are the induced variables (IVs), including prices, methods of production, quantitative and qualitative outputs generated by the market under the influence of the UVs (1992, p. 42).

He argues that if the market were to reach a position consistent with neoclassical equilibrium, the IVs would map perfectly to the UVs. On the other hand, his interpretation of the radical subjectivist view is that equilibration of the IVs to the UVs is never fully realized because of continually changing UVs. Thus, while the “tendency” still exists, Kirzner argues that IVs are somewhat independent from the UVs. He asserts, moreover, that the equilibration tendency of the IVs *should* represent a core premise of any notion of economic coordination. To relinquish all recognition of the equilibrating nature of the market process in favor of an emphasis on the disequilibrating nature of UVs would, in his view, surrender the traditional core of economics (1992, p. 51).

## V. DISCUSSION AND ANALYSIS

We now turn to a discussion and analysis of Kirzner’s intellectual contribution in the areas of methodology and the entrepreneurial role. We also consider his later attempts to integrate broader notions of uncertainty with his theory of entrepreneurship. We begin by examining the broader methodological and historical context of Kirzner’s early discussion of praxeology. We believe considering his work in such light provides valuable insights into his early methodological development and we also gain a greater appreciation for directions that he would take later in his career.

*Kirzner's Praxeology in Context*

The methodological environment within which Kirzner developed his own early insights can be generally summed up as one in which the profession, to the extent that it was methodologically conscious, was on a course to prove itself worthy of the “scientific” appellation. Surely this scientific impulse has been detectable throughout the last 200 years as even the classical writers were pursuing a science of wealth that would include uncovering economic laws that could rival those in the natural sciences (see, for example, Caldwell 1994). There is also little doubt, however, that this emphasis gained momentum throughout the latter half of the twentieth century.

While we might delineate various manifestations of the last century’s pursuit of scientific qualifications, we take the positivist movement, embodied in Milton Friedman’s famous essay of 1953, as typifying this trend. Friedman’s positivism, which he presumed mimicked the natural sciences, was intended to advance the science of economics. He emphasized the development of deductive proofs that were intended to be general in their application. “Facts” needed to be objective and measurable, which would render them subject to rigorous empirical testing.<sup>10</sup> In the process, according to Friedman, there is no need to worry about assumptions, which are indeed unrealistic, because the only function of science is to build models for predictive purposes.

Moreover, there was considerable intellectual effort at that time devoted to drawing out the distinctiveness between economics and its competitor social sciences, such as sociology and psychology. This point is remarkable because one detects in this literature a certain insecurity among economists regarding their role in the social scientific community, particularly *vis-à-vis* psychology, which was presumably on the intellectual rise.<sup>11</sup>

Another key aspect of the general methodological atmosphere was its normative nature. For example, while Friedman wrote as if he were simply reporting on the profession’s best practices, he was largely writing about his notion of ideal-types. This is problematic because it was never made clear how tenable such ideal-types were; and perhaps it is even more important to note because the casual conflation of positive and normative positions—the so-called *naturalistic fallacy*—has caused years of untold confusion in the discipline about what economists actually do.

While this latter aspect of the methodological debate in economics may be of great significance, we cannot pursue it here.<sup>12</sup> What is of direct relevance for us is that it is within the context of this methodological juggernaut, which embodied professional concerns over the importance, distinctiveness, and especially scientific-ness of economics, that Kirzner enters the fray with his emphasis on praxeology in the early 1960s. We will investigate three themes with regard to

<sup>10</sup> See also Friedman’s introduction to his *Price Theory* (1962), where he takes Robbins’ definition to suggest that “no value judgments enter into its solution” (1962, p. 6).

<sup>11</sup> See, for example, Stigler (1960).

<sup>12</sup> See, for example, Backhouse (1994), Blaug (1992), Caldwell (1994), Dow (1997), Gerrard (1990), or Hausman (1992) not only for recent overviews on methodology in economics, but for some often sharp critiques of Friedman (1953).

Kirzner's early work on methodological questions. They are: (i) the normative character of Kirzner's methodology, (ii) the retention of a scientific concern over the nature of economics, and (iii) the likelihood that Kirzner intended to develop some kind of methodological middle ground early in his career.

We begin by pointing out what is rather obvious with several decades of hindsight: like most others involved in the methodological discussions at the time, Kirzner's praxeological stance was also a strongly normative one. In general, criticism leveled at the positivist position can likewise be leveled at Kirzner. To some extent this is surprising, given the often-sophisticated discussion of the history of economic methodology evidenced throughout his first book (1960).

Indeed, a glaring feature of this work is the claim that all of economic thought was marching inexorably from an overly narrow (and flawed) method, which focused almost exclusively on wealth and its creation (among the classical theorists), to a more enlightened and general approach embodied in Robbins' allocation definition. This latter approach had switched methodological attention to agents' actions and decisions (as opposed to the *results* of those actions). Kirzner then argues that the culmination of such an approach is to be found in Mises' praxeology, the study of human action based on human purposefulness.

In terms of positive methodological descriptions, Kirzner would appear to be on relatively firm ground in his historical characterization of the changes in the discipline, as it shifted from a concentration on laws that underpinned wealth creation to one that developed methods for analyzing individual decision making. His historical and methodological insights in this area remain of interest, yet as far as we can tell, they are largely neglected by historians of thought and economic methodologists.

On the other hand, where he is likely on less firm methodological ground is in his Whiggish insistence that the discipline had been moving in some kind of linear progression from a relatively more flawed approach to a more enlightened one, terminating in Mises' method, which he claimed had apodictically certain epistemological grounds (1960, pp. 177–78). We would argue, moreover, that this aspect of Kirzner's early work was likely to have been one of his explicit objectives. We must recall that Kirzner was one of Mises' most devoted students, writing his dissertation under Mises just a few years before the publication of the 1960 book. Mises himself wrote the short preface wherein he strongly underlines our point:

Doctor Kirzner's book provides a historical account of all the solutions suggested in this [methodological] debate. It is a very valuable contribution to the history of ideas, describing the march of economics from a science of wealth to a science of human action. The author does not, in the fashion adopted by some recent histories of economic doctrines, indulge in value judgments and paradoxical observations (Mises, in Kirzner 1960, pp. vii–viii).

The work can be seen and, in the last chapter, very much reads as a strong methodological advocacy for Mises' praxeology. While there are passages that seem to suggest that praxeology *is* what economists are doing, it is clear that his was a normative appeal that economists *should* move further in the praxeological

direction. As we suggested in our point about the mainstream's methodological confusion between positive and normative approaches, Kirzner's often-imperceptible movement between these two spheres weakens some of the more salient historical points, as well as his descriptions of the praxeological view.

Our second contextual argument turns to an analysis of Kirzner's praxeology itself. As we have pointed out, Kirzner was heavily indebted to Mises for his emphasis on praxeology. But more importantly, we would argue that praxeology, both in Mises' and Kirzner's hands, was intended to be every bit as scientific an approach as that advocated by the mainstream. While non-mathematical and often non-empirical (especially in the use of formal statistical analyses), praxeology emphasized value-free analysis, apodictically certain first principles, logic, and proofs of the intentionality of human action. From these theorems, basic claims to truth in human action could be uncovered. For example:

Purpose is not something to be merely "taken into account": it provides the sole foundation of the concept of human action . . . There is place for a distinct science of economics *only* because the teleological quality of action makes possible a unique kind of "explanation". The theorems of economics are derived for praxeology exclusively on the basis of the purposefulness of human behavior . . . [Praxeology's] description of all human action as rational constitutes a proposition that is, in fact, incapable of being falsified by any experience, yet does, nevertheless, convey highly valuable information . . . Such a proposition cannot be proved empirically false because, as we have seen, [an individual's] programs *can* be changed, so that evidence that a man no longer "follows his best interests" proves only that he has chosen a new "program" . . . Despite the impossibility of its empirical contradiction, this proposition yet conveys highly useful information because the insight it provides makes possible the derivation, *in regard to whatever program is relevant in given circumstances*, of highly developed chains of theorems (Kirzner 1960, pp. 165, 172).

In addition, Kirzner is concerned with the distinction between praxeology and psychology (Kirzner 1960, p. 151). This view reflects Mises' earlier position as well: "the praxeological problem is in no way related to psychological issues. We must conceive, not merely understand" (Mises 1949, p. 486).<sup>13</sup> Indeed, there appears to be as much concern with delineating their intellectual domain from its close substitutes as the mainstream displayed.

Kirzner's emphasis on the scientificness of praxeology, as well as his emphasis on the juxtaposition of praxeology *vis-à-vis* the dominant approach of the day, strikes us as important for another reason. For the last several decades at least, the Austrian approach is well known to be overwhelmingly antithetical to the formalistic and the statistical approaches of the mainstream. It could well be said that the former is wholly averse to the "scientific" mantle—a term used by Hayek—in which the mainstream cloaks itself. Yet, it seems clear that in 1960, Kirzner's emphasis on praxeology as a prescription for economic practice was much more closely aligned with the promoters of a scientific economics than the

<sup>13</sup> Consider also: "Whether an action stems from clear deliberation, or from forgotten memories and suppressed desires which from submerged regions, as it were, direct the will, does not influence the nature of the action" (Mises 1949, p. 12).

opposing view. While less mathematical, the Austrian approach, at least in the hands of mid-century proponents, could hardly be said to be antithetic toward a “science” of economics. In our estimation, these Austrians disagreed with the mainstream only on what constituted the correct way to approach that science.<sup>14</sup>

Turning to our last point in this subsection, we hypothesize that Kirzner’s later middle-ground position—between the mainstream’s equilibrium models and the Lachmann-inspired radical subjectivism—may well have its intellectual and methodological genesis in his 1960 book. Kirzner’s entire approach to the methodological issues posed early in his career can be viewed as a middle ground one: he was critical of the mainstream, but only insofar as they had not gone further in the direction of a praxeological stance. For example, Kirzner argues that Robbins’ allocation definition was actually a subset of the more general praxeological view. “Much of the criticism Robbins’ definition received will be seen to dissolve when his conception of economics is related more clearly to the idea of human action” (1960, p. 184).

Impugning motives from Kirzner’s methodological positioning is speculative, but we detect in this early work the genesis of a tendency that would mark Kirzner through his later career: a tendency to remain steadfastly in the middle of intellectual debates. In this case, it was between the dominant neoclassicals and the increasingly sidelined Austrians who were emphasizing praxeology. Thus, while mainstream thinkers typically associate Kirzner with the Austrian approach, it seems clear that he saw himself as walking the fine line between the two camps, even very early on.

And there may be yet another aspect of Kirzner’s centric methodological positioning when we consider the potential tension between the scientific praxeology that Mises had advocated and the work of that other twentieth century Austrian luminary, Hayek. While some of Hayek’s early arguments on method seem to closely parallel those of Mises, by his mid-career, the former was delving very deeply into questions of psychology (1952), social and economic institutions (1960), and social evolutionary processes (1973). Moreover, it is Hayek as an elder-scholar who argued most vociferously against science’s “pretense of knowledge” in his Nobel lecture, of all places (1974).<sup>15</sup>

Clearly, Hayek took a different intellectual course from his one-time close colleague, Mises, and pursued a number of lines of inquiry that would not have fit easily within the praxeological perspective (i.e., psychology, institutions, social evolution). We would suggest that the diverging interests of these two Austrian scholars is potentially relevant to the disunity that has surfaced within the Austrian school since the 1970s. It is also interesting, although speculative, to consider Kirzner’s position *vis-à-vis* these two cornerstones of the modern

<sup>14</sup> Economics is clearly a science for Mises, but the tools of the natural sciences are not applicable for a good reason: the nature of its focus is human activity. For example, Mises had earlier defended the non-quantifiable charge leveled by the positivists by stating that it was not due to a lack of measurement ability, but the lack of constants in economics that prevented it from using the scientific methods of physics, chemistry, biology, etc. (1949, p. 56).

<sup>15</sup> While we realize that Hayek’s particular aim was the pretense to knowledge with regard to systemic economic planning, his message has much wider import for economics, and indeed scientists in general. We appreciate David Prychitko’s discussions on this point.

Austrian movement as he tried to promote his own views.<sup>16</sup> Perhaps a decision early in his career to mediate the growing chasm between the intellectual positions of Hayek and Mises helps explain Kirzner's later proclivity to solve mainstream neoclassical problems using Austrian insights, as well as his later middle ground position within the Austrian tradition.

### *Kirzner and Determinism*

Praxeology's individual purposefulness implies a teleological view of *individual behavior* in that it assumes individuals have objectives and act in accordance with those objectives. Assumptions of teleology, or determinism, in *social processes* are, however, much more nuanced and potentially more problematic. We define determinism in social processes to refer to any depiction of said processes as converging toward specific outcomes or equilibria. Such equilibration, or convergence, is typically modeled as a system constrained by parameters that must inevitably predetermine the outcome (or array of outcomes). It is the determinism in social processes that we focus on in this section, particularly as it applies to the development of Kirzner's work.

Determinism can be a useful theoretical abstraction. Many of the insights of the neoclassical approach come from its simplifying assumptions about parameters that will ultimately constrain the result. In the static supply and demand model, all parameters (i.e., income, tastes, population, etc.) are determined exogenously; individuals' willingness to pay and the firms' costs are assumed to be calculable. Clearly, powerful conjectures regarding the direction in which prices and quantities move are made possible with this model and its concomitant assumptions.

A review of Kirzner's portrayal of the arbitrage process is instructive in light of such deterministic modeling. He relies explicitly on a deterministic framework in his early descriptions of the entrepreneurial role, and his account makes all the standard assumptions described above in the simple supply and demand model. The theoretical clarification comes when considering how prices might actually be changed in response to an over- or under-supply of the good in question, or how geographically isolated markets for the same good might be brought into harmony. Kirzner's entrepreneur, through his perception, identifies various discrepancies (e.g., over-supply, under-supply, two isolated markets with differing prices) and plays the middleman, or the arbitrager, buying and selling in the hope of making a profit.

Until this breakthrough, the neoclassical approach could not theoretically demonstrate the *mechanism* by which prices would change within markets. Kirzner's entrepreneur thus serves the function of the fictitious Walrasian auctioneer in actually bringing about market clearing, or convergence. With this development, a description of the arbitrage mechanism, along with the role of

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<sup>16</sup> Interestingly, one finds a virtual blueprint for Kirzner's later approach to the entrepreneurial role in Hayek (1937). Also, despite Kirzner's strong position on Mises' praxeology in 1960, Kirzner began to take up the problematic concepts of equilibrium, competition, and eventually the entrepreneur (all of which can be found in Hayek (1937)) a decade or so later.



those agents responsible for carrying it out, was reconciled with an equilibrium approach.

On the other hand, determinism can be a problematic theoretical abstraction, particularly when viewed from more subjectivist approaches. First, determinism—and the related concepts of convergence and equilibrium—is overwhelmingly employed to infer optimal outcomes (or the divergence from such optima). And while it is one matter to conceive of individual behavior as optimal (which is often reduced to a tautology that individuals must be optimizing in whatever decisions they make), it is quite another to conceive of social outcomes as optimal, or even potentially optimal. Subjectivists will ask what optimality means from the perspectives of the various *individuals* within the community.<sup>17</sup> Equilibrium in the simple supply and demand model, for example, usually provokes hasty conclusions regarding the optimality of the result. But of course this may not be optimal from the perspective of every member of a given community (i.e., restricting supply should make at least some producers better off).

Second, these concepts cannot cope very well with the increased uncertainty (and not simply risk) generated in social systems by creative and unpredictable behavior. Reconciling these aspects of social life with an equilibrium outcome, somehow predetermined by existing parameters, is problematic—and even quite misleading. James Buchanan and Viktor Vanberg (1991) contend that accounting for individual creativity and true uncertainty must force us to consider *evolutionary* processes that cannot by definition be constrained in advance with *ad hoc* parameters. Such evolutionary systems will be more appropriately modeled within an “open-ended” theoretical framework.<sup>18</sup>

Kirzner’s early descriptions of entrepreneurship (1967, 1971, 1973) suggest that he is indeed taking a deterministic approach to market processes. His own stated aim regarding the entrepreneurial role was to fill the gap in the neoclassical approach that did not specify the actual process of equilibration. As we have already suggested, equilibration itself, or the question of whether equilibrium is the proper way to describe these processes, was never at issue for Kirzner. As far as he is concerned, conceptualizing equilibrium as the state of rest at which the economy is more or less destined to arrive, given external parameters, is a legitimate theoretical construct.<sup>19</sup> Indeed, Kirzner clearly states that he accepts the neoclassical assertion that profits cannot exist in equilibrium. Thus, to the extent that it is profits driving entrepreneurial action (and in his view all entrepreneurial action is driven by the pursuit of profits), the system must be out of equilibrium prior to entrepreneurial action. Kirznerian entrepreneurs, as we have seen, drive the system toward equilibrium.

Kirzner is also unambiguous regarding the optimality of this equilibrium position brought about by entrepreneurial action. In outlining the differences

<sup>17</sup> On this general point see Hayek (1937), or on the critique of the use of social welfare functions, see Buchanan (1954).

<sup>18</sup> For a more recent approach to the role of entrepreneurship that specifically attempts to build upon such open-ended process-oriented foundations, see Jakee and Spong (2003).

<sup>19</sup> It is worth pointing out that this same static notion of equilibrium was earlier criticized by both McNulty and, ironically, Kirzner.

between his theory and that of Schumpeter, Kirzner insists that Schumpeter cannot guarantee that entrepreneurs will “choose the best course of action” or that they will take advantage of all existing opportunities (Kirzner 1971, p. 119). His continued assertion that entrepreneurs, in essence, correct the existing “mistaken” decisions by other market participants gives a clear picture that entrepreneurs drive the system from some sub-optimal disequilibrium to a more optimal equilibrium one, which “ensure[s] the exploitation of all available opportunities for mutually profitable exchange” (Kirzner 1992, p. 50).

Seen in this light, it is clear that Kirzner’s entrepreneur, while filling the gap in the neoclassical account of price changes, cannot very well explain the kinds of processes that Schumpeter’s theory of entrepreneurial “creative destruction” does. For example, Kirzner’s entrepreneur, as it stands here, is unable to explain *endogenous* social and economic change, a point that we return to in more detail in the next section.

Kirzner’s early descriptions of the entrepreneurial process are also consistent with deterministic neoclassical analyses when it comes to his view of uncertainty. Like neoclassical theorists, Kirzner is willing to downplay the role of uncertainty in order to maintain convergence in his equilibrating model. He explains that while uncertainty is inherent in every decision, he deliberately puts greater emphasis on the *identification of profit opportunities* by entrepreneurs (1973, p. 86–87).<sup>20</sup>

As outlined above, radical subjectivists such as Lachmann raised a distinctly new challenge to Kirzner’s market process theory by the mid-1970s. The radical subjectivists emphasized the potential for economic agents to act in an unpredictable manner, generating uncertainty in outcomes. As a result, Kirzner attempted to incorporate a greater recognition of uncertainty in his work and in so doing exhibits his steadfast middle ground positioning. But this is a move that would create inconsistencies in his pre-existing theoretical position on equilibration or, as he began to say, “equilibrating tendencies” (see, i.e., 1976, 1982, and 1985a).<sup>21</sup> By maintaining his emphasis on equilibrating tendencies he was still describing the market process as one that displayed an inherent determinism.

The inconsistencies created by Kirzner’s attempt to reconcile uncertainty with some variant of social determinism (i.e., “equilibrating tendencies”) were pointed out in a little-circulated piece by Peter Boettke, Steven Horowitz, and David

<sup>20</sup> Kirzner (1973, p. 79):

Even if decision-makers displayed neither aversion nor preference toward uncertainty as such, even if they failed altogether to recognize the relatively precarious character of all perceived profit opportunities, we would yet have to find a place within our theory of the market process for entrepreneurial alertness and for its effect upon the continued availability of perceived opportunities for pure profit.

<sup>21</sup> On this point, we identify a variation in our view with that provided by Vaughn (1992, p. 260). While she argues that Kirzner maintained absolute commitment to the appraisal of the entrepreneurial process contained in his 1973 work, we would suggest that Kirzner did attempt to integrate more subjectivist concepts into his analysis. For example, in his 1992 piece, a work to which Vaughn does not refer, Kirzner explains the process of equilibration in a manner that puts more emphasis on the degree of uncertainty in the market process, and endeavors to demonstrate his own view of equilibrating tendencies.

Prychitko (1986), who argued in favor of an evolutionary market process that completely dispensed with Kirzner's equilibration. More recently other authors, such as Don Boudreaux (1994) and Eran Binenaum (1995), have continued to point out the difficulties and inconsistencies in Kirzner's equilibrium position.<sup>22</sup> But it was Buchanan and Vanberg (1991) who most succinctly identified the problems with Kirzner's response to the subjectivists. They frame the problem in a slightly different way from that presented by Lachmann and others, examining the methodological essence of process-oriented descriptions of the market. By their account, a true process-oriented approach must be non-teleological, or non-deterministic; a non-teleological description must not imply a systemic convergence toward some specific outcome, goal, or any other such *telos*. As a result, the equilibrium conception is ultimately a teleological or deterministic device.<sup>23</sup>

Recall that Kirzner's later discussion of UVs and IVs is one in which he endeavors to differentiate a more unique view of his equilibration process from the standard deterministic explanation (1992). As described above, the UVs represent subjective preferences, the current state of technology and the availability of resources, while IVs represent prices, methods of production, and quantitative and qualitative outputs generated by the market under the influence of the UVs. The market process, as Kirzner describes it here, is one in which given UV values tend gradually to become reflected in IV values (1992, p. 42). On the other hand, Kirzner explains that equilibrium (the exact mapping of IVs to UVs) is never actually reached due to constantly changing UVs, and "entrepreneurial error" which disequilibrates the IVs.<sup>24</sup>

In our view, this later attempt at a modified description of the equilibrium process is not sufficiently detailed to provide any greater insight into the market process than that provided by the more parsimonious neoclassical approach combined with Kirzner's earlier emphasis on entrepreneurial alertness. For example, to describe the market process in the UV-IV framework, he is forced to make an assumption similar to the standard *ceteris paribus* notion used within

<sup>22</sup> For example, "Kirzner too readily accepts the standard notion of equilibrium as representative of his view of equilibrative tendencies" (Boudreaux 1994, p. 57). It should be noted that Boudreaux is not intending to be critical of Kirzner's theory of entrepreneurship, so the context of his comment is slightly different to ours. However, his point does buttress our own that the equilibrium concept automatically brings forth a set of connotations consistent with its mainstream use, regardless of the intentions of the author.

<sup>23</sup> Given several discussions with scholars on this issue, we would like to repeat the point that the teleology problem raised by Buchanan and Vanberg, which we take to be of critical importance to Kirzner's broader theoretical claims, refers to teleology in systems, not teleology in individual human behavior. The latter sense is used to denote the assumption of purposefulness, or goal-oriented behavior on the part of individuals. Neither Buchanan, Vanberg, Kirzner, nor we would disagree on the usefulness of employing such a methodological device.

<sup>24</sup> Kirzner's description of IVs and UVs also demonstrates an interesting variation in his interpretation of entrepreneurial "error." In his earliest contributions on entrepreneurship (e.g., 1973), Kirzner had maintained the existence of entrepreneurial error in the market process in the form of overlooked profit opportunities. In 1982 he identified the possibility that entrepreneurs make errors of judgment across time periods. However, in this more recent account (1992), he is more explicit that entrepreneurial error can also be the source of disequilibrium, i.e., that entrepreneurial errors may prevent, or at least interrupt, the movement toward the theoretical position of static equilibrium.

the neoclassical framework. Kirzner's assumption that the underlying variables remain unchanged is tantamount to his earlier descriptions of the entrepreneurial role in the single-period setting: effectively, the parameters are held constant, while entrepreneurs bring (existing) markets together and solve various other arbitrage problems (1992, p. 43). As a result, Kirzner's model of the market process remains deterministic in much the same way as his early descriptions. An even more recent statement suggests that he continues to be steadfastly deterministic:

Of course, the role of the entrepreneur can be understood as disrupting in a very down-to-earth sense. People had jobs and their jobs are destroyed. People had careers, and they are now gone. Granted. But what appear to be disruptions aren't disruptions at all. They are simply the *revealing of misallocations that were there before* . . . *Ex post*, we have to recognize that when an innovator has discovered something new, that *something was metaphorically waiting to be discovered*. But from an everyday point-of-view, when a new gadget is invented, we all say, gee, I can see we needed that. It was just waiting to be discovered (Kirzner 1997a, cited in Vivel 2001, emphasis added).

In summary, we argue that Kirzner's earlier contributions were written in an effort to solve the market process problem facing the profession in the late 1960s and early 1970s, and his theory of entrepreneurship was indeed a theoretical solution to the shortcomings in the Robbins' account of the maximization process.<sup>25</sup> In this context, the determinism underlying Kirzner's discussion is appropriate and his theory of entrepreneurship should be appreciated for the great intellectual contribution that it was.

However, we would argue that it was the subjectivist influence of Lachmann and Shackle that induced Kirzner to put greater emphasis on uncertainty during the 1970s and 1980s.<sup>26</sup> The retention of several standard economic concepts—more specifically, the deterministic equilibrium concept Kirzner utilized in his earliest descriptions—created theoretical inconsistencies in his approach. These inconsistencies led to the teleological critique by Buchanan and Vanberg. Finally, his 1992 attempt to completely withdraw from using strong form equilibrium notions does not adequately demonstrate his description of the market process as any less deterministic than earlier ones. The full impact of this remaining shortcoming will be discussed in the next section.

### *Kirzner's Entrepreneur*

Kirzner has consistently reminded the profession of the critical role played by entrepreneurs. In Section II, we re-examined how the mainstream had narrowed its explanation of competition by associating it with a particular market structure and the concept of equilibration. As such, this approach was not only unrealistic,

<sup>25</sup> For a detailed discussion of the context in which Kirzner formulated his theory entrepreneurship, see Sautet (2000).

<sup>26</sup> Kirzner is undoubtedly more aware of the criticism from all sides than anyone else. He has routinely referred to the "double exposure of the middle ground," in which he is criticized by both neoclassicists and radical subjectivists (1992).

but likely to have been misleading in many of its implications regarding common notions of competitive *behavior*, as McNulty so aptly pointed out.

The neoclassical orthodoxy had failed to explain the process by which market participants would identify new information that might alter the parameters of the maximization decision. Even neoclassical search theory depicts the pursuit of new information as a maximization problem subject to a set of well-defined parameters without explaining how changes in these parameters are discovered.<sup>27</sup> By resurrecting the entrepreneurial role, Kirzner was able to fill this gap. In doing so, he was also able to identify those agents—his “entrepreneurs”—that would move a disequilibrated market toward equilibrium. In this respect, his contribution to the Austrian variant of the neoclassical approach is successful, important, and *still* under-appreciated by the mainstream. Indeed, his entrepreneurial element accentuates the key function played by arbitrage, and it offers a potential explanation of how Hayekian problems of dispersed knowledge can be reduced as diverse economic plans are coordinated by those arbitrageurs.

However, while Kirzner’s contribution on the arbitrage process is illuminating in the context of a single market or within a partial equilibrium setting, it is not clear how his model of arbitrage explains more economy-wide, or general equilibrium tendencies.<sup>28</sup> For example, Kirzner’s theory helps us to understand how a dispersed market for oranges clears through agents’ alertness to the possibility of price discrepancies. However, accounting for the arbitrage process within the market for oranges does not, *per se*, instruct us on the interdependencies between that market and the market for apples. In many non-trivial cases, clearing in a given market will not occur in isolation from others. As a result, we argue that Kirzner has really not provided a comprehensive theory of an economy’s general tendency for stability, coordination, and clearing and must therefore qualify his own claims of having explained more general equilibrating tendencies in the economy.<sup>29</sup>

Another noteworthy aspect of Kirzner’s entrepreneur relates to his limited account of uncertainty. In an insightful comment comparing Kirzner’s entrepreneurial role to Mises’, Jack High (1982) argues that Kirzner removes much of the uncertainty upon which Mises’ earlier entrepreneurial theory was based. For Mises, the entrepreneurial element represents the bearing of uncertainty in the nature of every action (1949, p. 253). Mises’ conception of “market ignorance”

<sup>27</sup> The economics of search portrays the agent as knowing in advance what information exists, even before they search, as Kirzner himself states: “In the neoclassical world, decision makers know what they are ignorant about” (1997b, p. 64). In his critique of search theory, High (1983–84) identifies precisely this weakness, arguing that search economics is simply an extension of cost-benefit maximization: “In fact, search models are inherently equilibrium models in which the auctioneer’s kin calls out a process distribution rather than a single clearing price” (1983–84, p. 255). For a detailed discussion of the difference between search theory and Kirzner’s entrepreneurship, see Kirzner (1979, pp. 139–49). For an opposing view on this issue, the reader should consult Caplan (1999), who claims that the search literature can adequately account for the entrepreneurial function. We thank an anonymous referee for encouraging us to explore this comparison.

<sup>28</sup> Again, we thank David Prychitko for his discussions on this point.

<sup>29</sup> We need also remind the reader that a description of this process is a task that no economic theorist has yet accomplished. Perhaps Kirzner’s only fault here is the ambitiousness of his project.

includes the possibility that an agent is uncertain of the appropriate ends-means framework to employ. In this case, the agent will be uncertain about a range of facts or details, but will still make a decision as best she can. According to High, Kirzner's version of market ignorance precludes this form of uncertainty. In Kirzner's account, an individual can be ignorant of certain important facts; however, due to the individual's unawareness of these facts there will be no uncertainty in the individual's mind as to the ends-means decision (High 1982, p. 162). The individual will therefore make the decision with full confidence. Indeed, this limited account of uncertainty stems, in our view, from Kirzner's early attempts to simply insert the entrepreneurial element into the neoclassical equilibrium approach.

Kirzner's 1982 attempt to further acknowledge the role of uncertainty has problematic consequences for the concept of entrepreneurial alertness, as noted by Binenbaum (1995) and Karen Vaughn (1992). In what Kirzner refers to as a *single-period* setting, entrepreneurial alertness represents the ability to discover a profit opportunity (which effectively must be pre-existing). Action that takes advantage of this discrepancy drives the market toward equilibrium. In his expanded *multi-period* analysis, Kirzner argues the entrepreneurial agent is alert to similar kinds of changes that may occur across a number of periods. The action of the entrepreneurial agent who is alert to these possibilities drives the market toward equilibrium *a number of periods later*. In fact, Kirzner suggests that alertness can accommodate a whole range of activities over differing periodicities:

Alertness is a concept sufficiently elastic to cover not only the perception of existing arbitrage opportunities, but also the perception of inter-temporal speculative opportunities that can be definitively realized only after the lapse of time, and even also the perception of inter-temporal opportunities that call for creative and imaginative innovation (Kirzner 1985b, p. 85).

However, as Vaughn (1992, p. 259) points out, how entrepreneurs' alertness can overcome this broader notion of uncertainty and remain consistent with a view of entrepreneurship as the coordinating (i.e., equilibrating) force in the market is unclear. Indeed, we would argue that his concept of alertness in this context becomes *overly elastic* and therefore must carry too much of his argument. For example, alertness may indeed be a useful shorthand for the attribute which enables a stock trader to identify important new information on which to buy or sell shares. We would question, however, whether such alertness is responsible for the ability of a different individual, in a different setting, to conjure up, design, and implement a new product or service in the context of an uncertain future chain of events. Kirzner's theory seems to suggest that this entire range of activities is accommodated by his notion of alertness.

In our view, Kirzner is making an unsubstantiated empirical claim regarding alertness. It is something that he simply assumes exists among at least some market participants. He does not specify how one acquires it or how much is required for successful entrepreneurial action. In later contributions, where he expands on entrepreneurship to explicitly include non-price competition (1992, pp. 30–35), the *quality* of entrepreneurial alertness is responsible for an even



greater degree of market activity.<sup>30</sup> His notion of entrepreneurial alertness now carries the responsibility for the creation of new products, utilization of new technologies, and the identification of discrepancies between the tastes of market participants. Consider, for example:

The future does not now exist, but we endeavor to grasp that future somehow in our imaginations. Some of us are more successful at this endeavor than others are . . . We must, that is, recognize something like “*entrepreneurial ability*”, understood as the capacity independently to size up a situation and more correctly reach an imagined picture of the relevant (as yet indeterminate) future (Kirzner 1992, p. 26, emphasis added).

And,

In particular the futurity that entrepreneurship must confront introduces the possibility that the entrepreneur may, by his own creative actions, in fact construct the future as he wishes it to be. In the single-period case alertness can at best discover hitherto overlooked current facts. In the multi-period case entrepreneurial alertness must include the entrepreneur’s perception of the way in which creative and imaginative action may vitally shape the kind of transactions that will be entered into in future market periods . . . To be a successful entrepreneur one must now possess those qualities of vision, boldness, determination and creativity (Kirzner 1982, p. 155).

And while all these activities are initiated by high quality entrepreneurial alertness, Kirzner does not explicitly model, or elaborate on, the pivotal role now played by that alertness. Indeed, there would seem to be an even greater need to address the many psychological aspects that are part of the process by which an individual identifies what they deem to be “appropriate” courses of entrepreneurial action.

One irony is that Kirzner was very clear in his early interpretation and description of the defining elements of economics: the praxeological perspective was not intended to be concerned with the physiological, physical, and particularly the psychological bases of human decision making.<sup>31</sup> We see, however, that Kirzner’s alertness is surely a psychological phenomenon and his notion of entrepreneurship is simply a representation of all those psychological factors that do impact on decision makers within the market process. It would include the very core of the individual learning process that allows the agent to identify the discrepancies that Kirzner’s theory is so dependent upon. It is therefore paradoxical that by inserting the entrepreneurial element back into the neo-

<sup>30</sup> We see this same tendency even earlier: “It is indeed empirical accidents, such as the differences in the entrepreneurial alertness of different men, that will govern the specific course of market events” (Kirzner 1979, p. 31). Again, we would like to acknowledge David Prychitko for raising this issue.

<sup>31</sup> Witt also makes this point (1992). Writing from an evolutionary perspective, he also cites Mises’ view of praxeology as restrictive. Indeed, Witt notes that by Mises’ delineation of the praxeological perspective, many aspects of interest to evolutionary economists, such as decision anomalies, dynamic learning, and creativity would then fall within the purview of psychology (Witt 1992, p. 220).

classical equilibrium, Kirzner is essentially adding the role of human perception.<sup>32</sup>

Kirznerian entrepreneurship can therefore be summed up as the quality of individual perception in the market and, as such, is possessed by everyone in that market. How entrepreneurship translates into a distinct *activity*, however, is not at all clear. Indeed, by this account, everyone is an entrepreneur, an explicit position also taken earlier by Mises (1949, p. 253). The problem with such an approach is that it is virtually impossible to identify any action as non-entrepreneurial.

A final aspect of Kirzner's entrepreneur that we would like to outline relates to Kirzner's response to the radical subjectivists. Recall that Kirzner developed his distinction between single- and multi-period settings in response to the subjectivists' charge regarding determinism, and an initial under-appreciation for true uncertainty and human creativity. Kirzner acknowledges that the single-period setting adequately encompasses standard notions of the arbitrage process. The multi-period setting, on the other hand, requires much more of the Kirznerian entrepreneur. Such an entrepreneur must have the ability to anticipate virtually all of the potential future scenarios and discrepancies when making current decisions. He suggests, furthermore, that it was this latter class of entrepreneurial activities that would encompass innovation and economic growth. But there remain a number of problems with his extension.

First, as we have already discussed, the determinism inherent in his approach creates inconsistencies with any attempt to integrate a greater recognition of true uncertainty. Second, we saw that "alertness" to market discrepancies had even heavier explanatory demands placed on it in the multi-period setting, without a concomitant increase in the precision with which the term could be used. But, one of the most important admissions on Kirzner's part comes when he suggests that the nature of the decision-making problem is effectively the same in both settings:

There are many opportunities for alert entrepreneurs. Some are of relevance only for short-run market processes; others hold relevance for long-run processes of growth and development. I will show that, despite the validity of such a classification, the nature of entrepreneurial decision making is, at bottom, no different in regard to long-run growth contexts than in regard to short-run contexts (1985a, p. 84).

Thus, while we have every sympathy for the later directions that Kirzner wants to take his entrepreneurial model—especially in attempting to deal with true creativity, innovation, and endogenous change—we do not believe that his development of the multi-period model adequately overcomes the earlier criticisms. In sum, we would take what might be considered the strong position that

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<sup>32</sup> Note that Kirzner (1980) eventually does recommend that the underlying psychology of entrepreneurship be investigated, as Binenbaum (1995) has also discussed. On a related note, High (1982) analyzed what alertness actually represents in Kirzner's work, finding that it was initially being "on the lookout" for information that would improve one's situation. Consistent with our conclusion, High suggests that Kirzner attempted later to expand this notion to deal with the problem of true uncertainty (High 1982, p. 164–65).

the body of Kirzner's theoretical insights in the middle and later stages of his career remained less about "entrepreneurs" and more about "arbitragers". In the final analysis, Kirzner's theory of the entrepreneurial role still struggles to explain true creativity, innovation and, more broadly, endogenous economic change.

While this development was, of course, no small accomplishment considering the thoroughgoing neglect of this issue that existed in the discipline at the time, we are compelled to differ with those who would make broader claims about the kinds of processes that Kirzner's contribution can adequately explain.<sup>33</sup> In our view, a more persuasive theory of entrepreneurship must account for creativity and innovation in the context of a truly unknown future. Thus, while Kirzner has surely forged and maintained the intellectual path in matters pertaining to the role of the entrepreneur, further advances and theoretical clarification are still necessary. Jakee and Spong (2003) is just such an attempt to outline an open-ended entrepreneurial process that clearly distinguishes between more conventional activities, such as arbitrage, and truly creative activities, such as new product or service design. In their framework of radical uncertainty, diverse expressions of entrepreneurial action are the product of an individual's subjective imagination, rather than an alert response to objectively existing opportunities.

## VI. CONCLUSION

Although we have by no means examined the entire breadth of his writing, this paper has attempted to demonstrate some of the essential characteristics of Israel Kirzner's principal contributions to the discipline.<sup>34</sup> After outlining the chronological development of his body of work, we began our analysis by placing Kirzner's prescription for a uniquely economic methodology, praxeology, within a broader historical context. We then interpreted the development of his theory of the market process in an effort to explain why it was criticized as deterministic. On the other hand, we clearly recognized the difficulty that Kirzner faced in emphasizing both the coordinating role of the market process and the existence of the subjectivist element in entrepreneurship. Also, while Kirzner's entrepreneurial alertness provides a link between the ends-means decisions of Robbins, and does overcome certain problems of neoclassical equilibrium analyses, he has not provided a sufficiently robust explanation of the term. Instead, this critical aspect

<sup>33</sup> In terms of understanding Kirzner's weakness in the face of his great contribution on this point, we would suggest that Kirzner may well have been faced with a stark option: either he could turn his attention to a more detailed and robust working out of a theory of innovation and endogenous change, which would presumably not only rely more heavily on the radical subjectivists' notion of uncertainty, but also would diverge more heavily from his earlier apparatus to describe the entrepreneurial process (including alertness and especially some degree of determinism); or, he could retain most of his earlier tools while attempting to broaden their definitions and applicability. The latter is the choice that he seemed to have made. The problem, of course, is that this broadening simply could not sufficiently reconcile many of his earlier concepts with those emphasized by the radical subjectivists.

<sup>34</sup> The well-informed reader will note that we have omitted a discussion of Kirzner's contribution to capital theory. For those interested in this work, see Kirzner (1996).

of the Kirznerian entrepreneur has become a black-box of its own. Finally, we argued that Kirzner's entrepreneur is, perhaps, less broadly applicable to the area of entrepreneurship than he and many of his strongest supporters might claim. Fundamentally, we think that Kirzner's greatest insight—which has withstood the assault of many detractors over the years—is his clarification of the arbitrage process.

Although we have been critical of some aspects of Kirzner's entrepreneurial role, this is only in an effort to fully demonstrate that his contribution is of paramount significance. We would hope that the greater body of economists will not only recognize the importance of the entrepreneurial element at some point in the future, but will pursue its examination even further. Indeed, the black-box that we have ascribed to Kirzner's concept of entrepreneurial alertness needs to be further explored by others.<sup>35</sup> Recognizing, for example, the importance of psychological factors should not be seen as invasive on economic territory or diminishing the *economic* explanation. In the area of entrepreneurship, perhaps more than many others, the two disciplines are undeniably intertwined and complementary, as Herbert Simon in particular has argued for nearly half a century.

Finally, we would argue that any description of entrepreneurial processes needs to build upon Kirzner's contribution if it is to account for social and economic change. Any such development of entrepreneurial theory should combine Shackle and Lachmann's insights into uncertainty, Kirzner's emphasis on the individual's ability to perceive exogenous changes to the environment, and Buchanan and Vanberg's counsel regarding human creativity and its part in non-deterministic evolutionary processes. An improved theory of the entrepreneur should also recognize the recent advances made in institutional economics, particularly the stabilizing role institutions play. Unsurprisingly, many of these more nuanced features of entrepreneurial theory are ones that Kirzner himself anticipated.

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<sup>35</sup> There are a number of recent contributions to the entrepreneurial literature, which further elaborate on the concept of entrepreneurial alertness, while building on Kirzner's discussion. See, for example, Choi (1993) or Harper (1996).

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