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Mises, Kirzner, and Knight on Uncertainty and Entrepreneurship: A Synthesis

Economists can no longer take it for granted that individual decision makers, or groups, engage in nothing more than allocative decisions against the background of clearly perceived alternatives. -Israel Kirzner, Discovery and the Capitalist Process

The stimulus which was exercised in this connection by the work of Frank H. Knight may yet prove to have a profound influence far beyond its special field. -Friedrich Hayek, "Economics and Knowledge"

Introduction

In working out the basic logic of choice in his *Principles of Economics*, Carl Menger uses carefully described examples of the situations his agents face. Whether it is Robinson Crusoe, a small mountain community, or a ship lost at sea, the context in which decisions take place is always precisely circumscribed.¹ The reason for this exactitude is simple: to choose is to elect over a range of given options. By meticulous attention to detail, Menger is able to draw our attention past the particulars of the situation to the underlying universal logic of choice. Because he does not overreach, attempting to use the logic of choice *across* contexts, Menger's exposition is universally valid.

¹ See especially Menger (1994, pp. 133-9).

My purpose here is not to take quail with Menger's simple constructions; though simple, they are faithful to the way that humans actually choose in all times and places. Rather, my purpose here is to ask how such a given range of possibilities comes to be the relevant range for choosing. Mises recognizes that this is a decisive element in the nature of action:

The present qua duration is the continuation of the conditions and opportunities given for acting... As the future is uncertain it always remains undecided and vague how much of it we can consider as *now* and present. If a man had said in 1913 : At present—now—in Europe freedom of thought is undisputed, he would have not foreseen that this present would very soon be a past. (Mises 1998, p.101)

In recognizing the vagueness of the concept of the “present,” Mises is calling into question not whether the situations in which choice occurs are given to choice, but rather whether they are given to the agent. All economization requires an opportunity set over which the agent economizes; how is that opportunity set constructed? If it is automatic, then economists have little to discuss except the basic logic of choice. If it is not, then we must take seriously the question of what happens “prior to” and “between” the agent's encounter with these possibility sets. This paper seeks to synthesize the ideas of Frank Knight, Ludwig von Mises, and Israel Kirzner on uncertainty and entrepreneurship in order to provide a framework that allows us to treat the construction of opportunity sets seriously and systematically as a part of action. With Kirzner, I assert that the power of choice is not the whole of action, but that agents must also subjectively construct opportunity sets over which economizing choice takes place.² In so doing, I hope to simultaneously clear up some confusion regarding, especially, the nature of uncertainty that has pervaded Austrian analysis.³

2 Mises at least hints at a diadic structure of action that is similar too but not identical with Kirzner's: “Action is to make choices and to cope with an uncertain future” (Mises 1998, p. 249).

3 Asking this question embroils me in a controversy amongst fellow Austrian travelers, especially

The second section outlines how Mises and Kirzner each treat uncertainty and entrepreneurship. The third section answers my primary question by offering an interpretation of Knightian uncertainty, and how Misesian judgment and Kirznerian alertness are related to it and to each other. I argue that Misesian judgment can properly be understood as a power exercised in response to uncertainty, while Kirznerian alertness should be taken as a habit of that power, thereby making the case that the two views of entrepreneurship are neither identical nor antagonistic, but rather complementary. The fourth section traces out some of the implications of my argument, asserting that Kirznerian alertness can be understood as specified, cultivated, and virtuous. The fifth section concludes and contains speculations on potential policy relevance.

Mises and Kirzner on Uncertainty and Entrepreneurship

For Mises, uncertainty and entrepreneurship are inextricably intertwined.⁴

The term entrepreneur as used by catallactic theory means: Acting man exclusively seen from the aspect of the uncertainty inherent in every action... Entrepreneur means acting man in regard to changes occurring in the data of the market. (ibid., p. 254-5)

Insofar as the concept of uncertainty is completely bound up with the flow of time, so the capacity for entrepreneurship is defined entirely in terms of man's prophetic skills. High (1982) has aptly called this Misesian vision of entrepreneurship "judgment," adapting Mises' own exposition of the historian to the entrepreneurial element of human

concerning the continuity between the work of Mises and Kirzner on entrepreneurship. My purpose here is not to settle those debates, establish or contest a privileged academic pedigree, nor to convince the reader of the superiority of one side or the other. Where I come down on these issues will only be mentioned in passing; I leave it to the reader to examine the relevant papers and decide for himself where he stands. Rather, my goal is to use these issues as a springboard for more fully articulating an answer to the question posed above.

⁴Unfortunately, what Mises means by uncertainty can be difficult to discern. It always has to do with the future, but in what sense the future is uncertain changes from one passage to the next. At least two other meanings than the dominant one used above jump out at the attentive reader, and on the same page (Mises 1998, p. 105). In the first, it seems that uncertainty implies action. In the second, the freedom of choice in action implies uncertainty.

action.⁵ “The only source from which an entrepreneur's profits stem is his ability to anticipate better than other people the future demand of the consumers” (Mises 1998, p. 288). The entrepreneur is thus always and everywhere a speculator.

Mises, then, uses the concept of entrepreneurship to explain how acting man responds to the flow of time. Israel Kirzner's extensive body of work concerns, in large part, the role that the entrepreneurial element of human action plays in the market process. This identification of entrepreneurship as the driving force of the ongoing market process was the explicit and overriding theme of Kirzner's 1973 classic *Competition and Entrepreneurship*. I do not think it is unfair to either thinker to say that Mises takes a broader, praxeological view of the nature of entrepreneurship, while Kirzner focuses almost exclusively on how it manifests catallactically. For this reason, Kirzner actually begins with a definition of entrepreneurship with regard to its pure catallactic function *prior* to the consideration of uncertainty, whereas Mises takes the opposite tack.

The market process, according to Kirzner, is “the systematic plan changes generated by the flow of market information released by market participation—that is, by the testing of plans in the market” (Kirzner 1973, p. 10). This is the process of increased dovetailing (or coordination of) plans.⁶ Increased coordination means that plans are made more compatible, and thus that prices better reflect underlying scarcities. The price movements associated with this increased compatibility, for both Kirzner and Mises, are

⁵ See Mises (1998) p. 58.

⁶ Whether there exists sufficient stability of market conditions for such dovetailing to be meaningful has been called into question by some (Salerno 1993); it is beyond the purview of this paper to address this question, but I shall simply state that my position is closest to that of Kirzner (1996). Salerno's vision seems to indicate a complete lack of continuity through time, one that is incongruent with Mises' flexible definition of the real present (Mises 1998, p. 101), which can accommodate long-term planning horizons.

brought about by entrepreneurial activity. Kirzner is fond of quoting Mises's statement that "The essential fact is that it is the competition of profit-seeking entrepreneurs that does not tolerate the preservation of *false* prices of the factors of production" (Mises 1998, p. 335, emphasis in original).

The first necessary step to the correction of prices is the recognition that the current set of plans of market participants are incompatible. These incongruities will necessarily be manifested in price differentials, which must be perceived to be acted upon. "The equilibrative properties of entrepreneurial activity still consist purely in perceiving price differences" (Kirzner 1999).⁷ That there exist such price differentials creates arbitrage opportunities; however, in order to move the market towards a greater state of coordination these differences must be really present, which is why Kirzner comes to identify the catallactic essence of entrepreneurship as alertness:

The entrepreneurial element in the economic behavior of market participants consists... in their alertness to previously unnoticed changes in circumstances which may make it possible to get far more in exchange for whatever they have to offer than was hitherto possible. (Kirzner 1973, p. 15-6)

The entrepreneurship that drives the market must not merely form a judgment of the future, but that judgment must reflect an accurate perception of market conditions. That is, it must embody alertness to profit (arbitrage) opportunities. Kirzner is perfectly aware that this is, at the least, a departure of emphasis from Mises. In commenting upon the absence of speculation in his primary formulation, he offers the following justification for this divergence in his otherwise Misesian framework:

My discussion of entrepreneurial alertness has deliberately avoided emphasizing its speculative character... my emphasis on the element of alertness in action has been intended to point out that,

⁷ Note that it is not to be read from this passage that either Kirzner or the present author believe that equilibrium is ever attainable. What is important is the systematically coordinating effect of these price movements, not whether they attain to some endpoint.

far from being numbed by the inescapable uncertainty of our world, men *act upon their judgments* of what opportunities have been left unexploited by others. (Kirzner 1973, p. 86-7)

Kirzner's notion of entrepreneurship, then, is thus at its core about the perception of new opportunities.⁸ These opportunities are defined in purely catallactic terms (price differentials, profits, and arbitrage), and come about in at least three ways. The first is the recognition of previous errors; these are opportunities that arose in the past but were not carried out but are still relevant.⁹ The second is the introduction of new opportunities by exogenous changes, an uninteresting possibility except that it allows the theorist to account for the case in which there is a change but it is difficult to call the previous decisions an error because the change was quickly accounted for and adjusted to. The third source of these opportunities is the uncertainty of the future, a topic addressed especially in later essays by Kirzner (1982, 1992). In this later work, he uses the analytic machinery developed in his 1973 one-period construct to understand how man gazes into the uncertain future.¹⁰

Kirzner '82 is essentially an exploration of how, with respect to uncertainty, what was described as *seeing* a new opportunity is essentially the same function as *foreseeing* a future opportunity. “We call this motivated propensity of man to formulate an image of the future man's *alertness*” (ibid., emphasis in original). That is, just as in the cases of error or exogenous changes, discoveries may reveal novel opportunities. The opportunity set is ultimately constructed and given, but not automatically. Because uncertainty is

⁸ The relevance of the concept of opportunity perception to the question of opportunity set construction will be explored in the next section.

⁹ These still-viable plans were not carried out either because they were not perceived or because the resources needed to carry them out have been malinvested in less productive lines of production. Put differently, they result from either a lack of perception or a misperception.

¹⁰ These three sources of opportunities thus map onto the concept of time: opportunities created by past errors, by present (brand new) exogenous changes, and by future changes.

pervasive and gradated, all actions exhibit some measure of entrepreneurship, though not necessarily an equal measure (Kirzner 1992).

Before proceeding, it will be profitable to outline what I consider to be the advantages and disadvantages of each of these two perspectives, and how they tend to patch each other's weaknesses. Misesian judgment recognizes the importance of losses, while Kirznerian alertness tends to downplay their possibility. The synthesis proposed makes use of both, for judgment is requisite to understand mistakes and alertness to account for the systematic tendencies of the market process and the common sense observation of widespread successful action. Kirzner's notion of opportunity perception will prove more important than Mises's overemphasis on the future, for it allows us to take seriously the possibility of present ignorance rather than merely ignorance of what will come. And finally, Mises's more praxeological bent, which emphasizes the omnipresence of entrepreneurship, will correct an overemphasis on novelty in Kirzner's analysis.

In my reading of these concerns, Kirzner has brought us full circle, back to the edge of a Misesian intuition that we can now more fully explore thanks to his contributions. By starting from the Misesian entrepreneur's role in the market process, Kirzner has successfully demonstrated the centrality of opportunity perception to the entrepreneurial aspect of action, and in turn shown that this perception is man's response to uncertainty. The intuition that this journey has brought us back to is the relationship, cited above, between the present that provides the given opportunities for action and the uncertainty associated with that present (Mises 1998, p. 101). This intuition is what I wish to flesh out in the next section. By explicating the correct understanding, it is my goal to

connect the dots between the important insights of all these thinkers: from uncertainty, to entrepreneurship (consisting of both judgment *and* alertness), to the market process.

Uncertainty, Judgment, and Alertness: An Entrepreneurial Redux

Frank Knight's distinction between risk and uncertainty has received many citations but few careful readings.¹¹ It is true that he associates risk with situations in which probabilities can be expressed numerically and actuarial tables formed, and uncertainty with situations in which this is not the case. What is usually glossed is the metaphysical and epistemic framework from which he reaches those conclusions, a framework that must be grasped in order to understand the essence of uncertainty.

Knight cross-applies Locke's idea of primary qualities and secondary qualities to the social world.¹² The primary qualities of the social cosmos are the “elements” that come together to form the secondary qualities, or situations, that we face. These elements can be understood because we can classify them into manageable groups, but the potential combinations which they form are effectively infinite. There are only so many notes that the human ear can hear, but they can come together into an infinite variety of songs. In any situation characterized by this effectively infinite number of outcomes, the whole range of possibilities cannot be known (if we ascribe any cognitive limits whatever to man); these are the situations Knight describes as uncertain. We are not blind in such situations, though, precisely because of our knowledge of the elements generating those outcomes:

Finite intelligence is able to deal with the world because [t]he number of distinguishable

11 Langlois and Cosgel (1993) and Langlois (1994) are welcome exceptions to this generalization, and a good place to start in understanding Knight. Their interpretive lens is not the same as mine, but their conclusions are.

12 Locke is explicitly mentioned on p. 204 of *Risk, Uncertainty, and Profit*, in the epistemologically dense section leading up to the risk and uncertainty distinction.

properties and modes of behavior is limited, the infinite variety in nature being due to different combinations of the attributes in objects. (Knight 1921, 207)

However, it is also important to note that, for Knight, “the fact can hardly be over-emphasized, that a judgment of probability is actually made in such cases” (Ibid. 226). Knight is thus not claiming that probability estimates are not made in situations of uncertainty, but rather that there is a two stage process involved, “the formation of an estimate and the estimation of its value” (ibid. 227). The essence of uncertainty is that the possibility set over which the agent makes probability judgments and then valuation is not given automatically by the environment; rather, the construction of the possibility set is a distinctive cognitive act.¹³ “The point is not so much that we do not know probabilities as that we do not know the classification of outcomes” (Langlois and Cosgel 1993). The opposite of uncertainty is not perfectly accurate knowledge, but completely exhaustive probabilities.¹⁴

It is my contention that this Knightian concept of uncertainty, properly understood, will allow us to unfold the intuition about the present in Mises and more fully and systematically bring to bear the powerful analytic machinery developed by Kirzner. The distinguishing characteristic of uncertainty is that it is about possibilities, not probabilities; this is why I claim that Mises misunderstood Knight's distinction. Mises (and Kirzner following him) consistently presumes that uncertainty concerns the future. However, if uncertainty implies open possibility sets, then it is both wider and narrower than concern for the future. It is narrower in that our vision of the future is a function of

13 Situations of risk do not suffer from this problem precisely because the *outcomes* are easily classifiable, meaning it is a trivial step to get the objective probabilities.

14 One does not have to accept Knightian metaphysics and epistemology to believe in uncertainty. The essence of the concept is simply that possibility spaces are open, not given automatically by an agent's environment.

both the possibilities we imagine and the probabilities we assign to those possibilities.¹⁵ It is wider in that the flux of time is not the only source of open possibilities as long as agents are non-omniscient (an intuition that underlies Kirzner's 1973 one-period construct).

One of the advantages of the Knightian understanding of uncertainty is that, though it does not presuppose indeterminate human action (freedom of choice), it can accommodate the introduction of such a concept without crippling the capacity of agents to deal with reality. Since situations of uncertainty are already open-ended, the introduction of open-ended action does not generate insuperable difficulties. However, wherever the open-endedness of choice is introduced, the situation is necessarily one of uncertainty and not risk.¹⁶ Mises argues that, at least analytically, action must be taken as indeterminate (Mises 1998, p. 105); following him but utilizing Knightian machinery, I claim that we should take all action as occurring in the face of uncertainty, or open (effectively infinite) possibility sets. Identifying in that open space a range of opportunities over which choice is made is the function of the entrepreneurial element of human action.¹⁷ “The adoption of any particular ends-means framework is a step which is logically (although not necessarily chronologically) prior to that of allocating means consistently with the given ranking of ends” (Kirzner 1982)^{18,19}.

15 It should be noted that Mises' distinction between class and case probability is orthogonal to this point. Any probability, numeric or not, cannot be judged without a prior recognition of a possibility.

16 That every situation is one of uncertainty does not imply abandoning the concept of risk. Individual clusters of causal elements affecting our plans may be reduced to risk, as in the case of insurance or hedging. However, the situation *as a whole* is still one of uncertainty, such as the possibility of fraud. Note that most discussions of die probability contain the proviso of a *fair* die, implying that as long as human action is involved such a stipulation is necessary.

17 Note that if entrepreneurship concerned probabilities rather than possibilities, it would not be substantively distinct from neoclassical search theory.

18 In the same article, Kirzner refers to the selection of a framework as a “choice.” This is, according to the framework I have laid out, incorrect. The generation of an opportunity set is prior to choice.

19 Salerno (1993) explicitly rejects this diadic structure of action, arguing that the agent would be stuck in

Semantically, this definition of entrepreneurship is in full accord with Mises: entrepreneurship is action seen exclusively from the point of view of grappling with uncertainty. This identification is marred by the difference between the Knightian definition of uncertainty which I argue for and Mises' future-oriented definition, but, as stated above, I believe it reflects a Misesian intuition about the ambivalence of the present that is given for acting. Ultimately, however, the definition that I argue for has more in common with a synthesis of the various functions Kirzner ascribes to the entrepreneurial element of action. Note that all these functions rely on the presupposition that the opportunity set for choosing is not given automatically, but rather must be perceived by the agent.²⁰ Therefore they all fall under what I would consider the proper definition of uncertainty.

I am still troubled, however, by Kirzner's emphasis on novelty and downplaying of error. For this reason, I am more inclined to call the entrepreneurial function of constructing a possibility set “judgment,” following High's interpretation of Mises. In an enduring or “repeated” situation, there is no reason that a continuing or identical judgment of possibilities would be any less a function of this element of action than recognizing new ones.²¹ Furthermore, recognizing a possibility that is deemed unprofitable and never acted upon would also consist of the same operation; novelty of possibilities does not imply that manifested preferences will be different than in the past.

an infinite loop. This is not the case if the construction of the possibility space occurs temporally simultaneously with the election of ends (Butos 2003).

20 I would like to reiterate that Kirzner is best understood here as developing rather than departing from Mises. There is a latent understanding in Mises that entrepreneurship is about the recognition of possibilities: entrepreneurs “are the first to understand that there is a discrepancy between what is done and what could be done” (Mises 1998, p. 333).

21 To be fair to Kirzner, with a neoclassical audience it is only the discovery of new possibilities that would establish the entrepreneurial role as distinct.

I am also unwilling to ascribe to “alertness” a universal characteristic, as it implies a mastery over one's environment that will not be operative in all judgments.

Still, there is a strong case to be made for not throwing out the concept of alertness. Kirzner (1982) argues that the extent to which the open-ended future tends to conform to our expectations indicates that we must be alert to real signals in our environment. In regard to how this entrepreneurial facet of action plays out in the market process, such accountability to external conditions rings true with the Mengerian-Misesian notion of consumer sovereignty. It must be the case that the entrepreneurial judgments that drive the market are alert *if* the market is ultimately being steered by consumers.

The synthesis I propose is that *judgment* be considered a *power* associated with man's action. It is the half of the diadic structure of action that constructs the opportunity set over which choice takes place. *Alertness* would thus properly be understood as a *habit* associated with that power, a quality that indicates an inclination in the way in which the power is used. Alertness is a quality of the faculty for judging possibilities when that faculty is developed in such a way as to be apt at reading the signals of an agent's environment so as to reveal potential courses of action that the agent would deem fruitful.²² That is, alertness is a quality of judgment when judgment is accountable to its environment. In the market context, this takes the form of alertness to profit opportunities.

I do not claim that this synthesis is a great theoretical innovation, merely a fruitful

²² These definitions are essentially Aristotelian-Thomistic. In a lengthier treatment, I would be inclined to make the case that what I am here calling “judgment” is better described by Aristotle as the faculty of imagination, but it is beyond the pale of this paper to lay out an Aristotelian economic anthropology.

reading of the three thinkers under consideration that can help clarify our thinking about uncertainty and entrepreneurship. Much of it is implicit in Kirzner, who often describes alertness as a “propensity,” a description in full accord with its identification as a habit. Furthermore, in a passage cited above relating his view of the entrepreneur to that of Mises, Kirzner embraces that entrepreneurs make judgments, but believes that these judgments (or at least, the agents that make them) are characterized by alertness (Kirzner 1973, p. 86-7). It is also congruous with Kirzner's concern that the entrepreneurial driving force of the market not be a passive, but rather an active force.²³

Alertness: Cultivated, Specified, and Virtuous

The hypothesis I have put forward is not merely a way to resolve tensions between thinkers; it bears real implications, three of which I explore in this section. The first two are intimately related. If alertness is a habit, then it is not simply turned “on” or “off” automatically by “interest.” Habits, rather, are both cultivated and specified.²⁴

To be a specified habit is to have a propensity not towards the apt operation of a power in general, but rather with regard to a specific object. Runners and wrestlers share a common muscle structure, meaning that their innate powers are the same (though not necessarily of the same quality). A trained runner, however, has developed his muscles in such a way as to be suited to a specific task very differently than the way in which a trained wrestler is developed. I argue that alertness is likewise specified. This

²³ Aquinas defends the sense in which habits are active as follows:

But there are some habits, which even on the part of the subject in which they are, imply primarily and principally relation to an act. For, as we have said, habit primarily and of itself implies a relation to the thing's nature. If therefore the nature of a thing, in which the habit is, consists in this very relation to an act, it follows that the habit principally implies relation to an act. Now it is clear that the nature and the notion of power is that it should be a principle of act. Wherefore every habit is subjected in a power, implies principally relation to an act. (Aquinas ST I-II Q49 A3)

²⁴More correctly, some habits are specified, indicating a disposition of a faculty, and others simply indicate aptness in achieving the natural function of the faculty with which they are associated (Aristotle 1984, 1022b4-14). As shall be seen above, however, because judgment is a response to uncertainty, it should be understood as a disposition as well as aptness.

specification makes sense in light of Knightian uncertainty: an agent's judgments will be characterized by alertness in situations generated by causal elements with which he has experience. Knowledge of those elements could be understood as either a complement to his judgment or an input into his alertness. If this implication is correct, alertness may not be generalizable; a businessman could be alert in one industry and lost in another, until such a time as he cultivates alertness in that environment as well. I believe that this is congruent with some of the functional features of entrepreneurship in the market process as described by Kirzner:

At each instant, therefore, current market prices reflect the best conceivable estimates of relative consumer preferences. The calculations which entrepreneurs make by reference to such prices (and by reference to such expected future prices), are thus informed by the assessment of the shrewdest of entrepreneurs, operating under the powerful incentive of winning pure profits. (Kirzner 1996)

Because of human cognitive limits, I believe that the “shrewdest” entrepreneurs are different for different goods; otherwise, one or a small handful of entrepreneurs are driving all prices the economy. Alertness, then, can be specialized to a particular context. This context could be an industry, a city, or any other set of causal elements that come together to form various situations in which an individual must act.

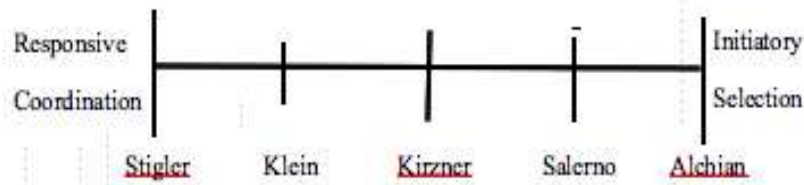
Concomitant specification is cultivation. Habits are gained not by abstract inquiry, but by practice.²⁵ The continual exercise of judgment in a particular context will tend to cultivate alertness to the possibility spaces generated by that context. I believe that this is also in step with some of Kirzner's work in regard to comparative economic systems and entrepreneurship. Entrepreneurship, as a category of action, will be present whether agents interact in a market process, in non-priced voluntary environments, or in

²⁵ Consider Mises's thought experiment (1998, p. 570-1) in which all prices are forgotten. It takes time and repeated interaction for the market to be reestablished, which agrees with the idea that alertness must be cultivated.

government. How do different contexts cultivate judgment differently? What sorts of alertness do they spawn?

Economists can no longer take it for granted that individual decision makers, or groups, engage in nothing more than allocative decisions against the background of clearly perceived alternatives. Economists must consider that economic processes, and especially market processes, have a profound impact upon the way individuals perceive the options available to them. (Kirzner 1985, p. 82)

The third implication of the power-habit thesis is that entrepreneurial alertness in the market context, that is, alertness to profit opportunities, can be regarded as a virtue. In making this case, we must first begin with an analytic space, a continuum of positive descriptions of the activity of market agents. This continuum, presented in Figure 1, is based on the range of debate spelled about by Daniel Klein (1999).²⁶ The continuum represents the degree of responsiveness to one's environment that the agent in the market exhibits. On the left is the purely responsive agent, for whom the market process would



consist of pure coordination. On the right is the purely initiatory agent, for whom any systematic market tendencies would have to be explained by selection mechanisms.

The far left is the domain of the “narrow neoclassical” view, expounded as a response to Kirzner by Benjamin Klein (1975), but whose intellectual godfather Daniel Klein properly identifies as George Stigler. In this view, there is no scope for what Kirzner describes as entrepreneurial discovery, because the agent's stock of knowledge

²⁶ Kirzner (1985, p. 7-10) constructs a similar continuum, but with Schultz on one end and Shackle on the other.

can always be a function of a maximization problem. The whole range of possibilities is given to choice, and if we are ignorant we are efficiently ignorant. The market agent, in this view, is purely responsive, his actions dictated by the clear signals of his environment; there is no problem of opportunity set construction.

The right end of the scale is best represented by Armen Alchian's classic article on uncertainty and evolution (Alchian 1950). In this view, we need not treat the market agent as responsive to his environment at all. Rather, systematic patterns of behavior can be attributed solely to selection mechanisms in which some enterprises survive and others are culled. This possibility is so suggestive to Alchian that he in turn argues that we could treat the actions of market agents as effectively random; that is, they would have no basis in present market conditions at all. We cannot say anything about successful firms except that they have not yet been weeded out.

I place Dan Klein (1999) to the right of Stigler's maximizing agent. His argument is that we can conceive of entrepreneurial generation of opportunity sets as the acts of a "deeper" agent, which then feeds that opportunity set to a "shallow" agent that chooses. In effect, this makes entrepreneurship a multi-stage optimization problem. This model allows for more creativity on the part of the agent than standard neoclassicism could ever admit, but still makes him effectively fully reactive.

To the left of Alchian goes Salerno's interpretation of the Misesian entrepreneur. He argues that the market operates by a pure selection mechanism, but not one as random as Alchian's: it is based squarely on consumer sovereignty. The market process operates "via monetary profits and losses to weed out from the market the relatively unastute and inefficient entrepreneurs while transferring the power... to the more farsighted and

technically proficient entrepreneurs.” (Salerno 1993) The market process does not engage in price correction or coordination of plans (except that manifested in the plain state of rest), but rather, through profit and loss, places resources in the hands of those best able to anticipate the desires of consumers.²⁷

Kirzner occupies the middle position, his agents walking a razor's edge between responsiveness and creativity. His view of the alert, entrepreneurial agent recognizes not only a role for coordination, but also selection (Kirzner 1979, p. 105). The entrepreneurial discoveries made by these agents are motivated, but not subject to “Menger's Law” (Kirzner 1982).²⁸ They are creative, but in a way that is accountable to their environment, what we might call “creatively responsive:”

My “alertness” view of the entrepreneurial role rejects the thesis that if we attribute genuine novelty to the entrepreneur, we must necessarily treat entrepreneurially generated market events as not related to earlier market events in any systematic way. (Kirzner 1985, p. 11)

Let us now leave aside the question of coordination versus selection, and focus solely on the responsiveness versus creativity of the agents on the continuum. Remember that it is alertness, not judgment, that occupies the middle position in this analytic space. My contention is that this line can also serve as a representation of degrees of responsiveness of the power of judgment; that is, different from the above use of the line as a range of analytic positions on the nature of action, it can be taken as a range of possibilities of real action.

On the left end of the continuum is the weather vane, the person who fails to show any foresight in a particular situation and can only react *ex post*. On the far right is the

²⁷ Note that, despite their differences, Austrians occupy the middle positions. I believe that, insofar as the descriptions of agency that occupy the continuum are concerned, this is another manifestation of Garrison's “middle ground” thesis (Garrison 1982).

²⁸ As noted above, however, Kirzner does sometimes use the language of choice to describe the formation of a means-ends framework, which would push him more towards Klein on the scale.

individual who refuses to read the relevant signals in his environment at all, making his decisions without regard to the appropriateness or the context. Though these extreme types of action are not common, they are possible (though we would never observe their systematic occurrence).

In the context of the market, where to be successful is to be creatively responsive, the quality of aptness in judgment would be described as alertness. Since it is situated between an excess (being too responsive) and a deficiency (being too initiatory), alertness can properly be called a virtue in the Aristotelian sense; it is the mean which indicates aptness. It would not as such be a moral virtue, as it does not concern an appetite, but rather would be more akin to the intellectual virtues such as the virtue of art, which indicate “the aptness to work well” (Aquinas, ST Q57 A3). The success of the market depends (at least partly) on the extent to which this virtue can be cultivated, exercised, and selected for.

Conclusion

We return now to where we began, with Menger's simple stories meant to draw out the logic of economizing activity. Those stories worked because the situations they described were straightforward and carefully specified, and the goods that were in question, such as water, have a universal and relatively straightforward appeal. The student who obnoxiously raises his hand and asks why Crusoe does not take his excess water to nearby islands and sell it may be missing the opportunity cost point, but he is on to an important question. In analyzing real markets, we should always take Menger's logic as our solid basis, but if we wish to have a full-bodied theory we must be attentive to that space “between” decision contexts. We can treat the development of those contexts

as pure accidents of history, but to do so supposes that human agency is, roughly, on par with that of the goldfish, whose awareness of time extends only a few moments in either direction. The theory of the entrepreneurship seeks to relate the opportunities perceived in these choice contexts to a part of action itself, resulting in a diadic praxeological viewpoint that Kirzner calls “the signal merit of Mises' notion of human action” (Kirzner 1993).

With regard to empirical and policy relevance, I believe that the synthesis I have laid out here bears direct relevance on the arguments of Holcombe (1998, 2003) relating entrepreneurship to economic growth. The result of successful entrepreneurship is to meet the same array of desires using less resources (that is, to make plans more compatible). This frees up resources for use in new lines of production, intensifying the division of labor and the emergent complexity of the economic system. If alertness is specified to an environment that consists of an array of causal “elements,” then increased complexity means that there is more room for entrepreneurs to become specialized in more and more unique arrays of these elements. Alertness thus becomes more specific, and the number of margins for noticing profit opportunities increase. Exploiting these profit opportunities in turn frees up more resources, resulting in a virtuous circle of economic development. No doubt other implications are implicit as well.

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