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Monetary Calculation and the Unintended Extended Order: The Misesian Microfoundations of the Hayekian Great Society

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Abstract. In the last decade, a small group of Austrians has attempted to argue that there are crucial distinctions between the Misesian and Hayekian lines of influence, and that the former is the superior. This paper argues that the group has both misread Hayek and underplayed the similarities of Mises and Hayek. More specifically, it sees Mises's emphasis on monetary calculation and goal-driven human action as providing the microfoundations for Hayek's emphasis on spontaneous order and the epistemic properties of the price system. The paper also disputes the claim that Hayek held a "fully-informative," neoclassical view of prices and explores the disequilibrium foundation for Hayek's understanding of the role of prices as knowledge surrogates. The relationship between monetary calculation and cooperation in anonymity is discussed in the final section.

Key Words: Austrian economics, Ludwig von Mises, F. A. Hayek, knowledge, economic calculation, ideal types

JEL classification: B25, B41, B53.

Introduction

Presidential addresses present opportunities to engage in some "Big Think" about the organization and its core ideas. One can engage in stocktaking and/or some forward-looking vision. The argument below will attempt to do both. As the title suggests, this paper will explore the two main lines of thinking, Mises's emphasis on monetary calculation and Hayek's emphasis on spontaneous order, that have defined Austrian economics for most of the last 75 years, and it will argue that these two are connected in deep and important ways. Arguing that Mises and Hayek are "connected in deep and important ways," runs the risk of being accused of stating the obvious. But in the very recent past, this point has not been obvious at all to some who work in the Misesian tradition, as seen in the literature attempting to "dehomogenize" Mises and Hayek that will be explored below (e.g., Salerno 1990, 1993, 1994). I wish to argue that modern Austrian economics both *is* and *should be* the economics of *both* Mises and Hayek. In saying that, it is not that we need to just staple together "what Mises said and Hayek said" and somehow have a full-fledged approach to economic and social phenomena. Rather, it is the work of both that provides the starting

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point for something that moves beyond what either has said. As Pete Boettke has put it, "the best reading of Mises is a Hayekian one and the best reading of Hayek is a Misesian one." This paper attempts to defend that quip in some detail.

Having said all that, the claim made by self-identified Misesians (really, Rothbardians) that the visions of Mises and Hayek are not so complementary (and that Mises's is the superior one) does point out the ways in which much of modern Austrian economics has been strongly influenced by Hayek, and should lead those who gladly accept that Hayekian influence to reconsider carefully what is in Mises. More important, the "de-homogenizers" are quite right in pointing to elements of Mises's thought that have been neglected or under-emphasized by Hayekians (and even by Kirzner). An Austrian economics for the 21st century is going to have to rediscover those Misesian insights and more fully integrate them with Hayek's work on knowledge and coordination.

One way to frame that integration is suggested by the title: what Mises has provided are the "microfoundations" of the extended order, or Great Society, that we see emphasized in Hayek's work. Put somewhat differently, a "praxeological" social scientist has both a Hayekian and a Misesian task: The Hayekian task is to recognize and describe the nature of the unplanned order that is to be explained, while the Misesian task is to describe the process by which intentional human action is guided such that it can produce that Hayekian order. For economics, the answers are about the coordination of plans and knowledge and the coordinating (note the verb rather than the noun) role of economic calculation.

The "de-homogenizers" have, for the most part, correctly identified those microfoundations, in particular the importance of monetary calculation and Mises's concept of "appraisement," but in their zeal to demonstrate the superiority of the Misesian vision over the Hayekian, they ignore what seems to be the obvious relationship between those microfoundations and Hayek's vision of the social order.[1] That is, they ignore that the outcome of the use of economic calculation by individual entrepreneurial actors and by firms and households is precisely the "use of knowledge in society" that characterizes the Hayekian spontaneous market order.

Hayek on the Extended Order

Although we normally put micro before macro, there are reasons to explore Hayek first. One reason for doing so is that the core contribution of Austrian economics is to explain how market processes, and economic calculation specifically, generate and sustain the spontaneous order of the Great Society. A look at how Hayek understood spontaneous order, and noting that he clearly did see the role of intentional human action in generating it (even if he was prone to under-emphasizing it at times), is the place to start in exploring the linkages between Mises and Hayek.

Simply put, spontaneous orders are "the result of human action but not human design." The evolutionary processes of the market, and of human culture and society more broadly, unfold in ways no one designed or necessarily intended, even though each step of the way is itself an intentional choice by individual actors. Critics of Hayek, including those associated with the de-homogenizers, have accused him of believing that people perform "a spontaneous action without knowing why and for what purpose" and that others imitate

the process "again without any motive or reason" (Hoppe 1994:139).[2] This version of the critique is perhaps the most extreme, but others have, in more sophisticated ways, suggested that Hayek's work on spontaneous order and cultural evolution has lost sight of the role of the individual.

This is not a completely unfair concern about Hayek's work. In his early contributions to the calculation debate, he did indeed emphasize the logic of choice and the issues of incentives and information that face choosers (Boettke 1998). However, it is equally true that from the 1950s onward, his explorations of spontaneous order and cultural evolution led him to focus on group selection processes and downplay the role of the individual (or household or firm) in making the choices that initiated and continued those processes. Even given that shift, references to intentional human action are not completely absent from this work. One example from 1976 comes from his essay "The New Confusion about 'Planning'" (Hayek 1978:233), where, after raising the argument that "if planning is good for individuals and firms, why is it bad for the whole economy?", he expresses amazement that anyone would seriously believe that the argument against "planning" is an argument about whether or not there should be planning. The argument is really about *who* should plan. He then quotes a long section from *The Road to Serfdom* (1976 [1944]:34–35) where he points out:

> "Planning" owes its popularity largely to the fact that everybody desires, of course, that we should handle our common problems as rationally as possible and that, in so doing, we should use as much foresight as we can command. In this sense, everybody who is not a complete fatalist is a planner. . . An economist, whose whole task is the study of how men actually do and how they might plan their affairs, is the last person who could object to planning in this general sense.

Clearly, as late as the mid 1970s, Hayek was endorsing this view of rational action, intentionality, and individual planning.

This view of individual planning is consistently couched in the larger context of spontaneous orders. For Hayek, it is the undesigned and unintended institutions of the marketplace that make it possible for individuals to engage in rational planning at the micro level.[3] What makes it possible for a firm to make decisions about what to produce and how to produce it is the fact that there is an array of money prices determined in the marketplace that can guide those choices. It is that array of prices, itself the result of prior human action, that provides information about the success of those prior actions, the possible success of alternate future courses of action, and the possibility of undertaking new actions not previously considered.[4] This just one example of Hayek's argument that reason is the product of culture rather than the other way around. Our ability to engage in the sort of intentional planning that underlies the market process is made possible by the existence of cultural institutions such as markets, prices, and property. This point about intentional economic behavior underlying the process is sometimes lost because Hayek's emphasis in later years was on the background institutions and conditions rather than the intentional actions.

It is not conincidental that this argument is analogous to Hayek's theory of mind that he continued to work on over the course of the same period. In *The Sensory Order* (1952),

and in several papers in the 1950s and 60s, Hayek argued that the human mind itself was a spontaneous order that emerged from the physical structure of the brain and its interaction with the external world. More relevant is his depiction of human action as taking place against a background (to use a word associated with the contemporary philosopher of mind John Searle [1992]) of tacit knowing and mental structures that we cannot fully explicate. What makes our current actions possible is the accumulated experience that has created the mental maps and models that guide us at a more general level. Explicit human knowledge must always be understood against a background of embedded knowledge. The same argument is true of both knowledge and action. It might still be possible for us to "act" in the absence of the "background," but it would be substantially more difficult and less effective.[5]

As with so much else of Hayek's work, the roots of his later arguments can be found in the socialist calculation debate literature of the 1930s and 40s. Hayek's concern with spontaneous order and the institutional order certainly begins to emerge in those papers, but they also have a clear role for the entrepreneur and intentional human action more generally. As Boettke (1995) has argued, Hayek's work in the calculation debate begins by assuming the accuracy of Mises's (1920) argument about the necessity of private property for pricing and rational resource allocation. Hayek therefore spends little time rehearsing that element of the issue, choosing instead to address the various "market socialist" alternatives. Because the market socialists were also trained economists, Hayek had to respond to them in more technical and narrow terms than Mises's more grand statement (Boettke 1998).

At the same time, his exploration of those technical issues, and his realization of the sources of the differences between the Austrians and the neoclassical market socialists, forced him to come to grips with the underlying epistemic issues that divided he and Mises from the socialists. Those concerns about knowledge did, in important places, manifest themselves as concern with individual calculative action. As one example, consider his famous comments about cost in the 1940 paper. There he points out that costs are not something objectively given to the entrepreneur (as the costs curves of modern theory might suggest), but rather something that needs to be "discovered anew" daily in the marketplace. Note too that indivdiual rational action is not absent here; it is entrepreneurial behavior that is the fountainhead of the discovery process of the market. Another example is Hayek's famous response in "The Use of Knowledge in Society" (1945) to Schumpeter's argument about imputation and the possibility of public ownership of the means of production. There Hayek chides Schumpeter for assuming that the value of higher-order goods can be automatically imputed from the value of the lower-order goods, when in reality, it requires the forward-looking evaluations of entrepreneurs clashing in a competitive market to determine those values. Though de-emphasized, the calculating entrepreneur is not absent in Hayek's most important work.

Mises on Monetary Calculation and Human Action

An understanding of the role of monetary calculation is central to making the link between intentional human action and the unintended order of the marketplace. What is it, exactly, that makes it possible for order to "emerge" in the way that Hayek describes it? How, exactly,

does forward-looking human action lead to the emergent phenomena of the market? In "The Use of Knowledge in Society," he gave us the broad contours of the answer: prices make the communication of knowledge possible, and the availability of that knowledge makes plan coordination, and social order, easier to attain. But that argument does not specify the process by which prices are used to provide and obtain knowledge. Rather than assume Hayek could not provide such an explanation, it seems more reasonable to assume that he, as he appeared to do in the earlier calculation debate articles, took the Misesian type arguments as given. Reading Hayek decades later, perhaps this is not so obvious.

It is the use of money in exchanges that activates the epistemic properties of the price system. Mises's argument in 1920 was that prices were, essentially, indicies of comparison that allowed us to determine which resources to use and whether or not we had used them effectively, i.e., they allowed us to pick the economically rational project out of all of those that were technologically possible. Because all goods trade against money, the market value of each good can be reduced to a cardinal number—the money price. The money price still does not allow us to access the subjective values held by buyers and sellers, but it does give us the good's "objective exchange value" by indicating what the marginal buyer and seller are willing to give up or accept in trade. As such, the money price represents a sort of social consensus about the value of the good, and that is what is necessary for rational resource allocation. As Mises emphasized, one can only get such money prices where there are markets, which in turn require money and monetary exchange, which in turn require the fundamental institution of private property (and the security and enforcement of the rights thereto).

In a brief section of *Human Action*, Mises (1966:331–333) further explicated how this process works. As Salerno has argued, the key is the idea of "appraisement." The current set of prices reflects the historical process of price formation, and serves as the starting point for further human action. Individual producers "appraise" the current situation by imagining various possible future constellations of prices, comparing those to the current set of prices (which reflect not the "present" but the "immediate past"), and acting in such a way as to maximize the difference. As Mises (1966:332) puts it, "Appraisement is the anticipation of an expected fact." In our entrepreneurial capacity, we form expectations of the future and determine our use of current resources based on that "anticipation of an expected fact." This is perhaps most obvious in the case of capital goods. The decision to switch production techniques, for example, might result from a change in entrepreneurial expectations. That shift in expectations is an act of (re)appraisement. The entrepreneur's anticipation of expected facts has shifted. As a result, the entrepreneur might well re-evaluate the various production techniques available and make a switch. It is also true of consumer goods, however. How we decide on purchases will depend to some degree on our acts of appraisement with respect to "expected facts."

All of this links to the pricing and calculation process fairly straightforwardly. In his discussion of appraisement, Mises (1966:332) distinguishes appraisement from "valuation," where the latter refers to subjective value judgments, while the former is, as noted above, about anticipations of the future. Actors appraise the current market situation (e.g., they take into account the structure of prices, the purchasing power of money, etc.) and that act of appraisement underlies the valuations they then make: "The valuations of a man buying

and selling on the market. . . depend upon appraisement" (1966:332). Those valuations are revealed in the acts of choice that drive the pricing process of the market. From a Misesian perspective, market prices are the emergent result of individual acts of valuation that are in turn the result of appraisement of the market.

Money prices also greatly facilitate the processes of appraisement and valuation. The existence of money prices makes monetary calculation possible. For Mises (1966:209), the interconnected acts of appraisement and valuation are further intertwined with the ability to calculate in terms of money prices: "The exchange ratios between money and the various goods and services as established on the market of the past and as expected to be established on the market of the future are the mental tools of economic planning." Mises (1966:211) is quite clear that it is the use of money and the emergence of money prices for each good that underlies our ability to make use of economic calculation to develop the complex and effective division of labor of the modern market economy.

Our Misesian "microfoundations" thus begin with acting man engaging in appraisement and valuation. Faced with the necessity of action, actors look at the current set of money prices as a starting point for their appraisement of an uncertain future:

> In order to see his way in the unknown and uncertain future man has within his reach only two aids: experience of past events and his faculty of understanding. Knowledge about past prices is part of this experience and at the same time the starting point of understanding the future (Mises 1966:337).

Included in those past prices are the profit and loss calculations from prior actions. With that data, the actor must appraise the future. What are the actor's "anticipations of expected facts?" It is here that the "faculty of understanding" comes into play, and where the differences among actors in their acuity at appraisement make themselves known. Some will be better appraisers than others, either in their role as producers or consumers. Actors use those appraisements as the basis for the choices they make in the market.

At the level of individual action, we are assumed to have scales of preference that rank the subjective use value we attach to each unit of a good along side the subjective use value we attach to acquiring or parting with specific quantities of money. Having done our appraisal of the future, we must now compare the prices we expect to face at the time of purchase or sale with our scale of preferences. That is the act that Mises calls "valuation" and will determine what action we then take in the market. And once again, the existence of a set of prices all reckoned in terms of money makes this process much easier.

This process was most clearly laid out by Rothbard in chapter 4 of *Man, Economy, and State* (1962:201–225). He describes there the way in which a demander's scale of preferences can be illustrated by one ordinal chart that combines the demander's preference to hold particular quantities of money and specific units of the good in question. To use Rothbard's example (1962:206ff) of the demand for butter, a scale of preference might look like the following:

7 grains of gold
(1st pound of butter)

6 grains of gold
5 grains of gold
(2nd pound of butter)
4 grains of gold
3 grains of gold
(3rd pound of butter)
2 grains of gold

The parenthetical amounts refer to possible units of butter the person might wish to obtain. Where pounds of butter have money prices, in this case in terms of grains of gold, we can engage in valuation and appraisal along Misesian lines. The potential buyer here has a maximum price of 6 he will pay, as he prefers keeping 7 grains of gold to the first pound of butter.[6] At a price of 4, for example, he will buy two pounds of butter, as he prefers the first pound to 4 grains and he also prefers the second pound to 4 grains. He has appraised his future needs for butter and then engaged in valuation of those needs against the prices he might face and then acts accordingly. It is fairly easy to then derive a market-wide demand curve for butter, a market-wide supply curve (for suppliers, the scale will reflect their willingness to part with pounds of butter, and the importance of the ends they would satisfy, compared to their desire to obtain grains of gold), and a market-clearing price.[7]

Thus, these valuation-driven actions of "buying or not buying and . . . selling or not selling, contribute. . . to the formation of the market prices," and the future that emerges is "brought about by the interplay of the valuations of all individuals participating in the operation of the market" (Mises 1966:331). All of these acts of appraisal and valuation are made possible because monetary calculation gives us the ability to make comparisons and chart alternative paths through the uncertain future. For Mises (1966:315), as for Hayek, the array of market prices is a spontaneous order that is the result of human action but not human design:

> The market phenomena are social phenomena. They are the resultant of each individual's active contribution. But they are different from each such contribution. . . [the individual] does not always see that he himself is a part, although a small part, of the complex of elements determining each momentary state of the market.

Although Mises never says it as explicitly as Hayek did, it is clear from his argument that he understands the communicative properties of prices. The earlier quote about the role prices play as the starting point for appraisement begins to suggests that they provide useful information to actors. To drive this point home, Mises (1966:337) offers the following thought experiment:

> If the memory of all prices of the past were to fade away, the pricing process would become more troublesome, but not impossible. . . It would be necessary for [the entrepreneurs] to assemble anew all the data they need as the basis of their operations. They would not avoid mistakes which they now evade on account of experience at their disposal.

The current set of market prices is "data" and "experience" at the disposal of entrepreneurs; they are "knowledge surrogates." They do not "convey" knowledge, if "convey" means "pass on to others." Rather they make knowledge "socially accessible." When we "use" a price, we don't know what others know, rather we simply are able to act *as if* we knew what others knew. Prices are, in that sense, surrogates for knowledge.

Calculation, Prices, and De-Homogenization

It is precisely on this point that we can examine the controversy begun by Salerno's papers in the early 1990s. For many years, Hayekians have used the catch phrase "prices convey knowledge" as a summary for Hayek's insight from the 1945 paper onward. Certainly this phrase appears in Don Lavoie's 1986 *Comparative Economic Studies* paper, and was part of the George Mason "oral tradition" for many years. As a number of subsequent authors have noted, this phrase can have a number of alternative interpretations, with a variety of consequences. One response is that Hayek can be seen as saying nothing more than that prices, specifically equilibrium prices, are shorthands for the underlying tastes, preferences, and costs of market actors. In this sense, Hayek's insight (and the Austrian argument that "prices convey knowledge") is simply read back into an equilibrium framework where prices are "fully informative," and many of the Misesian insights are lost. This interpretation of the phrase is the one that explains why neoclassical economists are perfectly comfortable with, if not downright enthusiastic about, Hayek's 1945 paper: read this way, it confirms their own worldview quite nicely.

The problem with the "prices convey knowledge" formulation was best noted by Dave Prychitko, who once quipped that prices cannot "literally" convey knowledge, or otherwise we would "know" everything that the price is "conveying." The problem is in the word "convey," this argument suggests. That is one reason for preferring the language of "surrogate for" rather than "convey," as it seems to better indicate what Hayek was really trying to say: prices are *substitutes* for knowledge, rather than providers or conveyors of knowledge. When we have access to a price, we do not acquire the knowledge "behind" it, rather we are able to act "as if" we had that knowledge. This is the point of Mises's thought experiment about all prices disappearing. Those prices are the sediment of much experience and without them, we would be lacking a significant hunk of the information necessary for future-oriented decisions.

Where Salerno and the other de-homogenizers go wrong is that they attribute either or both of these incorrect variations to Hayek and Hayekians. Specifically, they seem to believe that the Hayekian concern with "knowledge" as opposed to "calculation" is because Hayekians accept the fully informative prices story where prices provide all the information one needs to act. If so, what purpose is there for appraisement, calculation, and valuation? If prices are indeed "fully informative," then the active part of entrepreneurial behavior seems superfluous. Salerno (1994:116ff) makes this argument explicit when he refers to Hayek as a "market-oriented proximal equilibrium theorist" and suggests that he is a "brother under the skin" with the "neoclassical/socialist GE theorists." The source of this charge is Salerno's reading Hayek (and Hayekians, such as Yeager 1994) as saying that market prices are a "substitute for the perfect knowledge that is assumed by neoclassical theorists to be

possessed by all market participants" (Salerno 1994:116). Thus Hayek et. al. are claimed to believe that markets are very near equilibrium (thus, "proximal equilibrium" theorist), and that there is no need for the active entrepreneurial element emphasized by Mises.

It is worth noting how this interpretation of the Hayekian view of prices and knowledge fits perfectly into other elements of the "de-homogenizationist" agenda. Most notably, it fits into their understanding of spontaneous order as neglecting, if not outright rejecting, the importance of intentional, rational action. How does order emerge in the Hayekian view? All you need are market prices, which, being substitutes for perfect knowledge, lead actors to "spontaneously" (i.e., without the need for forethought or rationality) coordinate their plans, producing order. Note further how it fits with their view of Kirzner's entrepreneur. Salerno and others have argued that Kirznerian "alertness" is not true to Mises because it is too passive. Rather than engaging in active appraisement and evaluation, and attempting to actualize the future he envisions, the Kirznerian entrepreneur is seen as simply reacting to changes in the exogenous data. The data change and some people are better at noticing that change than others. Once they notice it, they "re-maximize" based on the new means-ends framework, and this process slowly drives us toward equilibrium (see Salerno 1994:118). In the eyes of the de-homogenizers, this is a consistent Hayekian gestalt of the market where human action, both the real thing and the book, is effectively absent.

A complete parsing of the de-homogenizers' textual references to Hayek and Kirzner is beyond the scope of this paper. However, there are certainly places where Salerno is, at the very least, highly uncharitable in his reading of the Hayekians. For example, Hayek at one point says "on the whole current prices are fairly reliable indicators of what future prices will probably be" (cited in Salerno 1994:116). Salerno reads this as evidence of Hayek's "proximal equilibrium" view, but it could equally be read as simply saying that prices do not fluctuate greatly from day to day. Hayek's use of "future prices" need not be read as "long-run equilibrium" prices. In fact, it could easily be read in a Misesian way as suggesting, empirically, that even though there is no *causal* linkage, acts of appraisement that begin with current prices are unlikely to imagine future prices ("expected facts") that are dramatically different from today's, if only because those current prices embody the very experience and so forth that Mises notes in the thought experiment mentioned earlier. Although the future is always uncertain, the weight of experience encapsulated in current prices will likely still be highly relevant for entrepreneural appraisal of the future, leading to prices that are not dramatically different tomorrow from today.

The argument made by the de-homogenizers that Hayek's conception of prices is fundamentally backward-looking while Mises's is, more correctly, forward-looking, can more directly be undermined by Hayek's (1977:116) brief discussion of the role of prices in *Law, Legislation, and Liberty*, where he offers a very "Misesian" reading of the role of prices. This passage is worth quoting at length:

> The current prices, it must be specially noted, serve in this process as indicators of what ought to be done in the present circumstances and have no necessary relation to what has been done in the past in order to bring the current supply of any particular good on the market. For the same reason that the prices which guide the direction of the different efforts reflect events which the producer does not know, the return from

> his efforts will frequently be different from what he expected, and must be so if they are to guide production appropriately. The remunerations which the market determines are, as it were, not functionally related to what people *have* done, but only with what they *ought* to do.

More directly, the "neoclassical" interpretation of Hayek has already been responded to by Hayekians, most notably Esteban Thomsen's 1992 book. In all of the literature by Salerno and others, there does not appear to be any extended discussion of, or citation to, Thomsen's book. Thomsen provides a reading of Hayek that puts a great deal of distance between Hayek and the neoclassicals. Specifically, and this is a point Yeager (1994) raises in his reply to Salerno, Thomsen argues that Hayek's work on prices refers to the epistemic properties of *disequilibrium* prices. It is not that prices are, as Salerno interprets Hayek, substitutes for the perfect knowledge of neoclassicism as they would be in equilibrium, but that disequilibrium prices still provide information to actors, even if that information is imperfect. Seen this way, the Hayekian argument looks very Misesian: the imperfectly informative prices of disequilibrium are valuable precisely because in their absence, we would lack the knowledge that they embody (as Mises recognized) and not have use of the price system for economic calculation. It would be interesting to see the de-homogenizers seriously tackle Thomsen's book.

Even given this omission and the aforementioned uncharitable interpretations, it remains the case that Hayekians must accept some responsibility for the Salerno interpretation. There are indeed places where Hayek and others have talked about the epistemic properties of prices in ways that suggest the very interpretation Salerno offers. For example, consider the following from Brian Loasby (1982:114–115):

> There is no need for [information about resources, technology, and preferences] to be communicated. What is more, as F. A. Hayek, for example, has emphasized no one needs to know why the price of some particular commodity is whatever it is.... The increased price provides the only signal needed...

It is important to note that *nowhere* in the 1945 article does Hayek make categorical claims such as "no one" needs to know, or that prices provide the "only" signal needed. The neoclassical interpretation of Hayek offered by Loasby is a misreading. Those who reject the de-homogenizers' position and the neoclassical reading of Hayek need to articulate better the issues at stake in order to avoid a legitimate complaint on their part.

In some sense, being more precise about what Hayekians mean when they say "prices convey knowledge" is one goal of this paper. Toward that end, one suggestion would be a change in language that might help a great deal. Where Hayekians have always talked about "prices" doing this or that, perhaps we need to now talk of the "price system." Although individual prices certainly *do* serve as knowledge surrogates in the way described, the more important point to make is that the price *system* enables us to act by making use of knowledge that would otherwise not exist. In his excellent overview of the calcuation debate, Boettke (1998:40) makes this point very clearly:

> [I]n Hayek, there is an argument. . . that the knowledge required for economic calculation is available *only* within the market process itself. Outside of that context this knowledge does not exist. And, it is precisely this contextual knowledge of the market which enables economic actors. . . to engage in rational economic calculation.

The existence of the price system makes possible ways of knowing and brings us surrogates for knowledge that we cannot do without in discovering how to use resources effectively. It is the epistemic properties of the price system, not just individual prices, that make possible appraisement, calculation, and valuation, all of which are necessary for rational action by individuals, households, and firms. This way of viewing the matter seems both true to the Mises-Hayek vision and supportable by the textual evidence from both authors and modern Austrians.

To return to our main theme, the epistemic properties of the price sytem make possible the Great Society or extended order that is central to Hayek's thought. Monetary calculation, appraisement, and valuation are the Misesian microfoundations of the epistemic properties of the price system. That is the process of human action that leads to the results that are not of human design. The broader social order that emerges is one that both depends on and reflects the centrality of monetary calculation.

Monetary Calculation and the Great Society

The Hayekian Great Society is characterized by an extensive and fine division of labor (also one of Mises's signs of human progress) and the use of exchange, markets, and the price system to coordinate that division of labor. The flip side of the division of labor is the need for human social cooperation.[8] As our tasks become progressively narrower and more finely divided, we become increasingly reliant on others to provide us with what we want. In earlier times, social cooperation took place almost exclusively within the family or extended kin network. Kin networks were not just units of production and consumption (as one could argue households still are to some degree), they were encompassing institutions. There was almost no one outside one's kin who one could interact with or rely on. In such societies, there could still be a division of labor, but that division would be very limited. The limits would be set by the fact that cooperation had to happen in direct, face-to-face ways. As economists have recognized as early as Adam Smith, coordination and cooperation in face-to-face situations is limited by our ability to gain direct knowledge of others and act in ways that they wish us to. That is, human action in face-to-face societies is based on limited knowledge of the natural world and direct knowledge of the wants and needs of others.

What enables us to transcend these limits in the Great Society? How is it possible that we are able to cooperate beyond those we know face-to-face? In Richard Ebeling's (1987) felicitous phrase, the Great Society is an example of "cooperation in anonymity." Extending human cooperation beyond those we know directly is what has enabled us to grow beyond the limits of our kin. Ebeling argues, and recent work by Koppl (2002) expands on this in more detail, that the use of ideal types is key to our ability to navigate through a world of anonymity. Working from the tradition of Schutz, they argue that we form expectations of the future by expecting "typical" behavior of human actors. To use Schutz's overused

example, we know the typical behavior of a mail carrier, so we know when to expect him, what he does, etc. We do not need to know any details of that particular mail carrier, rather knowing that he is a mail carrier enables us to coordinate our behavior sufficiently.

As Koppl (2002:47–48) emphasizes, the more anonymous the interaction, the more abstract is the ideal type. Using a different set of terms, we might say that abstract ideal types are "thin" in the sense that they focus on a very particular form of behavior that is common to many individuals. Koppl, following Schutz, refers to this as a "highly objective" ideal type. For example, the ideal type "English speaker" is one we use all the time. Upon meeting someone new, the moment we recognize their ability to speak English, we begin to form a series of expectations about them and can orient our behavior accordingly. Just that piece of abstract information enables a good deal of social cooperation and coordination. One way of reading Mises's *Human Action* is that his a priori praxeological truths apply to the abstract "human actor." Any human capable of intentionality can have his or her abstract behavior rendered intelligible by praxeology. It is the theory of human action in the abstract. When we go to explain historical events, or look at more specific types of human action, we have to make use of "thicker" ideal types that are no longer a priori but empirically informed.[9]

One abstract, thin ideal type we frequently make use of is "money user." At roughly the same level of abstraction we might talk about a "catallactic actor," or someone who participates in the market exchange process. A subset of such catallactic actors (and catallactic actors are but a subset of "human actors") would be those who frequently engage in economic calculation, particularly with respect to capital goods. Obviously, this is a large group of people, spanning languages and nations. Yet we know, just as Bastiat knew that Paris gets fed, that they are able to coordinate and cooperate despite their anonymity. Or perhaps more accurately, they are able to cooperate in anonymity because they are able to make use of a common language of economic calculation. The price system, which is much like a language, enables us to extend our ability to communicate beyond both the need for face-to-face interaction, and the need for written or spoken language. The experience and history that are reflected in the prices of the immediate past do indeed play a communicative role. As Boettke (1998) argues, Salerno and the de-homogenizers have rightly focused our attention to the forward-looking role of prices, but have themselves underplayed the importance of their backward-looking role.

Nonetheless, one key to coordinating with other anonymous actors in the catallaxy is the ability to make use of the price system in the forward-looking act of appraisement. When we work on the assumption that others, like us, are appraising the future with the same eye toward deploying resources as profitably as they believe they can, we are able to cooperate implicitly by generating a competitive process that produces a "social appraisement" (to use Mises's term) that is reflected in the market price. The competitive proces, driven by monetary calculation, produces social cooperation in anonymity. Our reactions to the information about the past provided by prices, profits, and losses, and our informed guesses about the future embedded in our valuations and resulting actions in the marketplace, are part of the broader communication and discovery process identified by Hayek. Monetary calculation is how we "talk" to each other in the anonymous world of the market by enabling us to form useful ideal typifications of the behavior of anonymous others.

One implication of this is that the Great Society is an order held together by the interlacing webs of economic calculation. What makes possible the continued extension of the division of labor, and the complexity of the market that goes beyond our ability as humans to comprehend it, is the use of money, the evolution of money prices, and the use of economic calculation to pierce the fog of uncertainty that shrouds the future. The very "money-grubbing" that is so derided by the market's critics is indeed its lifeblood. What facilitates the anonymous interaction of the extended market order is our mutual ability to reckon in money prices and calculate the likely results of our future actions. Mises devotes a number of very eloquent pages of *Human Action* to the ways in which economic calculation is connected with human rationality. Our entire ability to plan for the future and determine which set of actions is best is premised on our ability to engage in economic calculation. How different is this from Hayek's claim that culture has produced reason, rather than the other way around? In the end, it seems odd that self-proclaimed Misesians would bash Hayek for being skeptical of reason, when Mises himself appears to argue that rational action is a function of economic and social institutions.

Conclusion

Whatever the cause of the last decade's split between the self-proclaimed Misesians and the rest of Austrian economics, its consequences have not been healthy. Not only has the intensity of the attacks on Hayek and Hayekians maintained itself over that time, the controversy has led to good minds on both sides being diverted away from what is our real task: making use of Austrian economics to render the world more intelligible. However, doing the latter will require that we take the notion of a "Mises-Hayek" approach to economics seriously. Self-proclaimed Misesians will need to realize that Hayek's analytical contributions are more Misesian than they have been willing to admit, which is a proposition that is independent of Hayek being in favor of a larger role for the state than was Mises. In turn, Hayekians are going to have to get beyond their reaction to the extreme claims made by the self-proclaimed Misesians and realize that there is much of value in Mises, and that Hayek and Kirzner cannot be understood but through his work. In addition, Hayekians must be careful not to contribute to the misreadings of Hayek that abound in Austrian literature and beyond. If this we all are going to truly "develop" Austrian economics, we will have to address both its Hayekian and Misesian tasks: markets are of *human action*, but *not human design*.

Notes

1. A theme that is also explored in Horwitz (1998, 2003).
2. Students often express this same misunderstanding of spontaneous order by believing that there is no intentional, rational action involved. In a more polite version of their pithy formulation: "stuff happens." The misreading by professional scholars is odd because Hayek is, after all, talking about an "order," which certainly suggests something more than random "stuff" happening. Human action is resulting in patterned (ordered) outcomes and that is a reflection of the intentionality behind our actions, which is in turn guided by a common set of signals. This combination of human intentionality and market and institutional guideposts reflects the Misesian and Hayekian sides of the generation of unplanned order.

3. As earlier phrasing suggests, the use of the term "individual" is meant to include firms and households as well. It is somewhat to cumbersome to say "economic organizations" or "the micro-level economic entity" or some such covering phrase.
4. See Lewin (1998) and Boettke (1990, 1998).
5. Caldwell (2003) provides a compelling interpretation of the importance of *The Sensory Order* for understanding Hayek's project. An earlier attempt at understanding that relationship can be found in Horwitz (2000).
6. The real comparison is between the value to the actor of having the 6 grains of gold available as part of his money holdings and the value of the end that would be satisfied by the first pound of butter. It is a comparison between the subjective utility that is the "yield to money held" (Hutt 1956) and the subjective utility associated with the end hoped to be satisfied by the good being purchased. The Austrian conception of opportunity cost as the foregone *expected* subjective utility of the next most preferred choice is clear here.
7. It is worth noting how Rothbard's approach derives from the Austrian-ordinal conception of diminishing marginal utilty. In an earlier section, Rothbard (1962:20–25) shows how the first unit of any good will be allocated to the highest valued use and the next unit to the next use, etc.. This ordinal view of marginal utility is then combined with the idea of demanders having a stock of gold they are considering parting with in order to increase their stock of a consumption good to get the scales of preference shown in the text. One can also see the Austrian version of "consumer surplus" by recognizing that if the market price is 4, our hypothetical demander earns a surplus of 2 because he would have been willing to pay up to 6 for the first pound of butter. The first several chapters of *Man, Economy, and State* remain perhaps the best Austrian explication of basic demand and supply.
8. As Salerno (1993:133) notes, Mises considered titling *Human Action* as *Social Cooperation* instead.
9. We also must include auxilliary assumptions about institutions and the like.

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