Methodological Individualism vs. Methodological Holism: Neoclassicism, Institutionalism and Socionomic Theory

Wayne D. Parker
Socionomics Foundation, Gainesville, Georgia USA
and
Emory University School of Medicine, Atlanta, Georgia USA

Abstract

Aims – Historically, there has been tension between *methodological individualism* (MI) and *methodological holism* (MH) in economics. Rather than a steady accretion of progress toward more complete social knowledge, one sees an oscillation between the popularity of MI and MH due to fluctuations of unconscious social mood. The new paradigm of socionomics created by Robert Prechter offers a more complete theoretical synthesis of MI and MH (compared to the new institutionalists) in its theory of the emergence of individual cognitive and affective processes in aggregate patterns of human social behavior.
Method – This paper presents an analysis of the history of economic theory since the 17th century that supports the socionomic thesis that endogenous social mood determines social events (including theoretical fads in social knowledge such as economic theorizing), not the common view that social events exogenously determine social mood.
Results – An examination of social mood during the periods of the mercantilists, the physiocrats, and the classical economists yields trends consistent with the same findings relative to institutionalists vs. neoclassicists: Periods of positive social mood correlate with methodological individualism, while periods of negative social mood correlate with methodological holism.
Conclusion – These findings suggest that economic theories related to social knowledge will predominate in the period ahead over theories focusing on individual knowledge. Socionomic theory resolves the MI/MH conflict, also resolving the conflict between the goal of mechanistic neoclassicism (to predict) and the goal of contextualist or organicist institutionalism (to understand) by addressing both goals with its new methodology.

Introduction

Almost all economic theories may be seen as predominantly using an approach of either *methodological individualism* (MI) or *methodological collectivism* or *holism* (MH). Since methodological collectivism has at times been confused with political collectivism, I will use the term "methodological holism" throughout this paper. I will adopt the admirably clear definitions for MI and MH given by Samuels (1972, p. 249):

> By methodological individualism I mean the view which holds that meaningful social science knowledge is best or more appropriately derived through the study of individuals; and by methodological collectivism I mean the view which holds that meaningful social science knowledge is best or more appropriately derived through the study of group organizations, forces, processes and/or problems.

Note that the definitions given here carry no implication that the MI/MH distinction here is related to the many theoretical polarities with which it is often confused or conflated: *erklaren/verstehen*, positivism/subjectivism, rationality/nonrationality, individual agency/collective agency, homeostasis/historicism, *Naturwissenschaften/ Geisteswissenschaften*, or teleology/nonteleology. Any rich associations that one may have to the usage of these terms in related debates will most usefully be ignored. There are important metatheoretical connections between MI and the concepts of atomism, reductionism, and formism (Pepper, 1942), just as there are connections between MH and the concepts of organicism and structuralism (Prechter and Parker, 2004), but this paper will not deal with those connections in depth. I will focus only on the relationship between MI and MH in economic theories and in socionomic theory. Though many economic theories manifest a blend of MI and MH, one or the other has been predominant during each of the periods in economic history. This initial exploration of this thesis will of necessity proceed by illustrations from a limited sample of theorists.

I will sketch a quick outline of socionomic theory here (Prechter, 1999, 2001, 2003; Prechter and Parker, 2005), since I will use its concepts to analyze the history of MI and MH in economics. Socionomics has four key elements: in human, self-organized complex systems,

1) Shared unconscious impulses to herd in contexts of uncertainty lead to the emergence of mass psychological dynamics that manifest as social mood trends;
2) These social mood trends conform to hierarchical fractal patterns that take a repetitive, self-affine form and are therefore probabilistically predictable;
3) These patterns of aggregate behavior are form-determined due to endogenous processes rather than mechanistically determined by exogenous causes; and
4) These social mood trends determine the character of social actions and are their underlying source, both in financial markets and in other domains.

Socionomics is a probabilistic science, not a strictly deterministic one, and allows one to predict general trends of aggregates, not the definite specific acts of individuals, any one of whom is seen as free to vary at will from the trend.

Market indices serve as the best sociometer (measure of social mood) currently available (see Prechter, 1999). Fig. 1 serves to locate temporally the theorists that exemplify the oscillation between MI and MH and also between positive and negative social mood, respectively, over the course of economic history. Prechter's socionomic theory is like Pareto's (1916/1935) sociological theory in suggesting that theorists pursue their favorite themes for reasons related to unconscious affective impulses (cf. Pareto's "residues") rather than being entirely impelled by objective data and cool logic (see Parker and Prechter, 2006, for more details). Often economists' theoretical explanation for their methodological choices constitutes mere post hoc rationalization (cf. Pareto's "derivations") for their own social behavior in choosing their methodologies, just as their theories serve as rationalization of social events in financial markets, which socionomics posits are also driven by affective factors. Socionomics sees unconscious social mood rather than rational choice as the source of the behavior of both markets and theorists. Shiller (1984, 2000), among others, has elucidated the role of "fads and fashions" in financial markets, providing empirical evidence of how market behavior varies from what one would expect on the basis

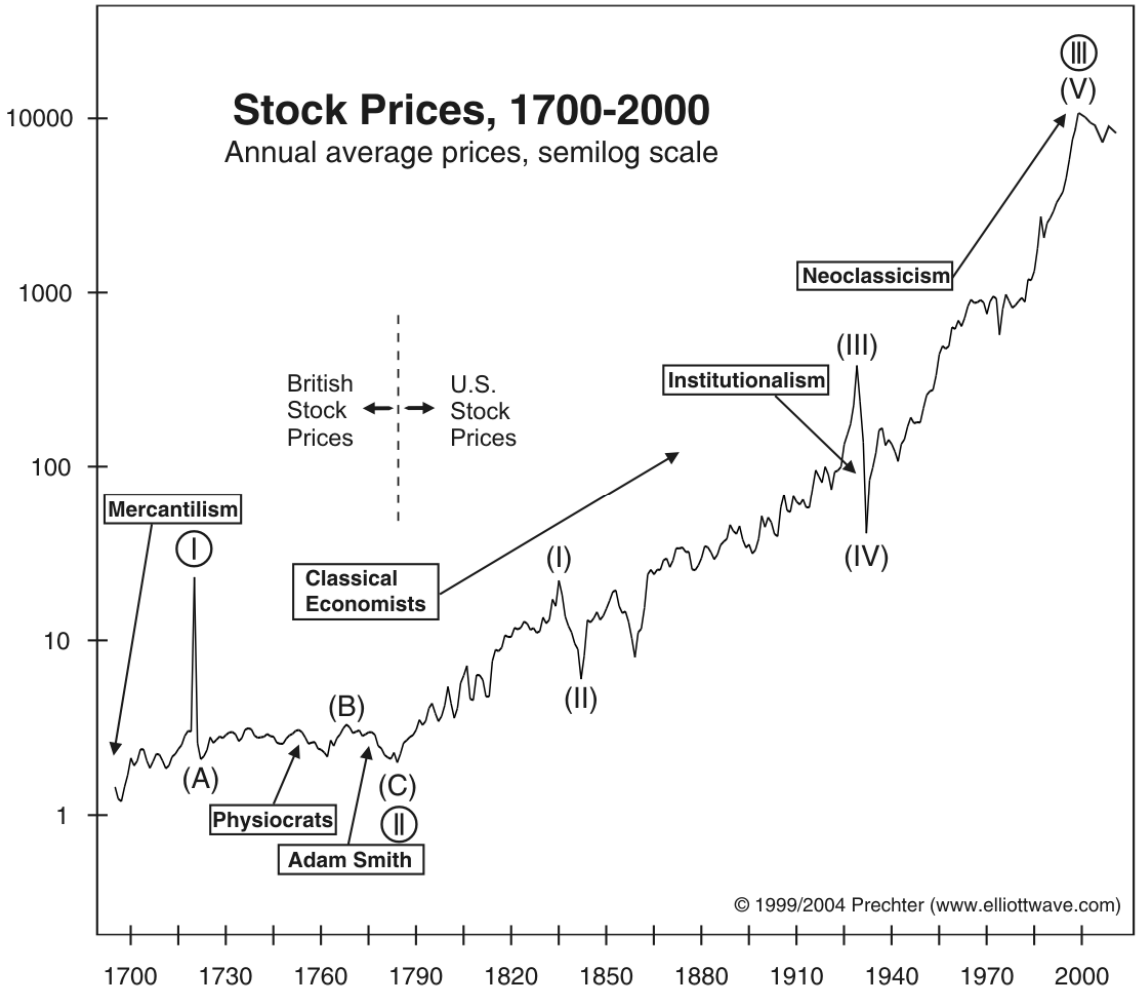

Fig. 1: Boxes with arrows pointing upward indicate MI theorists in times of positive social mood; boxes with arrows pointing upward indicate MH theorists in times of negative social mood.

of pure rationality. Socionomic theory finds similar fad-like social behavior in the thematic choices of economic theorists.

Overview of History of MI and MH in Economic Theory

Early Modern Period

Mercantilists. Space limitations restrict this overview to the economic history of Western Europe and the U.S. The mercantilists, as described by Heckscher (as quoted by Keynes, 1936/1997, chap. 23), dominated economic thought during the prehistory of modern economics, roughly 1500-1776. The social mood was negative during this period, as writers in this period of the early formation of nation-states saw life as an economic struggle for survival in which money was

viewed as a scarcity that must be fought over in the course of international trade. Heckscher describes this element of "money fear" in mercantilist thinking: "In the course of a century and a half this standpoint was formulated again and again in this way, that a country with relatively less money than other countries must 'sell cheap and buy dear'…." Primitive as this thinking was, leading to self-defeating excesses of protectionism, one can see that the mercantilist theories were MH, since their top-down theories addressed the competitive roles of nations rather than details of transactions among individuals. A typical mercantilist was Jean-Baptiste Colbert, French minister of finance from 1665 to 1683, who promulgated not only protectionistic tariffs but also war against France's neighbors as instruments of promoting French trade. Socionomic research has found a correlation between negative social mood and both increasing international friction and significant military conflict over the course of world history (Prechter, 1999). Socionomics suggests that it is not social events such as war and protectionism that cause negative social mood; rather, periods of negative social mood precede and increase the likelihood of both tariffs and international warfare.

Physiocrats. The timing of the physiocrat publications, roughly 1756-1780, overlapped the period of Adam Smith's work. Unlike the mercantilists, whose ideas they rejected, these were MI theorists, examining the details of economic relations between individuals in society with different socioeconomic roles and positions. Francois Quesnay, French surgeon and economist, created his famous *Tableau Economique*, published in 1758, to analyze the economic transactions of heterogeneous individuals. Invoking "natural order" as a rationale to exhort his readers, Quesnay optimistically suggested that following this natural order in economic matters (by which he referred to a certain manner in which wealth should be shared between the productive members of society, farmers and proprietors, and unproductive individuals, meaning merchants and manufacturers) would ensure the stability of a society. Quesnay's *Tableau* inspired great positive enthusiasm – Smith (1776/1994) quoted Mirabeau as including the *Tableau* along with writing and money as one of the three great inventions contributing most to social stability. The positive social mood here is obvious, and the socionomic thesis is that the correlation between positive mood and MI theories is systematic, not a chance occurrence.

Modern Period

Classical economists. Adam Smith (1776/1994) initiated the modern period of economic thought with *The Wealth of Nations*, and he is the obvious representative of classical economic theory. With his focus on the *division of labor*, MI clearly characterizes most of his work, even though the MH of his famous "invisible hand" is briefly evident. While Smith did not comment on it, there is already an implicit tension between the MI and MH aspects of his theory that was long ignored. In Warsh's (2006) useful exposition of the theoretical role of knowledge in economics, he noted that Smith optimistically focused on the beneficial integration of heterogeneous individuals to support a thriving economy (his famous "Pin Factory" exemplifies the benefits of such unintentional cooperation), while not focusing on how his invisible hand, which he saw as promoting the public interest, sometimes fails (e.g., as with increasing returns to monopolists). Warsh's example of the battle between Bill Gates and the U.S. government over a quasi-monopoly in software is a cautionary tale that engenders a much less positive mood than that shown by Adam Smith, who was quite ebullient about the results of *laissez-faire* economic

policies. The correlation of the positive social mood evinced by the classical economists and their MI theories is supported by the upward trend of the markets in Fig. 1 during this period. Not all the classical economists demonstrate positive social mood: Ricardo, and Malthus of course, were not nearly as optimistic as Smith (also note the MH orientation of Malthus' pessimistic theory). I am arguing instead for the general trend one may see in an overview of this era.

Original institutionalists. For the theorists sometimes called "old institutionalist economists" (OIE), I will use the same acronym to stand for "*original* institutionalist economists" to avoid the pejorative connotation that "old" has of "no longer of value." The OIE theorists, among whom Veblen serves as our exemplar, were eager to emphasize their innovative MH ideas, though many tried to include both MI and MH concepts. Consistent with the correlation of MH with negative social mood, much of OIE theory arose both as an attempt to solve the very serious social and economic problems of the times and as a negative reaction against previous economic theories. As Boettke (2005) noted, in the early decades of the 1900s (1900-1935) the institutionalists challenged the MI approach of the marginalists, and Keynes and his followers (1940s to 1970s) challenged the MI aspects of neoclassicism. In general, however, the MI emphasis of neoclassical theory dominated economics for most of the past century, consistent with what one expects from the positive mood portrayed in Fig. 1, which shows a stock market in a rising trend (with a few notable exceptions) throughout the 1900s.

According to Boettke (p. 148), Veblen was one of first major critics of the earlier MI emphasis in its concept of utility-maximization. Here he rejects the related hedonistic theory of motivation and the mechanistic "reactive organism" model of man suggested by this theory:

> The hedonistic conception of man is that of a lightening calculator of pleasures and pains who oscillates like a homogeneous globule of desire and happiness under the impulse of stimuli that shift him about the area…. He is an isolated…human datum, in stable equilibrium except for the buffets of the impinging forces that displace him in one direction or another…. [The] hedonistic man is not a prime mover. He is not the seat of a process of living except that he is subject to…circumstances external and alien to him.

The tone Veblen uses here makes it clear that dispassionate data-gathering was not the primary inspiration for his theorizing. The intensity of his rejection of the MI bias of earlier theorists, while often creating a blurred boundary between normative and positive economic theory, exemplifies the negative mood underlying his own motivation for such a negative critique.

Mutual misunderstandings between the OIEs and their critics were inevitable when exponents of opposing views held prior commitments to worldviews that were incommensurable with each other. Most of the MI theorists bore an allegiance (if only unconsciously) to a mechanistic worldview in which the implicit goals of science were assumed to be the prediction and control of human behavior. Most of the MH theorists among the OIEs had an equal commitment to nonmechanistic worldviews, either contextualism or organicism (Pepper, 1942), in which the goal of the social sciences was more related to the description and understanding of human behavior. These conflicting goals exacerbated the negative mood of the OIE theorists.

Neoclassicists. Hodgson (1998, p. 169) gives a useful definition of neoclassical theory:

> Neoclassical economics… may be conveniently defined as an approach which (1) assumes rational, maximizing behavior by agents with given and stable preference functions, (2) focuses on attained, or movements toward, equilibrium states, and (3) excludes chronic information problems (such as uncertainty of the type explored by Frank Knight and John Maynard Keynes).

Note that an MI approach is built into this definition due to its focus on utility-maximizing by individual agents. The neoclassicists have been especially aggressive in claiming that the MI approach is the essence of science. One of the MI advocates, Jon Elster (quoted in Hodgson, 1997, p. 402), asserted:

> The basic building block in the social sciences, the elementary unit of explanation, is the individual action guided by some intention…. Generally speaking, the scientific practice is to seek an explanation at a lower level than the explanandum…. The search for micro-foundations, to use a fashionable term from recent controversies in economics, is in reality a pervasive and omnipresent feature of science.

Not only do the neoclassicists see MI as the essence of science on theoretical grounds (due to their model of man and assumptions about the nature of causality) – a commitment to MI is even enforced in the economic profession due to neoclassicism's domination of the profession in many areas. James Tobin (quoted in Hodgson, 1997, p. 402) states,

> This [microfoundations] counter-revolution has swept the profession until now it is scarcely an exaggeration to say that no paper that does not employ the 'microfoundations' methodology can get published in a major professional journal, that no research proposal that is suspect of violating its precepts can survive per review, that no newly minted Ph.D. who can show his hypothesized behavioral relations are properly derived can get a good academic job.

Burns (1931), arguing for the usefulness of institutionalism's MH approach, pointed out that even in its own domain of MI, neoclassicism's assumptions about equilibrium sometimes produced unsuccessful predictions. He expressed puzzlement that such failures did not lead the neoclassicists to embrace institutionalism as a useful set of complementary principles, but noting their reluctance to do so mused that "It may in part be due to psychological antipathy to embarking upon investigations likely to involve an important modification, if not abandonment, of the existing integrating structure and a dislike of the inevitable period of uncertainty during which the higher synthesis [between neoclassicism and institutionalism] is in process of emergence" (pp. 84-85). As Kuhn (1970) pointed out, even clear falsification of a theory does not always cause its proponents to abandon it. This ubiquitous finding in the history of science is more evidence that the commitment to a particular scientific methodology, such as MI or MH, is more affectively inspired than rationally inspired.

Summary of Historical Meta-Analysis

My discussion has been far from exhaustive: I have not examined in any detail the marginalists, the monetarists, the Austrian economists, Keynes or Keynesians or New Keynesians, the New Classicals, or countless other schools of economic thought. This discussion merely attempts to present and explore a thesis about the nature of economic theorizing, rather than prove it. Even this brief overview may help suggest, though, that over the history of economic theory one sees not a steady accumulation of progress toward more complete social knowledge, but rather an oscillation back and forth between MI and MH. This oscillation is related to the fluctuations of unconscious social mood inspiring these fads in economic theory rather than logical deductions and data. To take the example of international trade, it may be tempting to contrast the early mercantilists with modern neoclassicists and conclude that we have made progress in this area. One might be tempted to conclude: "We used to think that protectionism best served a nation's economy, but now we know that free trade does." A closer look shows that evidence of cumulative social knowledge in this area is more apparent than real. The pendulum swings back and forth between the poles of free trade and protectionism over the decades. Warsh (2006) has an illuminating discussion of the failure of "convergence" theory in development economics, evident in the growing gap between the wealth of nations at the top and bottom. One must conclude that there is no compelling evidence of progress in this measure of applied economics, either.

Social mood, not facts and logical theories, impels even university professors to rationalize the "lifeboat mentality" of protectionism during threatening economic and social times. Recall that there was also a brief trend back toward protectionism, called by critics "neomercantilism," with the oil crisis in the mid-'70s and the global recession of the early '80s. As social mood turned positive, several rounds of multilateral trade talks strengthened free trade in the late '80s and through the '90s, but protectionism has seen some resurgence since 2000. Have we been steadily gaining more social knowledge about the nature and benefits of trading with other nations since the mercantilism of the 17th century, or have we been buffeted for all these centuries by the waves of social mood? The history of oscillation between free trade and protectionism supports the latter thesis.

Methodological Individualism and Holism in Socionomic Theory

Is there no way to resolve the theoretical tension we have seen historically between MI and MH? More recently, one sees in the work of some of the new institutionalist economists (NIE) some apparent awareness of the conflicts between MI and MH and some effort to blend these approaches. Due to incommensurability between the assumptions implicit in various aspects of their theories, however, the result to date has been a confusing eclecticism rather than a genuinely coherent synthesis of prior analysis at the individual and aggregate levels.

Hodgson (1998, pp. 180-181) points out that many of the OIEs themselves made serious efforts to achieve this integration between MI and MH:

> The thrust of the "old" institutionalist approach is to see behavioral habit and institutional structure as mutually entwined and mutually reinforcing: both aspects are relevant to the full picture…. A dual stress on both agency and structure is required, redolent of similar arguments in sociology and philosophy…. Both individuals and institutions are mutually constitutive of each other. Institutions mold, and are molded by, human action.

Hodgson points out that this mutually causal relationship between agency (MI) and structure (MH) can be distorted by erring on either side – and he concludes that the NIEs err on the side of MI, since their approach "focuses primarily on the emergence of institutions out of the interactions of given individuals."

Rather than delve further into the nuances of NIE theory (Hodgson, 1998, and DeQuech, 2002, have ably summarized and critiqued this field), let us examine how Prechter's socionomic theory has integrated MI and MH. Prechter's concept of *social mood* is the linchpin of this integration. In contrast to the NIEs, socionomics offers a synthesis by building on a process ontology a combination of the contextualist and organicist worldviews (Pepper, 1942). In the past, MI has been most closely related to the mechanistic worldview, while MH has been most closely related to either the organicist worldview (some type of structuralism) in some institutionalists' writings, or to the contextualist worldview (in the form of historicism) in others. Socionomics resolves the eclectic contradictions of combining mechanistic approaches to MI with organicist approaches to MH, as some of the NIEs seem to do, by integrating a new theory of unconscious mood at the MI level (via a contextualist theory), based on recent research in the neurophysiology of mood, with a quantified structuralism at the MH level based on the aggregate fractal pattern described by the Wave Principle originally discovered by R. N. Elliott in the 1930s (a type of organicism).

Socionomics thus not only resolves the MI/MH conflict that has plagued the history of economic theory – it also resolves the conflict between the goal of mechanistic neoclassicism (to predict) and the goal of contextualist or organicist institutionalism (to understand) by addressing both goals. Since the form of the fractal pattern of mood trends at the aggregate level is self-similar and probabilistically predictable, socionomics offers the methodology to predict *and* explain human social behavior, both in the realm of economics and in other domains where social decision-making under uncertainty is involved. Such mood trends, endogenously generated by an evolved social instinct toward unconscious herding and imitation in contexts of uncertainty, are mediated by the limbic system. (See Parker and Prechter, 2005, for more details of the socionomic herding theory and a comparison of this theory with other major herding theories in the social sciences.) Understanding this repetitive structure, which is different from that of fixed periodic cycles such as those discussed by Schumpeter, Kondratiev and others, allows one probabilistically to predict large-degree trend changes in aggregate social mood and corresponding trend changes in certain domains of human social behavior at the aggregate level.

It is certainly not a new idea in the history of social theory to say that MI has been most closely related to the mechanistic worldview, while MH has been most closely related to the organicist worldview. Stark (1962; as reviewed by Martins, 1964) analyzed the history of this connection, going back to Dilthey's discussion of three primary *Weltanschauung* in social theory, and discussed their sociological relevance. Martins (pp. 77-78) summarizes Stark's analysis:

> Not surprisingly, 'mechanicism' (roughly, ontological or methodological individualism) and 'organicism' (roughly, ontological and/or methodological collectivism) emerge as two of the basic thought-forms, logically prior to the third which can be seen as the sublation of the former. This third form… posits self and society as… aspects of the same thing, as ontologically equivalent: it is traced from Vico to Summer and Cooley.

So there are no new ideas under the sun. What, then, does socionomics add to social theory? The integration of contextualism with organicism in socionomics, and its corresponding integration of MI and MH without reliance on mechanistic assumptions, is original in basing its MI theory on a neurophysiological foundation, and in tracing the behavioral concomitants of individual herding behavior to the fractal aggregate pattern with MH implications. Others have tried to combine mechanistic with organicist theories, but this combination does not successfully integrate MI and MH due to categorical contradictions between these worldviews (Pepper, 1942). Combining contextualism and organicism, however, only causes a problem if one claims unlimited scope for the *explanandum* for such a theory. Socionomics avoids this problem by claiming validity only for explaining and predicting human social behavior in contexts of uncertainty. This clearly bounded scope of explanation also allows socionomics to offer a new theory of finance that does not conflict with other domains of traditional economic theory (Prechter and Parker, 2005).

Socionomic theory demonstrates emergence and irreducible holism in the way it depicts the relationship between MI and MH. The integration of MI and MH in socionomic theory involves a bi-level description of a single process that involves simultaneous mutually causal relations when the observer examines both the individual and the aggregate levels of analysis. This process is a type of *autopoiesis* (Maturana and Varela, 1992) or a self-creating process. Giddens (1979) has developed a somewhat similar autopoietic social theory in his concept of "structuration," where he also references the work of biologists Maturana and Varela.

While there are vast differences between socionomic theory and OIE and NIE, the socionomic concepts of mood and instinct may not be inconsistent with many OIE ideas about habit and instinct. As Hodgson (1998) has pointed out, the theoretical role of habit is one of the key elements that separates OIE from NIE theory (the latter show little interest in developing a theory of habit, while habit played a central role in early OIE theory). He (p. 189) argues for the continuing usefulness of the OIE ideas about habit: "The reintroduction of the concepts of habit and instinct into a theory of human behavior helps to provide a foundation upon which a theory of institutions can be built." Hodgson is arguing for a biology-based economics. Rooting the details of socionomics' theory of human agency in the *neurophysiology of mood* effectively addresses this need to move away from economic theory based on analogies to 19th century mechanics.

Parallel to Hodgson's comments about habit being a capacity and not necessarily a behavior, we may conceptualize social mood as an *action potentiality*. Using the term "potentiality" makes it clear that social mood does not just reflect the logical "potential" or possibility that something may happen – rather, mood describes a real *capacity* for action that is in existence in the neuroanatomical structures of the human brain and body. The "action potentiality" suggests that

mood is related to the innate agency of the individual human agent, his spontaneous capacity to initiate activity independently of exogenous stimuli, as opposed to the "reactive agent" model of man assumed by the mechanistic neoclassicists.

Social mood is partially but not entirely related to instinct, specifically socionomics' "herding impulse." Social mood coordinates instinct, habit, and creativity by mediating between them, just as social mood also coordinates social institutions at the aggregate level with individuals' instincts and habits by mediating among them. Thus, social mood serves as an affective filter between instincts and actions, coordinating a process of co-evolutionary selection, selecting for action those potentialities in instinct, habit, and social institutions whose enactment are congruent with current social mood. This may sound circular, but this is because autopoiesis is involved in this process of relating the levels of MI and MH, not circular reasoning.

"Habit-based action potentialities" describes social mood better than "habits," since one must avoid a false reification of these processes, consistent with the process ontology embodied in socionomic theory. In fact, the relation between "thing" and "process" is even more complex. The neurophysiological relationship between the *process* of action and the *thingish* capability suggested by "action potentiality" is such that it represents a sort of *quantum mechanics of human agency* in that it is rather indeterminate, relative to the observer in any given instance, where a potentiality becomes a real action in this theory of human agency. While socionomics posits (consistent with its alliance with contextualism) a real and separable causal efficacy to human agency, as opposed to such agency being reducible to exogenous causality, such action is emergent from an ensemble of literally millions of neuronal coordinations in any given action, during which the very *structure of neuroanatomy*, in the course of neuronal activity, is literally constantly co-evolving on a moment-by-moment basis with one's social environment. Many social theorists who are unaware of the details of neurophysiological processes may imagine that evolutionary processes require very long time-frames, perhaps generations, to significantly affect social behavior. However, if by "co-evolution" one does not just limit oneself to genetic processes, but also includes a broader definition such as "continuous survival-oriented change in mutual adaptation with one's social environment," one can see such co-evolution represented by the self-rewiring nervous system of the human agent. This is an ongoing integrated dance of processes involving instinctive, habitual, and creative action potentialities all constantly being made real, coordinated by the process of social mood. Such ideas are supported by recent neurological research into the nature and limits of *neuroplasticity* (including processes such as synaptic sprouting and pruning).

So are these "action potentialities" really *things* or *processes*? Like the "wave vs. particle" debates in quantum mechanics, it depends. More specifically, perhaps "things" are most usefully conceptualized as "processes that persist over some time-frame to be consistently observed to be identical from the perspective of some observer at some specified level of analysis." In this very relativistic definition, if one loses either the "persistence" of the process, the "consistency" of the observation, the "perspective" of the observer, or the "level" of the analysis, one also loses the "thing." From this epistemological stance, rooted in a process ontology, "things" are only epiphenomena, contingent on processes of persistence in time, consistency of observation, and a multi-leveled analytic/synthetic theory of ontology and epistemology.

How do aggregate structures or institutions affect or constrain individual behavior? Hodgson (2004, p. 656) argues that this takes place not in the *mechanistic* way of exogenous causes acting as a deterministic force upon individual agents who are helplessly controlled by them, but rather in a manner which socionomics sees as consistent with its blend of contextualist and organicist assumptions about human nature and causality:

> We are typically constrained in our actions. Accordingly, we acquire habits consistent with the operation of these constraints. Even when these constraints are removed, habits dispose us to act or think in the same old way. This provides a reconstitutive mechanism of 'downward causation' (Hodgson, 2002, 2003; Sperry, 1991) from institutions to individuals. The crucial point in the argument here is to recognise the significance of reconstitutive downward causation on *habits* (emphasis in the original), rather than merely on behaviour, intentions or beliefs. Clearly, the definitional distinction between habit (as a propensity or disposition) and behaviour (or action) is essential to make sense of this statement. Once habits become established they become a potential basis for new intentions or beliefs.

While the metaphor of "downward" causation may not be propitious, these ideas help us see how affective habits such as social mood are formed by the aggregate structure of the institution of the fractal pattern of the Wave Principle. This aggregate pattern not only operates as a probabilistic constraint on individual actions, but produces a form at the aggregate level that produces an effect (through what Hodgson describes as "reconstitutive downward causation") on the expectations and then intentions and actions of individuals via their habits of social mood. Social mood has *expectational*, evaluative, and affective components, producing either a positive or negative character in the related propensities for social behavior. Thus, when the aggregate form of institutions changes, the expectational component of social mood changes. Note that this is not the simple mechanistic "exogenous forces determine reactive behavior" formulation of neoclassicism. Rather, social mood is the *causal mediator* of individual choices that create the very aggregate form that constrains individual behavior itself. This *simultaneous mutual causation* or autopoiesis in the relationship between aggregate structure and individual agency is crucial in making a qualitative difference between socionomics and neoclassicism. If the causal relationship were one-sided, either from individuals to social institutions (as in the MI approach of neoclassicism and, to some extent, some of the NIE theorists), or from social institutions to individuals (as in the MH approach of some institutionalist writings, especially after 1940), or if the mutual causation were *sequential* rather than *simultaneous*, the nature of causality in socionomic theory would reductionistically collapse into some variant of the mechanistic worldview, with either social institutions controlling individuals exogenously, or individual choices adding up to institutions in a non-holistic, simply additive fashion (as in the search for "microfoundations" for macroeconomics), yielding an aggregate structure in which the whole would not be greater than the sum of its parts, so that the structures of society would be atomistically reducible to the predetermined behavior of computer-like individuals.

Why is this relationship of simultaneous mutual causation (autopoiesis) between agents and structures so difficult for economists to grasp? Part of the answer lies in their prior commitments

to the mechanistic worldview (a cognitive habit and an intellectual institution in its own right), while much of the answer is found in the constraints of the human nervous system. While the human brain is vastly complex and redundantly interconnected through literally millions of neural pathways, only a small portion of neural activity is accessible to our conscious awareness, and of this, only a smaller fraction could be characterized as *logical* cognitive processing of data. Of this tiny percentage of our brain devoted to logical, rational thought that is consciously perceived by the thinker himself, almost all is "left brain" *sequential* reasoning, with some holistic conscious perception assumed to be governed by right hemisphere functioning. By far the majority of our brain's data-processing, of course, operates beneath the radar of consciousness, where millions of synapses are making simultaneous "decisions" (routing information) every minute of our lives, on the basis of neural connections determined to a small extent by logic and to a vastly greater extent by either the "habits" of mood, previously learned behavior, instinctive "programming," creative serendipity, or other factors.

This neurophysiology suggests why we may be biased excessively toward linear, sequential causal processes in our theoretical models of human behavior, and why the notion of simultaneous mutual causal processes, being alien to our conscious experience of our own brain processes, would be so counter-intuitive to us, even though "simultaneous mutual causal processes" is certainly the best description of what is happening all the time in the very brain that thinks up all the theories in science as we know it – in our human brain. This, fortunately, does not mean that we cannot imagine such simultaneous mutual causal processes, any more than having a limited bandwidth in our visual perception keeps us from imagining many aspects of visual perception in frogs, birds, or other species with limitations that are different from our own. It just takes a little more mental effort – and of course scientific habits that take more than the usual effort are often not the most popular methodology in common use.

Neither linear nor nonlinear versions of financial modeling have succeeded in giving us the scientific Holy Grail of reliable prediction, leaving many economists to believe, as if by default, in the "random walk" model, serving only as an admission of defeat but offering neither prediction nor explanation. This is scientific paradigmatic myopia, since both "linear" and "nonlinear" usually imply a *unidirectional* causal model, to which randomness is not the only alternative. The alternative is precisely the simultaneous mutually causal model we are positing in socionomics. We will need new statistical concepts and tools to model this new paradigm. The fact that this is harder than using old concepts and tools, however, makes the old ideas neither more accurate nor more useful. Persisting in using linear/nonlinear tools when they have been shown to be inadequate to our purposes is like the old story of the drunk searching for his lost wallet under the streetlight at midnight, not because he lost it there but because it was easier to see things in that location. Simultaneous mutually causal processes are harder to "see" (and even think about) in the complex, autopoietic systems where they operate, but finding them where they actually are will predictably yield the greatest pay-off, even if it takes more effort. If the processes inside our own brains work this way, would it not be odd if at least some of our social institutions did not also take this form?

Conclusion

Despite the eclectic blend of MI and MH seen in some of the new institutionalist approaches, socionomic theory suggests that the future will see a trend change in economic theory back toward more dominance by MH theories, given the pattern suggesting imminent social mood trend reversal at the beginning of the 21st century. Though this trend shift in commonly accepted social theory seems likely, socionomics nonetheless will continue developing its theory that integrates MI and MH in its theory about the neurophysiology of social mood and the resulting patterns of herding behavior that help form the trends of this affective social habit and action potentiality.

We need much more socionomic research in the years ahead: Cross-cultural studies are needed to see if socionomic ideas hold up universally or are culture-bound; we will be testing hypotheses about the neurophysiology of mood and social decision-making under uncertainty; and we will test predictions about fractal patterns of social mood at the aggregate level, among other things.

Socionomics hopes to offer a contribution to a new conception of human agency, basing the conceptualization of agency in its domain (decision-making under uncertainty) on the concept of social mood, an affective habit that has dual sources in the evolutionary herding impulse and the social acculturation of this habit in social development throughout life. The institutions of social structures in this domain, whether in financial markets, political life, or cultural fads and fashions, co-evolve with the affective habits represented by the concept of social mood, which is seen as an unconscious predisposition toward positive or negative social action with expectational, evaluative, and affective aspects.

References

Note: I am grateful for the comments of Robert Prechter on an earlier draft, and for the extensive influence of his published research and ideas (see below) on my thinking. For many of the ideas in this paper I also owe much to Hodgson (1997, 1998, 2004) and Findlay and O'Rourke (2001).

Boettke, Peter J., and Christopher J. Coyne. (2005). Methodological individualism, spontaneous order and the research program of the Workshop in Political Theory and Political Analysis. *Journal of Economic Behavior & Organization*, *57*, 145-158.

Burns, E. M. (Mar. 1931). Does institutionalism complement or compete with "orthodox economics"? *American Economic Review*, *21* (1), 80-87.

DeQuech, David. (June 2002). The demarcation between the "old" and the "new" institutional economics: recent complications. *Journal of Economic Issues*, *36* (2), 565-572.

Findlay, Ronald, and Kevin H. O'Rourke. (Nov. 2001). Commodity market integration, 1500-2000. Working Paper 8579, National Bureau of Economic Research, URL = http://www.nber.org/papers/w8579.

Giddens, Anthony. (1979). *Central Problems in Social Theory: Action, Structure and Contradiction in Social Analysis*. Berkeley: University of California Press.

Hodgson, Geoffrey M. (1997). Economics and the return to Mecca: the recognition of novelty and emergence. *Structural Change and Economic Dynamics*, *8*, 399-412.

Hodgson, Geoffrey M. (Mar. 1998). The approach of institutional economics. *Journal of Economic Literature*, *36*, 166-192.

Hodgson, Geoffrey M. (2004). Reclaiming habit for institutional economics. *Journal of Economic Psychology*, *25*, 651-660.

Keynes, John M. (1997). *The General Theory of Employment, Interest Rates, and Money*. New York: Prometheus Books. (Original work published in 1936.)

Kuhn, T. S. (1970). *The Structure of Scientific Revolutions*, 2nd ed. Chicago: University of Chicago Press.

Martins, H. G. (Mar. 1964). The fundamental forms of social thought. *British Journal of Sociology*, *15* (1), 77-78.

Maturana, Humberto R., and Francisco J. Varela. (1992). *The Tree of Knowledge: The Biological Roots of Human Understanding*, rev. ed. New York: Shambhala.

Pareto, Vilfredo. (1935). Arthur Livingston (Ed.), *Trattato di Sociologia generale* [The Mind and Society] (Andrew Bongiorno & Arthur Livingston, trans.), Vols. I-IV. New York: Harcourt, Brace and Company. (Original work published 1916.)

Parker, Wayne D., and Robert R. Prechter, Jr. (2005). Herding: An Interdisciplinary Integrative Review from a Socionomic Perspective. In Boicho Kokinov, Ed., *Advances in Cognitive Economics: Proceedings of the International Conference on Cognitive Economics, Sofia, August 5-8, 2005*. Sofia, Bulgaria: NBU Press (New Bulgarian University), pp. 271-280. Also available online at http://www.socionomics.org/papers/essays.aspx.

Parker, Wayne D., and Robert R. Prechter, Jr. (2006). The socionomic theory of finance and the institution of social mood: Pareto and the sociology of instinct and rationalization. Paper presented at the meeting of the Association for Heterodox Economics, London, England, July 14-16, 2006.

Pepper, Stephen C. (1942). *World Hypotheses: A Study in Evidence.* Berkeley, California: University of California Press.

Prechter, Jr., Robert R. (1999). *The Wave Principle of Human Social Behavior and the New Science of Socionomics*. Gainesville, GA: New Classics Library.

Prechter, Jr., Robert R. (2001). Unconscious herding behavior as the psychological basis of financial market trends and patterns. *Journal of Psychology and Financial Markets* [now *Journal of Behavioral Finance*], *2*(3), 120-125.

Prechter, Jr., Robert R., Ed. (2003). *Pioneering Studies in Socionomics*. Gainesville, GA: New Classics Library.

Prechter, Jr., Robert R., and Parker, Wayne D. (2004). The financial/economic dichotomy. In Heping Pan, Didier Sornette & Kenneth Kortanek (Eds.), *Intelligent Finance - A Convergence of Mathematical Finance with Technical and Fundamental Analysis.* Melbourne, Australia: International Workshop on Intelligent Finance (University of Ballarat). Also available online at http://www.socionomics.org/papers/essays.aspx.

Prechter, Jr., Robert R., and Parker, Wayne D. (2005). The financial/economic dichotomy in social behavioral dynamics: The socionomic perspective. Manuscript submitted for publication.

Samuels, Warren J. (Aug. 1972). The scope of economics historically considered. *Land Economics*, *48* (3), 248-268.

Shiller, Robert J., Stanley Fischer, and Benjamin M. Friedman. (1984). Stock prices and social dynamics. *Brookings Papers on Economic Activity*, *1984*(2), 457-510.

Shiller, Robert J. (2000). *Irrational Exuberance*. Princeton, New Jersey: Princeton University Press.

Smith, Adam. (1994). *The Wealth of Nations* (Edwin Cannan, Ed.), New York: Modern Library (Random House). (Original work published 1776.)

Warsh, David. (2006). *Knowledge and the Wealth of Nations: A Story of Economic Discovery*. New York: W. W. Norton & Company.