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# Social Science as a Complex and Pluri-Disciplinary System: Economics as Example

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## 1. Introduction

Epistemic pluralism, including such perspectives as neuroscience, is a promising strategy for transforming the language games of social science – for putting any and all social sciences in what Wilson (1998) calls consilience. In other words, this paper addresses social science as a complex and pluri-disciplinary system. Epistemic refers to knowing, and pluralism can refer to a minimal strategy of more than one way. Rather than a minimal strategy, the paper recommends epistemic pluralism as a grand strategy that will be explained for individual social sciences as referring to a multiplicity of perspectives.

I sympathize with those who want a massive restructuring of the social sciences. I applaud attempts in the United States of the National Science Foundation to work toward what was conceptualized as the lost unity (to the extent that it ever existed) of the social sciences. These National Science Foundation attempts, and earlier in the 1920s attempts by agencies like the Social Science Research Council, were largely unsuccessful. Sometimes they were counterproductive in increasing the number of social sciences, e.g., adding trans-disciplines. A major problem for a complete restructuring for the social sciences is that complete victory is unlikely: the fragmented organizational status quo is often even more inhibiting than the substantive. I don't think it is adequate to seek such broadening of the language game of social science primarily *organizationally* – seeking salvation through either a massive or a less massive top-down structure of disciplinary reform. I do see a grand strategy of epistemic pluralism as a feasible opportunity to avoid the organizational solution. If that leads eventually to re-restructuring (as it may), that is fine. But meantime, a more attractive aim (helped by the catalytic power of neuroscience) is shorter term – major language game tweaking, with powerful programmatic results.

*“the frontiers of the individual sciences... are incessantly shifting and... there is no point in trying to define them either by subject or by method. This applies particularly to economics, which is not a science in the sense in which acoustics is one, but rather an aggregation of ill-coordinated and overlapping fields of research in the same sense as is medicine” (Joseph Schumpeter, 1954, p. 10)*

Epistemic pluralism – a grand strategy including neuroscience – is open to all the social sciences and to the social sciences as a whole, and this paper parallels what I have written

elsewhere on these and related topics in terms of “social science” subjects like public administration and governance (e.g., Farmer, 2010; 2011, and 2012). A distinctive feature of this article is that the example is economics.

Why select Economics as an example? One good reason might be Schumpeter’s comment about economics (quoted above): he held that in science the “process of specialization has never gone on according to any rational plan – whether explicitly preconceived or only objectively present – so that science as a whole has never attained a logically consistent architecture: it is a tropical forest, not a building erected accordingly to a blueprint” (Schumpeter, 1954, p. 10). On the one hand, exceptionalist claims have been made for Economics, such as that it is unique among the social sciences in being rigorous. If it is the case that Economics is the Queen of the Social Sciences, it seems interesting to consider a subject that considers itself in that way. On the other hand, we can note that some, especially in Europe, are experiencing economics as being at a crossroads, e.g., Rosser, Holt & Colander, 2001.

This paper contains four sections. First, it discusses the relevance of Ludwig Wittgenstein’s description of a language game, with illustrations from economics. Second, it describes epistemic pluralism, referring to an example outside economics. Third, it sketches neuroscience and its relevance to economics in terms of neuroeconomics. Fourth, it analyzes the relevance of epistemic pluralism, using economics as an example for all social sciences and for social science as a whole.

## 2. Language games

Epistemic pluralism can be directed in the shorter run at upgrading the language game of any social science, and this can be illustrated in terms of economics. No less than any other subject, Economics has its set of language games. Some such language games are within the mainstream and some are at the circumference of the discipline. Toward the mainstream, for instance, it has been suggested that there is a difference (a difference between language games, in fact) in the United States on macro economics between “two great factions: saltwater economists (mainly in coastal U.S. universities), who have a more or less Keynesian vision of what recessions are all about; and ‘freshwater’ economists (mainly at inland schools), who consider that vision nonsense” (Krugman, 2009, p. 40): and we will return later to this saltwater v. freshwater example. Toward the circumference, there are alternative schools of thoughts, including those described by Prychitko (2003) and those like behavioral economics and neuroeconomics.

Wittgenstein emphasized the nature and the relevance of a language game. For him, the nature of language is essentially public and social; it is not a private matter. It is created and sustained interpersonally by a language community, and we participate in a variety of language games. Wittgenstein illustrates a primitive language by talking about a builder and his assistant; the words and the action constitute the game, as the builder calls out the words like block, pillar and slab, and the assistant brings the respective stone. Language is an activity or a form of life, a game.

On the relevance of language games, there is Wittgenstein’s claim that “the limits of my language mean the limits of my world” (Wittgenstein, 1958, p. 11). Wittgenstein’s meaning (although often described) can be illustrated for economics in terms of contrasting metrics used, contrasting ideologies, and contrasting views of rationality.

For the first (the metrics used), listen to the argument that the President of France Nicolas Sarkozy uses in his preface to "Mis-measuring our lives: Why GDP doesn't add up" (Stiglitz, Sen & Fitoussi, 2010). "I hold a firm belief: We will not change our behavior unless we change the ways we measure our economic performance... A tremendous revolution awaits us – we can all feel it. This revolution is inconceivable without deeply challenging the way we represent the consequences of what we undertake, the results of what we do... " (Sarkozy, 2010, p. vii). The Commission that the President of France set up makes clear that its principal emphasis is choice of statistics (i.e. choice of elements of its language), rather than particular policies. But it does suggest that it would shape public policy for the better if society were to adopt a different metric for measuring our economic lives. The Commission recognizes what has been widely noted in the literature, and that is the limits of the Gross Domestic Product metric. Twelve recommendations advocate a new or substitute metric, replacing the current GDP. The Commission starts with better measures of economic performance in a complex society, e.g., when evaluating material well-being, looking at income and consumption rather than production. It also holds that well-being is multidimensional, and that objective and subjective dimensions of well-being are both important. One of its recommendations, for instance, is that quality of life indicators in all the dimensions (e.g. including people's health, education, personal activities and environmental conditions) should assess inequalities in a comprehensive way. The Commission notes that "what we measure shapes what we collectively strive to pursue – and what we pursue determines what we measure – the report and its implementation may have significant impact on the way in which our societies look to themselves and, therefore, on the way in which policies are designed, implemented and assessed" (Stiglitz, Sen & Fitoussi, 2010, p. 6). The way that my "economic" language (or any other of my language games) is limited will in turn limit my recognition of the "economic" or related world. Some would add that in this manner the social sciences are socially constructed, and their construction in turn shapes what they know about their worlds.

For the second example, Wittgenstein's view of language limits may be illustrated in terms of two varieties of ideology (leaving aside other varieties) that return as promised to the saltwater economists v. freshwater economists, noted above. The saltwater conceptualize the market as requiring macro management and the freshwater conceptualize the market in terms of neoliberalism. The first set of language users will readily see what they would characterize as a "necessity" of macro market management that John Maynard Keynes first advocated in his 1936 *General Theory of Employment, Interest and Money*, e.g., the desirability of government financial stimulation in time of recession. The second set of language users will have embraced neoliberalism, what is called the Washington consensus that started in 1979. Market fundamentalism maintains that, when markets are left alone, they will solve all economic problems. The market fundamentalists believe that the market gives better information than individual humans can obtain for themselves. So Nobel Laureate Paul Krugman (2009, p. 41) can write of the latter that "the belief in efficient financial markets blinded many if not most economists to the emergence of the biggest financial bubble in history." Milton Friedman could give a contrary instance of blindness.

For the third example, consider the contrasting views of rationality at the heart of mainstream economics. Shaun Hargreaves Heap, for instance, describes three different senses of economic rationality and their explanations and prescriptions. These three are the

instrumental (which he describes as the sense that is typical in mainstream economics), the procedural and the expressive. Under the instrumental rationality assumption, the individual person acts so as to satisfy his preferences best. Such rationality “is located in the means-ends framework as the choice of the most efficient means for the achievement of given ends” (Heap, 1989, p. 6). The procedural version portrays the individual as a rule follower, and such behavior is procedurally rational. Herbert Simon and his “satisficing” principle would be an example. By expressive, Heap takes rationality to be concerned with ends pursued rather than with the actions taken in pursuit of them” (Heap, 1989, p. 6). By contrast, there are “alternative” economics (like Behavioral Economics, noted earlier) that do not make the same assumptions about rational economic man.

The aim of epistemic pluralism is to tweak our language games. The argument here is that what is needed is a grand strategy, utilizing a multiplicity of perspectives. Let’s explain.

### 3. Epistemic pluralism: A grand strategy

Recall that “epistemic” is taken from the name of a branch of philosophy, and it indicates *knowing* as in such questions as “How do I know?” or “What is the difference between knowledge and opinion?” Recall also that “pluralism” can refer to both shades of a “minimal” or a “grand” strategy. A minimal strategy can be described as marginally “more than one way.” A grand strategy, rather than a minimal strategy, refers to a multiplicity of perspectives, and this multiplicity includes other social sciences without being at all limited to social sciences. A grand strategy of Epistemic Pluralism is what is being advocated here. Minimal epistemic pluralism is not uncommon in most social sciences, more in some than in others. A grand strategy would be a rare bird.

For an example of a minimal strategy, consider the long relationship between economics and mathematics (a non-social science). There has been a growing mathematization of economics. A contrast can be drawn between the economic world that Alfred Marshall was able to comprehend and the world of upgraded mathematization within contemporary economic theory. Weintraub explains that mathematics for 19<sup>th</sup> century economics honors students was defined as “a set of trick and details, based on Newton, which were linked to applied physics and mechanics, and which could be tested in a time-limited fashion” (Weintraub, 2002, p. 14), and the great economist Alfred Marshall later gave the advice “Burn the mathematics.” At the present time, “economists, methodologists, and historians of economics have debated the impact and significance of the substantial racheting upward of standards of mathematical sophistication within the profession” (Weintraub, 2002, p. 261). Many economists (not all economists) hold that power is gained for Economics from the rigor and the abstraction.

On a minimal strategy, it is true that inter-disciplinary relationships have developed “in” economics – and in other social sciences. “Over the years a number of new and exciting sub-disciplines have evolved, in which economists and colleagues from other fields jointly explore common ground. This is clearly visible in the names (and contents) of well-respected journals like *Economics and Philosophy*, *Journal of Law and Economics*, *American Journal and Sociology*, not to mention the many journals covering the domain where economics, mathematics and statistics overlap” (Erreygers, 2001, p. 2).

Let us re-explain. Mainstream social sciences and economics have each yielded some valuable results without utilizing any other perspectives except their own. Again, economics and other social sciences have used one or a minimal number of different perspectives. These individual perspectives have also produced enriching results. Yet, by itself and in isolation, a solitary way of looking can be misleading. Similarly, a minimal strategy of using perspectives can give only parts of puzzles, parts of the road map. A grand strategy, rather than a minimal strategy, of epistemic pluralism can yield a quantum gain in understandings. There is no wish to claim that a minimal strategy is never to be preferred.

How many lenses are best for a grand strategy? In an ideal world such as might exist on Mount Olympus, my supposition is that all lenses are best. However, in the world of theory and practice, selection is inevitable, and I would err toward robust perspectives. As I have mentioned before (e.g., Farmer, 2010), the optimal number of perspectives to analyze X depends on such factors as purpose, the nature of X, and the importance of X. Arnold Modell considers that studying the biology of meaning requires a strategy “that includes the philosophy of language, linguistics, cognitive science, neurobiology, and psychoanalysis” (Modell, 2003, p. 1). Some may wish to include not only disciplines and schools of thought but also artistic practices, e.g., for what they can contribute to exploration of emotional, affective and emphatic cognition (e.g., see Lopez-Varela, 2010). E.O. Wilson (1998) offers the grandest of grand strategies when writing about consilience and the unity of knowledge (uniting the sciences, and ultimately with the humanities).

The preference in my own study of Public Administration was to use eleven perspectives (Farmer, 2010). These perspectives were Public Administration from a traditional perspective, from a business, from an economic, from a political, from a critical theory, from a post-structural, from a psychoanalytic, from a neuroscience, from a feminist, from an ethical, and from a data perspective. And clearly there are many more candidate perspectives. The selected perspectives were used to identify insights about five Public Administration elements that were used as vehicles, as it were, for examining implications for Public Administration theory and practice. The five vehicles were the different kinds of planning, the different kinds of management, the meaning and relevance of what underlies public administration (e.g. the social construction of relevant societal beliefs and attitudes), the scope of public administration, and the extent of imaginative creativity in public administration.

Of the selected perspectives, here are only three examples of these perspectives and illustrations of insights suggested to Public Administration. First, the business perspective could tell Public Administration about the relevance of supply chain management (SCM). Second, the political perspective could lead to insights for Public Administration about how lobbying and money warp the administration of policy and co-shape policies, e.g., buying contracts and jobs. Third, the post-structural (or postmodern) could inform Public Administration more fully how the hyperreal accentuates fear. The hyperreal refers to items or events that, rather than being merely real or unreal, are perceived as more real than real.

#### 4. Neuroscience and its relevance

The twelfth informal annual conference of the Society for Neuroeconomics was held in Evanston, Illinois, in Sept-Oct, 2011. It was entitled *Neuroscience: Decision Making and the Brain*. It described itself as aiming “to promote interdisciplinary collaborations and

discussions on topics lying at the intersection of the brain and decision sciences in the hopes of advancing theory and research in decision making. To this end, we welcome involvement by all researchers interested in these and related topics, including reward, learning, emotion, and social behavior to name but a few" ([www.neuroeconomics.org/conference](http://www.neuroeconomics.org/conference), October 12, 2011). Neuroeconomics is on the circumference of economics: mainstream economics does not include neuroscience. Also, neuroeconomics by itself constitutes an example of a minimal strategy of epistemic pluralism.

The minimal strategy aims of neuroeconomics are bi-directional between two disciplines. A first direction aims to study what economics can offer neuroscience, via (say) mathematical economics. Paul Glimcher gives the example of probability theory for explaining the relationship between behavior and brain. He notes that "mathematical theories of decision making that include probability theory must form the core of future approaches to understanding the relationship between behavior and brain, because understanding the relationship between behavior and brain is fundamentally about understanding decision making" (Glimcher, 2003, pp. 177-178). The second direction aims to study what neuroscience can give to economics, including items friendly to the economics paradigm.

This bi-directionality should be analyzed. On the one hand, bi-directionality between two disciplines is not essential. In the neuroeconomics example given here, rightly or wrongly it might strike many non-economists as odd that economics (rather than mathematics) might offer to help neuroscience with its mathematics; it might seem less odd if the help came from mathematics. But a response would be that economics is concerned with decision making and that it is heavily invested in incorporating mathematics. On the other hand, bi-directionality between disciplines need not be equal. Like economic man, the choice between this or that direction (and the strength of the opposing directions) should be made by discipline X on the basis of the benefits accruing to discipline X. But a consideration is that neuroscience is a prestige science with which to partner, bringing benefits to the partnering discipline – and this points to the catalytic power of neuroscience in tweaking the language game of social science.

Neuroscience may well be the dominant science of the twenty-first century, and it should be recognized that it is producing game-changing results. It has been suggested that neuroscience can act as a catalyst in seeking the re-unification of the fragmented social sciences and social action subjects (e.g., Farmer, 2007, pp. 74-89).

Let us repeat what neuroscience is, and re-stress what it does not entail that otherwise would repel social science disciplines like economics. On the first part, neuroscience is the variety of specialties that study the brain – the central and the peripheral nervous systems – and the relationships of these organs to such activities as choosing, judging, behaving, remembering, thinking, deciding and feeling. This seems a large part of what is involved in social sciences, including economics. In neuroscience, many levels of study are utilized, e.g., including the molecular, cellular, systems, behavioral and cognitive.

On the second part (what neuroscience does not entail that otherwise might repel social science disciplines like economics), it is important to recognize neuro-plasticity. The brain is biological; but it is more than that. The functioning of the brain is shaped and re-shaped by social, political, psychological, economic, and other factors. The biology of the brain is shaped by its experience. Neuro-plasticity refers to the brain's capability, through re-wiring of the brain, of adapting. The brain is shaped and re-shaped by its experiences.

Among the social sciences and other disciplines, neuroeconomics is not unique in seeking an association with neuroscience. See Farmer (2007, pp. 77-80), for example, for an account at that time of the neuro-political, neuro-philosophical, and the neuro-psychological – as well as the neuro-economical. That section began by indicating that the impact on the social sciences by neuroscience should be “read in the context of the neuroscientific revolution symbolized during the Decade of the Brain (1990-1999) and the development of the Human Genome Project (1990-2003).” It also pointed to a critical question. That question is “whether the interest aims to preserve the disciplinary status quo or to achieve fresh and possibly counter-disciplinary conclusions. On the one hand, the interest of the neuro-economists may be in gaining support... This is not in terms of cooking the books, but rather of setting the research questions and agenda in a way that is friendlier or more open to the status quo. On the other hand, the interest of neuro-economists may be in following wherever the research leads, even if it clashes with the dominant paradigm” (Farmer, 2007, p. 77). This remains a critical question not only for economics but for all the social sciences.

The literature on how neuroscience can be helpful to social sciences is extensive. Richard Restak is among these in the literature. He has written that “our understanding of the human brain will revolutionize how we think of ourselves and our interactions with other people” (Restak, 2006, p.1). The subtitle of his book is “How the Emerging Neurosociety is changing how we live, work and love.” He lists how brain-based developments provide new societal capabilities, e.g., tests that reveal our private thoughts and tendencies, chemical enhancers to stimulate wants, and so on. Others are those like Antonio Damasio (2003) and R.L. Farmer (2009). The former book is entitled “Looking for Spinoza: Joy, Sorrow, and the Feeling Brain.” The latter book is entitled “Neuroscience and Social Work: The Missing Link.”

## 5. Relevance of epistemic pluralism to economics

As a beginning step, one way that the relevance and utility of a grand strategy can be explored is through an exercise (with two subsequent exercises) that plays with discovering possible insights for economics from consideration of a number of other perspectives. The notion of “discovering” is used deliberately, and the reader is asked to recall the difference in Philosophy of Science between discovery and justification. In any strictly scientific endeavor, there are no rules for discovering untested hypotheses. Archimedes can be sitting in his bath, and he can suddenly be struck by the idea that there might a connection between the volume of his body under the water and the displacement of a volume of water. It does not matter from the point of view of rigor what prompted his imagination – eureka – to think of that possible connection. It might have been A, B, C or D. The question of “justifying” possible insights is a different matter, with different aspirations for rigorous requirements.

Rigor is a matter of great importance for contemporary economics. Let’s turn to this, before turning to the recommended three exercises that appear at first sight (but not when examined rigorously) to be contrary to rigor. Edward Lazear is quoted (in Erreygers, 2001, p. 1) as explaining that the “power of economics lies in its rigor. Economics is scientific; it follows the scientific method of stating a formal refutable theory, testing the theory, and revising the theory based on evidence. Economics succeeds where other social sciences fail because economists are willing to abstract” (Lazear. 2000, p. 102). Asserts Lazear (2000, p.

103), the “strength of economic theory is that it is rigorous and analytic.” Here we leave aside the earlier comment about the relationship to rigor sought through mathematics.

But there is a downside to the rigor story, and to the extent that this downside is true it constitutes a rationale for at least some economists adopting a grand strategy of epistemic pluralism. Lazear (2000, p. 103) adds that “the weakness of economics is that, to be rigorous, simplifying assumptions must be made that constrain the analysis and narrow the focus of the researcher. It is for this reason that the broader-thinking sociologists, anthropologists, and perhaps psychologists may be better at identifying issues, but worse at providing answers. Our narrowness allows us to provide concrete solutions, but sometimes prevents us from thinking about the larger features of the problem.” To this Guido Erreygers adds that this view is not universally shared among economists. But he adds that a “closer look at what economists really know about society would teach them modesty both about what they have thus far achieved and about what they could possibly achieve in the future” (Erreygers, 2001, p. 2).

The adoption of a grand strategy does not imply that economics must give up the appropriate aspiration to positivism for the purpose of developing explanations. Yet appropriate use does not entail any kind of positivist fundamentalism. The strict use of positivism does not rule out all hermeneutics for developing understandings and meanings, as if Philosophy of Science did not contain these aims as differing from explanation. Yet it is curious that the distinguished economist David C. Calander should label himself an economic gadfly (in his “Confessions of an Economic Gadfly”) if it is because he opposes the Chicago (the Becker/Friedman) approach “that the market is the solution to everything” and the M.I.T approach that “reduces everything into quasi-formal models.” A line of research he supports is the art of economics, which he describes as going back to John Neville Keynes. “The art of economics involves judgment because you are adding in sociological and political variables” (Snowdon & Vane. 1999, pp. 211-212).

Here is one way how the Grand Strategy exercise could be attempted. For Exercise 1, take a sheet of paper and a pencil. Down the left side of the sheet list perspectives with which the reader is familiar – or alternatively (say) ten perspectives. The object of the exercise is to note under each perspective (each sub-heading) one or more items that economics might find relevant to economics. Unfortunately, this is not as straight forward as it is sounding if the exercise is adjusted to make it not merely the search for insights but for helpful insights. At the least, this involves much reading in the literature of each selected perspective. Also, after Exercise 1 is completed, two others remain. Exercise 2 is to synthesize what has been learnt for economics as a whole, using the insights for further reflection. (I would not rule out testing the more interesting possible insights or hypotheses that might emerge.) Exercise 3 is to contemplate (to reflect on) the synthesized conclusions one at a time.

### Exercise 1

Let’s make a list of ten perspectives in the form of sub-headings, and then enter elementary questions that might yield insights on economics. I am working on the assumption that an extraordinarily imaginative thinker could ask much better questions and achieve better insights. Some of the perspectives used here are disciplines (like History, Anthropology, Business, Political Science, Psychoanalysis, Neuroscience, Philosophy, and New Rhetoric) , and others are “schools” of thought (like Critical Theory and Post-structuralism). Clearly,

others are left out; but this does not mean that they are either less important or should have been left out. For instance, I leave it to the reader to include feminism, law, sociology, mathematics, and game theory. But enough is included to make the point about the discovery power of a grand strategy of multidisciplinary epistemic pluralism for economics.

HISTORY (a): Would history be among the perspectives capable of adding to a fuller and more useful classification of types of capitalism? Some historians have indicated that it is difficult to find any period that has no market, no capitalism. In his *The Idea of Capitalism before the Industrial Revolution*, for instance, Richard Grassby writes that the “main problem with the idea that capitalism emerged at a particular historical moment is that it is hard to find a pre-capitalist economy... Market capitalism appears as old as civilization and is recognizable even in primitive societies” (Grassby, 1999, p. 23).

(b) Would history be among the perspectives that could provide insights helpful in upgrading the predictive capability about future developments in the world economy? Yes, Economic History has long been studied by economists (but recall that the point here is not a minimal, but a grand, strategy), and important centers for the study of economic history include, for example, the University of Toronto. We turn to that university to Robert Heilbroner (1993), giving the 1992 Massey Lecture on 21<sup>st</sup> century capitalism. At one point, he writes that in the 1970s he “had occasion to discuss the success of economists in foreseeing large-scale events during the twenty-odd preceding years such as the advent of the multinational corporation, the rise of Japan as a major economic power... Not a single one of these world-shaking developments had been foretold.” He went to write about other world-scale happenings “such as the decline in productivity suffered by all the Western powers or the striking loss of global economic leadership of the United States” and the collapse of the Soviet Union. Referring to the great research institutions, he asserted that “The answer is that none foresaw them” (Heilbroner, 1993, pp. 19-20).

Anthropology (a): Is the money rhetoric in the United States different from that in some other countries, and, if so, could this be among the perspectives that can facilitate understandings in economics about (say) typologies and the nature of capitalisms? Ruben George Oliven is among the anthropologists who have written about the money rhetoric in the United States. “The United States is frequently depicted as a country where monetization – the increase in the proportion of all goods and service bought and sold by means of money – has taken place. Money has become a central value, and commoditization has fully extended to all spheres of life” (Oliven, p. 161).

(b) Could the one-dimensional nature of economic man be analyzed by economists with the help from perspectives that include anthropology? Oliven, for instance, writes more about the contrast of the United States with Brazil in that “U.S. Americans like to be independent” – not wanting to depend on friends. “This is why you see twelve-year old middle class children doing some sort of work to earn money... But if in the US people are usually doing things by themselves, those in Brazil are always asking for or offering help, which is a way of making friends and building networks” (Oliven, p. 119)

(c) Should Russia adopt an American or a Chinese economic system? This is a question that I was asked at Lomonosov Moscow State University in May 2011. Can an anthropological or sociological perspective participate with other lens in providing insights that can help

economic analysis of these and other policy issues in an increasingly integrated world market system(s).

*Business* (a): What understandings of economic theory (as it is) are elucidated by technological and business changes and aspirations?

(b) To what extent is the role in economic theory of the entrepreneur illuminated by the hierarchical status and hierarchical structure of a corporation?

*Political Science* (a): How is economic analysis of market fundamentalism illuminated, if at all, by theoretical discussions of concepts in political theory, e.g., by positive and negative freedom?

(b) What would understandings offered by the political science perspective contribute (with other perspectives) in deepening understanding of economic ideology? Kenneth Hoover, for instance, comments that the “partisans of the market are everywhere heard, while the partisans of government are muted and defensive. A half century ago, political discussion was quite the opposite. Then government was the wave of the future, and the evils of the market were widely advertised” (Hoover, 2003). His book examines the ideological spectrum in the twentieth century in terms of (two of them celebrated economists) John Maynard Keynes, Harold Laski and Friedrich Hayek.

(c) What is the utility of the political science perspective in providing insights for economic science in considering the relevance that market fundamentalism has for democracy? Noam Chomsky writes, for instance, that democracy requires “that people feel” a connection to their fellow citizens and that this connection “manifests itself through a variety of nonmarket organizations and institutions. A vibrant political culture” requires public schools, libraries, neighborhood groups and organizations, public meeting places and trade unions to meet and interact with fellow citizens. He claims that “Neoliberal democracy, with its notion of market *uber alles*, takes dead aim at this sector” (Chomsky, 1999, p. 11)

(d) To what extent can the perspective of Political Science help to elucidate what part, if any, Big Government plays in economic activity? For example, Timothy Carney claims that the “myth is widespread and deeply rooted that big business and big government are rivals – that big business wants small government” (Carney, 2006, p. 35)

*Critical Theory* (a): This refers to the work of the Frankfurt School of Critical Theory. To what extent does Herbert Marcuse’s one-dimensional man provide insight(s) about the limited notion of economic man? Marcuse was a philosopher and a sociologist, and his notion of one-dimensionality in thinking and acting includes a description and an assessment of uncritical and conformist acceptance of existing structures, norms and behaviors.

(b) Is there analytical utility for economics in Jurgen Habermas’ concept of the life-world? Habermas was also a philosopher and a sociologist, usually classified as a second generation member of the Frankfurt School of Critical Theory. The notion of life-world includes communicative reason and communicative action. Communicative reason “is contrasted with instrumental rationality that serves functional purposes – and that facilitates oppressive choices” (Farmer, 2010, p. 82).

*Psychoanalysis* (a): Does discussion of the unconscious in psychoanalysis suggest including insights about the effects of the unconscious in economic behavior? That is, might the

unconscious be incorporated more fully in economics in so far as economics is conceptualized as it was by Lionel Robbins as “the science which studies human behavior as a relationship between scarce means which have alternative uses” (Robbins, 1945, p. 24).

(b) Are there economic myths in the same way that (say) Carl Jung understood myths? Recall that Carl Jung focused on the collective unconscious which asserted that identical in all people is a common psychic substrate of a supra-personal nature.

(c) Is there an unconscious CEO’s office, or an unconscious (beyond the account of the invisible hand) functioning in the market place?

*Post-structuralism (post-modernism)* (a): Robert Fogel, the winner of the 1993 Nobel Prize in Economics, indicates that it is necessary “to address such postmodern concerns as the struggle for self-realization, the desire to find deeper meaning in life than the endless accumulation of consumer durables and the pursuit of pleasure” Fogel, 2000, pp. 176-177). He speaks in terms of self-realization being understood in terms of fifteen spiritual resources, e.g., like a sense of purpose, a vision of opportunity, a sense of mainstream life and work. He claims that the greatest mal-distribution in rich countries is in terms of spiritual, not material, resources. Could what Fogel calls such a “post-modern” perspective (some may wish to re-locate him to the economic history section) be among the lenses that aid economists in contributing to its analyses of economic life?

(b) How could use of deconstruction add to understanding of elements of economics like capitalism? Recall the nature of deconstruction and the fact that Robert Lucas was described as being deconstructive when characterizing involuntary unemployment as neither a fact nor a phenomenon that need be explained when talking about Keynes’ General Theory (see Samuels, 1990, p. 232). It will be recalled that deconstruction, developed by the philosopher Jacques Derrida, is described as a good reading of a text. Text is used in a wide sense to include meanings and narratives not only in documents but also implicit in situations and events. It thus includes, on some readings, economic situations, events and other phenomena. Concerning Lucas’ analysis, it is not suggested that he himself considered it “deconstructive.” But there is good reason to hold that Derrida would understand – the extent that deconstruction speaks all texts experiencing undecidability – deconstructive analysis applying both to voluntary and to involuntary unemployment.

*Neuroscience* The existence and work of the neuroeconomics society supports the view that neuroscience can make a contribution to economics. The previous section has also discussed the catalytic role that neuroscience promises to have on the analyses conducted in the social sciences.

(a) Can the development of neuro-societies create insights and raise analytical issues that affect economic choices and forward-looking economic analysis?

(b) Are economic beliefs (views, etc) co-shaped within the brain?

(c) Can the study in neuroscience of mirror neurons contribute to a deeper understanding of economic activity? Mirror neuron systems function when we look one another in the eyes and when we look at another’s actions. It is implicated in the copying behavior between individuals.

*Philosophy* (a): What light could philosophy of mathematics shed on the mathematization of economics?

(b) What could philosophy of science suggest about the positivism of economic “science,” and its association with rigor?

(c) What could philosophy of hermeneutics suggest about the character of research in Econ-Art? In his *Econ-Art: Divorcing Art from Science in Modern Economics*, Rick Szostak (1999) is among those who have discussed Econ-Art. There is much to be explored in this topic. For instance, consider Szostak’s comment that painters “are often known by their brushstrokes, composers by their innovative use of various instruments, and novelists by their vocabulary or manipulation of grammar... The econ-artist too is observed to take great pride in their mastery of the tools of mathematics” (Szostek, 1999, p. 75). On the same page, Szostek quotes John von Neumann as saying that “at a great distance from its empirical source, or after much ‘abstract’ inbreeding, a mathematical subject is in danger of degeneration.”

(d) What light can meta-ethics shed on the economic use of Pareto optimality?

*New Rhetoric* (a): The economist Deidre McClosky has utilized the perspective of New Rhetoric and Symbolic Interactionism to add insights to, and about, economic thinking. For instance, she has argued that the “proofs of the law of demand are mostly literary” (McClosky, 1998, p. 23) and she has used rhetorical analysis to claim that “statistical significance has ruined empirical work in economics” (1998, pp. 112-138).

*“A rhetorical criticisms of economics can perhaps make economics more modest, tolerant, and self-aware, and improve one of the conversations of mankind” (Deidre McClosky)*

(b) Would economists analyze differently if the focus of economic theory were on the work place, rather than on the market place? In other words, would there be significance in such a change in metaphor?

(c). Others have claimed to analyze the rhetorical reasons why there is a difference between what has been described as the cleanliness, beauty and orderliness of economic theory (e.g., see Farmer, 1995, pp. 154-167) and what Kenneth Burke describes as the “the scramble, the wrangle of the market place, the flurries and flare ups of the human barnyard, the give and take, the wavering line of pressure and counter-pressures, the logomarchy, the onus of ownership, the wars of nerves ((1969, p. 42). Burke describes New Rhetoric as leading us and economics through this condition.

*Others:* The reader is asked to expand and change the list, and to create a “better” and an amplified list of opportunities in the form of questions. For instance, add Feminism (or Womanism); note that interdisciplinary contributions from feminism have been achieved by some economists, and add helpful questions like “What does learning about ‘other-ing’ in feminist theory suggest about ‘other-ing’ in economic theory and practice?”

It should be re-emphasized that important perspectives and opportunities have been omitted from Exercise 1. Such omissions include (where important inter-disciplinary work has been done) not only Feminism but also in (say) Law, Mathematics and Sociology. It is correct that economists are described as crossing disciplinary boundaries in impressive numbers. In a minimal strategy of epistemic pluralist exploration, Gudeman (2009) reports that some economists have discussed unfamiliar entities like culture, figurative speech,

social and cultural capital, and even gift and reciprocity. The returns for economics are significant, even with a minimal strategy.

### Exercises 2 and 3

The returns are even greater for economics (and for any social science discipline) when a grand strategy, rather than a minimal strategy, is pursued. Two further exercises are suggested. Exercise 2 synthesizes what might be gained for economics as a whole, using all of the selected perspectives. Exercise 3 contemplates about (or reflects on) each substantive conclusion or item. The exercises are left to the reader.

Exercise 2 requires synthesizing the results of each and all of the perspectives in the reader's own version of Exercise 1. Perhaps the reader may decide to synthesize these results down to, say, five or so items. If the reader decides to list five or so items from her own list derived from her version of Exercise 1, she might (or might not) list as a first item (say) Capitalism which appears in the first perspective (history) in the version of Exercise 1 given above. Capitalism also appears in each of the other nine perspectives listed. And so on.

The reader should not be disturbed about the lack of a recipe for a hermeneutic activity like synthesizing and nor should she be unaware of the complexity. Hermeneutics refers to the interpretation of a text, elucidating meaning or understanding. A text is any kind of writing or situation or action. I have explained that the "hermeneutic approach that I prefer is that developed in the wake of Gadamer, Habermas, Apel and Ricoeur, and it seeks the underlying meaning of a text by thinking of the overall story that best brings together the text's important elements" (Farmer, 2010, p. 176). My preferred approach is this hermeneutic circle "that tries various interpretations until, considering all components, the "best fit" understanding is reached about the meaning. The reader is not obligated to adopt the hermeneutic circle. But she will recognize that there are good, bad and indifferent interpretations. Complexity results in part from the synthesizer's conscious and unconscious prejudices.

Exercise 3 aims toward contemplation of each of the synthesized items. I recommend that the reader attempt this with the considerations and practices that the neuroscientist Nancy Andreason (2005) analyses in her *The Creating Brain: The Neuroscience of Genius*. For instance, she recommends four exercises for extraordinary creativity. Only the fourth is mentioned here. "One of the best ways to get a new perspective on things – an important resource for thinking creatively – is to tackle a new field you know little or nothing about. If your college major was biology or physics, try studying poetry or painting... Churchill and Eisenhower painted... Einstein played the violin..." (Andreasen, 2005, pp. 162-163).

None of the three exercises will be as productive as they should be if the rigor of extraordinarily creative imagination is not involved.

*"Game theory, however, is not everything... The reigning culture in game theory asserts the sufficiency of game theory, allowing game theorists to do social theory without regard for either the facts or the theoretical contributions of the other social sciences. Only the feudal structure of the behavioral disciplines could possibly permit the persistence of such a manifestly absurd notion in a group of intelligent and open-minded scientists" (Herbert Gintis, 2009, p. xiii-xiv)*

The hesitations that some economist might experience at the prospect of a grand strategy are reflected in Gintis' remark for game theory. In different ways, they are shared by all social sciences. However, they can be overcome.

## 6. Epilogue

This paper has addressed social science as a complex and pluri-disciplinary system. The main example chosen for the claims in this paper have been made in terms of Economics. Yet its claims apply no less to any social science as to the whole of the social sciences.

This paper has pointed to a grand strategy for epistemic pluralism including the catalytic power of neuroscience. Rather than a minimal strategy, it recommends a grand strategy utilizing a multiplicity of disciplinary and other perspectives. It is a promising strategy for transforming the language games of social science.

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