Stratification Economics and the Neoclassical "Economics of Race" as Evolutionary Research Communities: Can the Stratification Approach Succeed? **(Conference Version)**

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Introducing Evolutionary Research Communities

In the abstract, scientific progress can be laid out as the steady accumulation of knowledge and the refinement of more sophisticated methods. Within that mainstream view, science is presented as a mechanical process, by which earnest researchers observe the world, build testable hypotheses based on those observations, test those hypotheses with the best available methods, and finally add the results of those tests to the one of either of the ever-growing piles of failed theories or to scientific knowledge. This view can be exposed as untenable with a closer look at the history of science and epistemology. The textbook idea of science progressing in a linear fashion is an oversimplification that obscures the human elements essential for understanding how sciences have evolved. It is a view of the history of science that is ahistorical.

Lakatos' methodology of scientific research programs represents an attempt at saving the linear, falsificationist view of scientific progress, while addressing the Kuhnian concern that epistemological discontinuities occur between different periods in the history of science. Lakatos acknowledged that there could be no solid through-line drawn between distinct scientific traditions, referring to each as its own research program, but insisted instead that research programs compete amongst each other and become successful through making progressive problem-shifts in the face of new evidence. On this view, the dominant scientific research programs must be those that avoid "degenerative" problem shifts (that is, those that simply restate arguments such that that narrowly fit within the parameters of observable data, e.g. "moving the goalposts") while protecting their hard cores from unproductive criticism.

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I submit that Lakatos' basic insight and move away from Kuhnian scientific revolutions and paradigms are correct with respect to economics in that the history of economics is not characterized by "gestalt-shifts". However, Lakatos' desire to build a methodology that would allow for a rational reconstruction of scientific progress led him to single-mindedly pursue a

positivist interpretation of that progress. Lakatos understood that research programs could protect their hard cores through tenacity and making modifications to their hypotheses in pursuit of scientific progressivity, but did not go beyond this motivation; thus, the preservation of a research program in Lakatos's framework is pursued only for theoretical reasons.

The pragmatists, especially Peirce, understood that tenacity was a fundamental method of fixing belief, but also that science takes place within communities of inquirers. A pragmatist understanding of the history of science privileges the role of historically-conditioned communities of researchers, rather than programs simply bound by adherence to a theoretical hard core. Moreover, the influence of Darwin on the pragmatists and institutional economists (who were economists with a pragmatist philosophical base), causes a pragmatic understanding to look for the evolutionary advantages and disadvantages that characterize these communities, theoretically, socially, and with respect to political economy.

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I propose that this pragmatic understanding of the evolution of scientific research programs be renamed the *methodology of evolutionary research communities*. These are groups of researchers engaged in advancing shared research agendas, bound by shared theoretical commitments, and who shape and evolve their communities in response to their social and political economic environments as well as in response to theoretical challenges. The remainder of this paper will be devoted to presenting the previous argument in detail. After demonstrating the need for the concept of evolutionary research communities, I highlight its utility through application to two existing communities within economics: the neoclassical economics of race, and stratification economics.

Lakatosian View of Science and Scientific Progress

Lakatos attempts to apply the revolutionary aspects of Kuhn's *Structure of Scientific Revolutions* to what is an essentially Popperian view of scientific progress in his "Criticism and the Methodology of Scientific Research Programmes". He wants to hold that science is about making bold, refutable conjectures and discarding hypotheses when they are falsified, while acknowledging that scientists often rationally do not discard or abandon entire theories based on a few refutations.

Scientific research programs have four main components: a hard core, a positive heuristic, a negative heuristic, and an auxiliary belt of hypotheses. These four components allow scientists working within research programs to modify their fields of study by degrees, rather than by the dramatic shifts seen in Kuhn's framework, and allow for the existence of something akin to Kuhnian "normal science" within bounds that remain falsificationist.

The "hard core" of a scientific research program consists of those hypotheses which scientists working within that program make a methodological decision not to question during research. Ideally, the hard core would be made up of formerly "background" assumptions and hypotheses now made explicit. There is an element of tenacity involved in acknowledging that a research program has an explicit hard core. Lakatos makes the hard core explicit to avoid problems introduced by the Duhem-Quine thesis, that there can be no refutation of a single hypothesis on its own. Establishing a hard core allows some theories to be "pinned down", while others are subject to scrutiny.

With a hard core established, research programs are judged based on whether they can be modified to contain more empirical content (that is, what is the theory saying about world that can be observed?) while preserving their hard core, rather than dismissing conflicting evidence in defense of their hard core. These modifications take place within an auxiliary belt of hypotheses. Changes within the belt are what determine whether a research program is progressive or degenerating. Progressive research programs seek further growth by covering more empirical content, while degenerative programs only defend and reinterpret information such that their hard core is preserved.

Positive and negative heuristics are derived from commitment to a research program's hard core and guide it in altering its auxiliary hypotheses. The positive heuristic informs researchers as to *how* they should modify the auxiliary hypotheses, while the negative heuristic informs researchers as to how *not* to modify those hypotheses; all in service to the hard core and the generation of novel facts. The most successful scientific research programs are those that can remain progressive, encompassing more empirical content than their competitors. In this way, the successful research programs are those that cover the most empirical content,

while leaving themselves as open as possible to critique in the auxiliary belt and remaining committed to their hard cores.

The methodology of scientific research programs provides a description of scientific progress that squares with the history of economics more so than Kuhn's methodology. It is difficult to characterize economics as having progressed through distinct *incommensurable* paradigms because of the continuity of its analysis over time. 21st century economists have added terms and methods to the economics toolbox, but still work within frameworks that rely on the same core concepts (e.g. supply, demand, labor, capital) that have existed since the beginning. It makes more sense to characterize the movements that have taken place within economics—classical, Keynesian, Marxian, stratification —as research programs, rather than distinct paradigms.

Lakatos's framework is lacking in its applicability to economics in that it relies too heavily on "progressive problem shifts" to rationalize how sciences develop. This was, after all, Lakatos's aim in developing the methodology of scientific research programs as an extension of Popper and response to Kuhn. The consequence of Lakatos's commitment to a falsificationist framework is that research programs are only supposed to develop or fade away for theoretical reasons. Research programs survive to the extent that they instigate progressive problem shifts within their auxiliary belt of hypotheses and fall into disrepute as their problem shifts become degenerative. Economics provides a potential counterexample to this notion. Research programs within economics often persist and maintain prominence within the field long after they have ceased to expose their theoretical commitments to challenging empirical content.

In his attempt to forge a "third way" between Kuhn and Popper, Lakatos moved too far towards Popper, losing the human aspects of scientific progress that Kuhn recognized and emphasized in his historical account. There is, however, a way to recover the social and political in the evolution of science, while maintaining the importance of theoretical progression and avoiding the "psychologistic irrationalism" that Lakatos imagined in Kuhn. By looking to the pragmatist philosophers and institutional economists Peirce and Veblen, we

understand science and epistemology as inescapably communal, and research communities as evolutionary.

Pragmatism, Institutionalism, and Evolutionary Science

Though several strains of philosophical pragmatism have developed over its history, it primarily adheres to a core set of principles: anti-essentialism, anti-Cartesianism, a rejection of the fact-value dichotomy, a primacy of practice, and anti-foundationalism. In addition to these, pragmatism as derived from the writings of its progenitor, Charles Sanders Peirce, also places a special emphasis on falliblism, community, and semiotics, or the interpretation of signs.

Taking a pragmatist's approach to the philosophy of science leads to an understanding of science that is radically different from the Popperian view, even as the pragmatist emphasis on fallibility anticipated the importance Popper would place on falsifiability rather than verifiability. Not only does pragmatism allow us to circumvent the Duhem-Quine problem, but it restricts our narratives of scientific growth to those that incorporate a role for communities of scientists. . Institutional economics, as advanced by economists like Commons and Veblen, is derived from a pragmatist philosophical foundation. Looking at scientific disciplines and schools of thought *as institutions* pushes us toward an evolutionary understanding of science.

When Veblen published his essay "Why is Economics not an Evolutionary Science?" he saw neoclassical economics as being largely unable or unwilling to adapt to the increasing stock of knowledge being gained in fields like anthropology and psychology with respect to understanding human behavior. In Lakatos's words over half-a-century later, neoclassical economics showed itself to be degenerating in the face of new evidence being codified in other social sciences. If economics was to progress, it would need to go the route of institutional economics, making itself adaptable to the conditions of the broader academic environment and able to analyze existing economic communities.

Despite neoclassical economics never contending with its theoretical commitments in the ways Veblen thought necessary for its survival, neoclassicism has remained hegemonic within economics. This reality causes problems for a Popperian view of progress within economics; neoclassical economics remained hegemonic, despite its key methodological

assumptions and predictions being invalidated by rival schools of economic thought, and of other disciplines of social science.

Clearly, then, the methodology of scientific research programs alone is not enough to accurately characterize progress within economics. Neoclassical economics could be described as a Kuhnian paradigm, but a Kuhnian analysis both overstates the difference between neoclassical economics and schools of economic thought that were previously dominant and understates the level of conflict present between neoclassical economics and contemporary rival schools of economic thought.

Neither the Popperian, Lakatosian, nor Kuhnian frameworks are up to the task of accurately describing the growth of schools of economic methodology. An ideal framework would account for the current variation in methodologies within economics and the continued dominance of neoclassical economics, while presenting the historical growth of these differing schools in a way that does not rely exclusively on theoretical progressivity nor pure contingency. It should take the appropriateness of scale recognized by Lakatos's scientific research programs and combine it with the inescapable sociality of the pragmatist/institutionalist mode of thought. This ideal framework can be found in the concept of the evolutionary research community.

Reconstructing Scientific Research Programs as Evolutionary Research Communities

Evolutionary research communities (henceforth research communities) should be thought of as a modification of the core concept of scientific research programs. The two concepts share many of the same features; both have theoretical hard cores, and positive and negative heuristics that guide researchers working within them in how to make modifications to their auxiliary belt of hypotheses. Research communities are, in other words, committed to a core set of hypotheses that are, by methodological decision, unassailable. The key difference between the two frameworks is in the expectation each has with respect to programs or communities that are degenerating.

Within the methodology of scientific research programs, theoretical progressivity is the only criterion by which a research program is assessed. If a scientific research program is

theoretically degenerating, then the methodology of scientific research programs predicts that its replacement by a more progressive program is only a matter of time. This sort of asocial, apolitical, ahistorical analysis is impossible within the methodology of evolutionary research communities. All analysis begins with research taking place within a community of inquirers who share a language of analysis, normative rules of theoretical progressivity, and often a similar social and political location. A research community's survival, just like the survival of any other social community, depends on its social and political traits, in addition to the theoretical advantages and disadvantages that come under scrutiny within the methodology of scientific research programs.

The ultimate criterion for a research community's fitness is whether its adherents can reproduce themselves unimpeded, either by convincing others to adopt its methodological commitments and become members, or by suppressing the growth of rival communities. Theoretical progressivity is a valuable trait for convincing others to adopt a set of methodological commitments, but there are adaptive social and political economic traits as well. One social trait that aids the continued dominance of a research community is the social status of its members. If, for example, the members of one research community hold prominent positions within academia, expanding and maintaining dominance will be much easier, as will be resisting theoretical pressure to abandon their community if it is degenerating. The set of political economic interests a research community serves is another example of a trait that helps to preserve its survivability.

In view of the analysis presented here, the Lakatosian view of science is only weakly applicable to understanding progress within economics. The methodology of evolutionary research communities augments the methodology of scientific research programs to address critiques that it receives from Kuhnian and pragmatic/institutionalist perspectives. The result is a socially and politically conscious framework for understanding social scientific progress as the evolution of communities of inquirers.

The Neoclassical Economics of Race vs. Stratification Economics as Evolutionary Research Communities

The hard core of neoclassical economics of race can be described as follows: individuals are independently rational; therefore, disparities that exist at the group level must be either the result of differing optimization across individuals, or of productivity differences between different groups. Thomas Sowell's emphasis on cultural differences between groups as an explanation for group-based disparity provides a clean example of that hard core at work. The positive heuristics of this framework guide researchers to preserve that core assumption by looking for the following factors to explain group-based differences: impediments to the market or free actions and associations of individuals; deficiencies or advantages in individuals or individual development; and deficiencies or advantages in culture. Researchers within the neoclassical research community are also guided to assume that observed behavior represents the revealed preferences of hyperrational agents. As negative heuristics, neoclassical economists are told to protect the assumptions of their hard core by refraining from appeals to irrationality as explanations for individual behavior, and further from appeals to collective or cooperative behavior at all.

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This collection of positive and negative heuristics results in auxiliary hypotheses that privilege explanations of racial disparities as the justified outcomes of individual actions and market processes, rather than the result of systemic racism or structural bias, whether past or present. To the extent that discrimination or bias is acknowledged, the neoclassical research community treats it as something personal, to be dealt with by time and the market- certainly not by extra-market intervention like affirmative action. Most disparities between racial groups, particularly between Blacks and Whites, come down to differences in individual effort,ability, and disposition to be fixed at the cultural level if they can be fixed all. It may even be that these differences are genetic; if this is the case, then not much can be done to correct them in the first place.

As a research community, the neoclassical economics of race has evolutionary advantages theoretically, socially, and politically that explain its continued dominance within economics with respect to providing explanations for racial disparities, but also disadvantages that could portend its eventual decline. Theoretically, the neoclassical research community has an advantage in that it produces analytically valid, predictive results with clear implications for

policy (non-)intervention. It also benefits from compatibilities with methodologically individualist research communities in other disciplines, as well as mathematically-grounded communities in the "hard-sciences". There are theoretical weaknesses in the neoclassical framework, however. While some social sciences have followed neoclassical economics into methodological individualism, many scholars outside of economics are critical of its asocial depiction of human rationality, as well as its individualist explanations for relative group positions. The notion of hyperrationality at the core of neoclassical microeconomics is consistently contested with respect to human behavior by scholars in psychology, sociology, anthropology, and even from within economics.

The neoclassical research community occupies the dominant position in academic economics, meaning its members enjoy prominent positions throughout academia, a significant social advantage. This allows them to spread their methods to large swaths of students, bringing new members into their community yearly. Moreover, its results are considered "aesthetically pleasing" to a large body of researchers, both for mathematical and more traditionally social reasons. The major social disadvantage faced by the neoclassical framework today is the increasing number of members from economically marginalized groups that are becoming educated and taking courses in economics. So long as the voices of subaltern groups are marginalized within economics through a lack of representation, explanations that disparage the disadvantaged can be sustained. Once this changes—and it has already begun to change—it will become difficult for the neoclassical research community to survive in its current form.

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The neoclassical economics of race enjoys political economic advantages as well. Its approach to racial economic disparities is to place onus on disadvantaged groups to solve their own problems. Since its primary policy prescription is non-intervention, it takes significant pressure off dominant social groups to address visible disparities. Predictive theories also often have results that are easy for policymakers to manipulate, to the extent that the theory would call for intervention (for example, to remove a regulation, or privatize where a good is being provided publicly).

On balance, then, it is clear how the neoclassical economics of race can have remained dominant within the field, even in the face of the unrealistic and falsified hypotheses in its hard core. While it has an adaptable auxiliary belt, its strongest evolutionary advantages lie in its social and political aspects. There are, however, weaknesses within each of its characteristics as a research community that could portend its replacement by an ascendant field in economics. One such field, stratification economics, will be examined next.

Stratification economics is a research community which evolved to address the theoretical weaknesses in neoclassical economics as it approached race. As such, many of its core assumptions and heuristics are diametrically opposed to neoclassical economics. The following principle represents the hard core of stratification economics: identity groups rationally compete collectively to improve relative position using available resources; this causes disparities between groups to persist, rather than disappear over time, without explicit intervention. Already, we see stark incompatibilities between the stratification economics research community and neoclassical economics. Hyperrationality and methodological individualism are ruled out from the outset, and a role for policy intervention is front-and-center.

Researchers within the stratification economics tradition are guided by the following positive heuristics to explain the relative position of groups: look for evidence of direct wealth transfers; look for historical events that caused disparity between groups; look for institutional and structural features that maintain group hierarchies. In defense of their hard core, they are directed to avoid appeals to deficiencies in individual preferences, genetics, or cultural norms as explanations for disparities between groups. Stratification economics and the neoclassical economics of race share one negative heuristic: both research communities reject appeals to irrationality as explanations for group outcomes. Within stratification economics, maintaining hierarchical position is a rational strategy for dominant groups, one that they will pursue absent intervention that would prevent them from doing so.

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This constellation of heuristics results in a belt of auxiliary hypotheses well-suited to countering many of the conjectures of neoclassical microeconomics. Researchers within the

stratification economics research community are trained to avoid explanations of disparity that "blame the victim", and thus can construct explanations that require dominant groups and power structures to explicitly address these disparities.

As a research community, stratification economics has evolutionary characteristics theoretically, socially, and politically, that give an idea of how this emerging field can progress within economics. Theoretically, stratification economics is a pattern, rather than predictive field, and relies on structural evidence. This means that it explains outcomes by showing how they fit within an institutional structure or pattern of historical occurrences. In some ways, this is a theoretical weakness, as pattern results often carry less weight than predictions. It could also be a strength, as a well-defined pattern can often be a more reliable indicator of the course of future events as compared to a predictive model. Stratification economics has a further theoretical strength, though, in its deep consonance with results across the social sciences. Whereas results in psychology and sociology are often opposed those in neoclassical microeconomics, they often match well with those in stratification economics. An example is the joint use of "stereotype threat" between all three disciplines. There is great potential for stratification economics to grow with respect to neoclassical microeconomics through partnering with other social sciences.

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Socially, stratification economics faces an evolutionary disadvantage with respect to the neoclassical economics of race, both because it is newer, and because it has fewer adherents. The number of new members into the stratification economics research community can only rise, however, as the members from subaltern groups move into economics. Moreover, if stratification economists can convince policymakers and scholars in other disciplines of the utility of their results and methodological commitments, then there the community could expand. Politically, stratification economics faces significant headwind from conservative policymakers who would rather not address the sorts of disparities that it identifies. Stratification economics' best chance for evolutionary survival and advancement is to continue to theoretically progress with respect to the neoclassical economics of race, and to expand its reach by engaging other social sciences and the public.

In conclusion, the methodology of evolutionary research communities allows for a more sophisticated understanding of the progression of communities of scholars within the social sciences, particularly within economics. As a pragmatic/institutionalist modification of the methodology of scientific research programs, it avoids Kuhnian critiques and brings social and political insight into the philosophy of science and social science.

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