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# The Future of Economics in a Lakatos-Bourdieu framework

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## Abstract

The global financial crisis has clearly been a matter of great consternation for the business-as-usual faction of mainstream economics. Will the World Financial Crisis turn out to be that ‘experimentum crucis’ which triggered a scientific revolution? In this paper, we seek to assess the likelihood of a paradigm shift towards heterodox approaches and a more pluralist setting in economics emerging from the academic establishment in the U.S. – that is, from the dominant center of knowledge production in the economic discipline. This will be done by building the analysis on a combined Lakatosian framework of ‘battle of research programmes’ and a Bourdieuan framework of ‘power struggle’ within the academic field and highlighting the likelihood of two main proponents of the mainstream elite to become the promulgator of change?

Keywords: Paradigm, heterodox economics, scientific revolution

JEL codes: A 11, E 11, E 12

# 1. The Keynesian Revolution and Pragmatic Pluralism – A Fruitful Competition Between Theories or a Crisis in Economics?

John Maynard Keynes concludes ‘The General Theory of Employment, Interest, and Money’ (1936: 383-84) with the following, now-famous words:

*„At the present moment people are unusually expectant of a more fundamental diagnosis; more particularly ready to receive it; eager to try it out, if it should be even possible. But apart from this contemporary mood, the ideas of economists and political philosophers, both when they are right and when they are wrong, are more powerful than is commonly understood. Indeed, the world is ruled by little else. Practical men, who believe themselves to be quite exempt from any intellectual influences, are usually the slaves of some defunct economist. .... I am sure that the power of vested interests is vastly exaggerated compared with the gradual encroachment of ideas. Not, indeed, immediately, but after a certain interval; for in the field of economic and political philosophy there are not many who are influenced by new theories after they are twenty-five or thirty years of age, so that the ideas which civil servants and politicians and even agitators apply to current events are not likely to be the newest. But, soon or late, it is ideas, not vested interests, which are dangerous for good or evil”.*

Though even Joan Robinson, Keynes’s closest student, viewed the transformative power of ideas as naive<sup>1</sup>, this passage makes plain the ambition attached to ‘The General Theory’ by its author. Keynes expected the book to do nothing less than revolutionize the field of economics. This ambition, which Keynes had already formulated one year earlier in a letter to the Cambridge philosopher George Bernard Shaw (Keynes 1935), was founded on three basic beliefs. First, as Keynes stresses at the book’s outset, the theoretical axioms of ‘The General Theory’ diverge from orthodox economic wisdom<sup>2</sup>: „For if orthodox economics is at fault, the error is to be found not in the superstructure, which has been erected with great care for logical consistency, but in a lack of clearness and of generality in the premises” (Keynes 1936: xxi). Unfortunately, he did not identify the assumptions he judged to be flawed, and failed to disclose any alternatives. These omissions, as he himself was acutely aware, were likely to draw criticism: „Those, who are strongly wedded to what I shall call the ‚classical theory‘, will fluctuate, I expect, between a belief that I am quite wrong and a belief that I am saying nothing new” (Keynes 1936: xxi). But if it is true that Keynes believed his book would overturn orthodox economics<sup>3</sup>, then he also thought he could convince economists who had not yet been steeped in orthodox wisdom. Specifically, he had in mind young economists who could be exposed to his theories early on and established economists who primarily

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<sup>1</sup> See Joan Robinson (1976).

<sup>2</sup> The orthodox wisdom Keynes was referring to is general equilibrium theory, which was developed at Cambridge University by the political economist Alfred Marshall and his successor, Arthur Cecil Pigou. Today this theory is known as the mainstream view or the benchmark model.

<sup>3</sup> Although Keynes’s line of argument ultimately amounts to an alternate theory – an assemblage of deductive arguments based on alternate assumptions – he repeatedly emphasizes that he is merely formulating a general theory that provides room for preserving orthodox economics (general equilibrium theory) as a special case (see Keynes 1936: VI). Keynes didn’t appear to be cognizant of the difference.

worked from an empirical or historical perspective, leaving them “without any formal theory of economics which was predominant and generally accepted” (Keynes 1936: xxvi). Here he was surely thinking about the supporters of the Historical School, who were still numerous, particularly in Germany, despite their defeat in the *Methodenstreit*.<sup>4</sup>

The second belief concerned impact. A lecturer at King’s College, Cambridge, Keynes considered himself influential enough to spark a worldwide revolution in economic thought. While this speaks to Keynes’s unshakable self-confidence as a member of the English intelligentsia, it is also a testament to the central position Cambridge University and Keynes occupied in contemporary academia. In the late 19<sup>th</sup> and early 20<sup>th</sup> centuries, during the reign of Alfred Marshall and Arthur C. Pigou, Cambridge University enjoyed a particularly esteemed status in the eyes of foreign economists.<sup>5</sup> And by 1936 Keynes had become an internationally acclaimed economist, a status he reached in a matter of years thanks to the publication of ‘The Economic Consequences of the Peace’ (1919) and ‘The Economic Consequences of Mr. Churchill’ (1925). Moreover, as the editor of ‘The Economic Journal’ since 1912 – one of the world’s most prominent journals for economics – he played a decisive role in determining what economists talked about in the English-speaking world and elsewhere; and he used his influence to generate publicity for his theories and advance the ‘Keynesian revolution’ (see Moggridge 1990; Aslanbeigni & Oakes 2007).

The third belief had to do with the state of the economy. In ‘The General Theory’ Keynes makes an oblique reference to ‘contemporary mood’, vaguely intimating why he thought economics had to be rescued from the fangs of orthodox theory. At least for many non-economists, the depression in the 1930s had exposed the deep flaws in orthodox economics, which held that unregulated markets inherently found a stable equilibrium, and that falling real wages were the solution for mass unemployment.<sup>6</sup> Keynes feared the economic, social, and political effects of misguided economic policy, in addition to the loss of credibility for a profession that did nothing to contribute to solving the problems of the day, and may even have aggravated them.

Keynes’s beliefs proved accurate and his book had its intended effect. For at that historical juncture, all the ingredients of what Thomas S. Kuhn (1962) calls a scientific revolution were on hand: empirical reality (the economic crisis) had shown prevailing theory to be false, an alternative theory (Keynesian theory) was available as a replacement, and

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<sup>4</sup> In the U.S., the ‘old institutionalists’ were quite strong (Youay 1998), and even Cambridge University – at the time, the stronghold of orthodox economics – nearly fell into the hands of the Historical School when it came time to select a successor to Alfred Marshall. That Arthur Cecil Pigou was appointed chair – and not H.S. Foxwell, who closely associated with members of the Historical School – was most likely attributable to Alfred Marshall’s having directly intervened in the hiring process. For more, see Coase (1994:151ff.)

<sup>5</sup> A number of prominent economists, including Gerard Debreu, Milton Friedman, and John Kenneth Galbraith, spent time as guest researchers at Cambridge University. Cambridge University also boasted a large number of extremely renowned teachers in economics, including Henry Sidgwick, Inglis Palgrave, Herbert S. Foxwell, John N. Keynes, Alfred Marshall, Arthur C. Pigou, John M. Keynes, Joan Robinson, Dennis Robertson, and Richard Kahn.

<sup>6</sup> The most explicit proponent of orthodox theory, Keynes’s colleague Arthur C. Pigou, clung tenaciously to the thesis – despite empirical evidence to the contrary – that nominal and real wages merely needed to continue falling in order to bring about full employment (1941).

the cultural dominance needed to install this new paradigm (Keynes and Cambridge) was in place. These conditions allowed the so-called Keynesian revolution to gain steam (Klein 1947), and Keynesian economics soon became the mainstream view in the U.S. and Europe, particularly after the Second World War. Though the true extent of the Keynesian revolution has been disputed<sup>7</sup>, one thing can be said for certain: Keynesian economics facilitated the search for alternative paradigms (see e.g. Lee 2000, Lee 2009) and strongly influenced the assumptions of orthodox paradigms – standard Keynesianism, neo-Keynesianism, and neoclassical economics – operating within the ‘dynamic-stochastic general equilibrium model’ (DSGE).

Should Keynes’s work really be conceived as revolutionary? Applying Kuhn’s ideas about scientific revolutions to non-experimental sciences such as economic theory has proven very problematic, though a thorough explanation would take us too far afield. It suffices to say that Imre Lakatos’s model of ‘battle’ between ‘research programs’ (1970) does a better job of capturing dynamic changes to paradigms relative to changing environments, and, in this regard, is more receptive to conceptions of plurality (competing paradigms based on axiomatic variation) and variation (approaches based on varied assumptions within the so-called protective belt).<sup>8</sup> In contrast to Kuhn, Lakatos believes that dominant paradigms are not replaced by alternatives that previously lurked in the shadows; rather, scientific progress is a result of competition between research programs that fluctuate between progressive and degenerative shifts.<sup>9</sup> A research program may eventually fail to prove its scientific value, and may as a consequence be abandoned, when it no longer is expected to be progressive, which is to say, when it no longer allows for the prediction of new facts. This awareness is not triggered by singular events (in the social sciences) or experiments (in the natural sciences); rather, it becomes evident over the course of extensive ‘repair work’.<sup>10</sup> Based on Lakatos’s model, then, scientific progress, especially in the social sciences,<sup>11</sup> requires paradigmatic competition, and in this regard the Keynesian revolution undoubtedly made a considerable contribution.<sup>12</sup>

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<sup>7</sup> See Hutton (1986), who speaks of a ‘revolution that never was’.

<sup>8</sup> Though I prefer Lakatos’s model to Kuhn’s, I continue to use the terms ‘paradigm’ and ‘paradigm shift’ because they are more succinct than ‘research programme’.

<sup>9</sup> A theory or approach can generate paradigmatic competition if, by positing alternate assumptions or introducing ad hoc assumptions, it is capable of delivering new, falsifiable prognoses (ex ante) or at least explaining existing anomalies within a research paradigm (ex post).

<sup>10</sup> Looking back historically, the economic crisis of the 1930s or even the current global financial crisis may well prove to be *experimenta crucis* for the further development of the field of economics. But they cannot be portrayed as anomalies that necessarily lead to the instant overthrow of orthodox wisdom such as the dynamic-stochastic general equilibrium model.

<sup>11</sup> This is true on the one hand because social reality is also social constructed, i.e. does not exist independent of our perception, which is merely influenced by economic models. And this is true on the other hand because falsification is not possible in non-experimental sciences. *Ceteris paribus* hypotheses can at best be falsified. Ultimately, the Duhem-Quine thesis exposes the methodological limits to the empirical assessment of purely theoretical predictions (see Cross 1982).

<sup>12</sup> If one accepts Feyerabend’s critique of Lakatos – namely, that his categorization into progressive and degenerative research programs is not logical, and that, accordingly, a ‘rational’ selection of research programs cannot deliver an acceptable basis for investigation – then the calls for pluralism become all the more important. As Feyerabend once stated: ‘anything goes’ (Feyerabend 1975: 27-28). This view is particularly prevalent among constructivists who study the sociology of scientific knowledge (see Yonay 1998: 218f.).

Yet science is not just a ‘battle’. It is also what Pierre Bourdieu calls a ‘power struggle’ (Bourdieu 1990; 1991), for actors in the domain of science are outfitted with varying degrees of social, cultural, and economic capital, making for a very uneven playing field when it comes to competition between paradigms. Under the dominance of a monistic understanding of science (as part of the cultural capital)<sup>13</sup> – in which, taking a cue from Kuhn, the rise of a dominant mainstream in scientific thought is seen as a desirable state of affairs and the mark of a mature (or ‘true’) body of thought (see Middleton 1998, Schultze 1996, Williamson 1997) – the process of standardization, or agreement on a common paradigm (what Lakatos calls a positive heuristic), reduces lack of certainty about the usability of one’s specific human capital by securing career opportunities. It is reasonable to assume that the degree to which various paradigms (or, rather, their proponents) are outfitted with economic capital (material resources) and social capital (co-operative ties to other actors within and outside the academic field such as influential journal editors, economic policymakers, business leaders, sponsors and, not to be forgotten, the media) plays a large role in determining who gets to define orthodox economic thought, and how much heterodox paradigms are marginalized (particularly in terms of professorial positions at universities).

Using a Lakatos-Bourdieu framework, it becomes apparent why the relative plurality of economic paradigms that prevailed following the Keynesian revolution was interpreted as a crisis in economics (see Kazmierski 1993), as well as why the DSGE mainstream – as a result of the monetarist counterrevolution – underwent a wave of standardization that primarily emanated<sup>14</sup> from a handful of elite American universities<sup>15</sup> instead of witnessing a ‘scientific revolution’ as has been argued using a Kuhnian approach (see Peabody 1971, Worland 1972). By the outbreak of the 2007 global financial crisis, the ascendancy of DSGE at universities, research institutes, central banks, and international organizations (such as the IMF and Worldbank) was so complete that economists began speaking of a consensus model, which was viewed positively (see Blanchard 2008) insofar as it seemed to have largely laid to rest the disputes within the DSGE mainstream between freshwater and sweetwater economists (see Goodfriend 2004).<sup>16</sup>

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<sup>13</sup> Feyerabend describes this monistic understanding as follows: “More than one social scientist has pointed out to me that at last he has learned to turn his field into a ‘science’ – by which of course he meant that he had learned how to improve it. The recipe, according to these people, is to restrict criticism, to reduce the number of comprehensive theories to one, and to create a normal science with this one theory as its paradigm. Students must be prevented from speculating along different lines and the more restless colleagues must be made to conform and ‘to do serious work’” (1970: 198).

<sup>14</sup> Here, as well, we find the three necessary conditions for a ‘counterrevolution’: Milton Friedman as a driving force and influential personality; the University of Chicago as an institutional vehicle; and the stagflation of the 1970s, which triggered the crisis in Keynesian economics.

<sup>15</sup> The hegemonial ability of elite U.S. universities similarly to advance a scientific discipline and to enforce standardized views in various fields of research is rarely contested (see Rosser, Holt & Colander 2010; Lebaron 2006: 92ff; Graham & Diamond 1997) and has been put forward as early as the 1970s (see Deutsch, Platt & Senghaas 1971). Mata (2009) points out the importance of US elite universities (namely Harvard) in promoting heterodox issues on the one hand and the efforts of the mainstream community to hold these strongholds.

<sup>16</sup> The terms ‘saltwater’ and ‘freshwater’ refer to the intellectual divide in the field of economics between universities on the East and West Coasts of the United States (Columbia, Harvard, Princeton, Berkeley, Stanford, and Yale) and those around the Great Lakes (particularly the University of Chicago and Carnegie Mellon University). These two geographic poles reflect the lines of tension between the Keynesian and neoclassical perspectives much better than the terms ‘revolution’ and ‘counterrevolution’.

## 2. On Classifying Plurality and Variation

How the field of economics will develop in the wake of the global financial crisis is an important question, but before speculating on an answer we need to categorize the current landscape of economic thought in order to clarify the mainstream/non-mainstream divide necessary to understand the difference between variation (among paradigms) and plurality (between paradigms). Despite the criticism leveled from many quarters at the dualistic division between ‘mainstream’ and ‘non-mainstream’ (see Mearman 2012)<sup>17</sup>, I want to retain these terms for two reasons: (1) to show that this dualism sometimes hides a wide range of competing paradigms; and (2) to clarify that the establishment of an alternative paradigm requires more than critical engagement with a few underlying assumptions.

Using Lakatos’s concept of research programs as a framework, we can identify the dimensions that constitute a scientific model<sup>18</sup>: (1) the methodical dimension, i.e. a methodology considered acceptable, or ‘scientific’; (2) the epistemological dimension, i.e. a series of core assumptions (axioms) that underlie the model; and (3) the heuristic dimensions, i.e. postulates that are derived from these core assumptions and that must be accepted (‘positive heuristics’) or, at least, may not be called into question (‘negative heuristics’). The DSGE mainstream – an amalgam of new classical economics and neo-Keynesianism – is based on the core assumptions of rationality, ergodicity, and substitutionality (the hallmarks of social exchange theory; see e.g. Davidson 1984, Davidson 2005). In addition, the DSGE relies exclusively on a formal, mathematical, positivist deductivism (see Lawson 2006). Over the course of the so-called empirical turn of the past three decades, this constellation of elements has been combined with sophisticated systems of micro- and macroeconometrics, as well as experimental designs that harness approaches used in the natural sciences, such as physics and chemistry (see Schmidt & aus dem Moore 2010). The postulate of stability and optimality (Walras’s Law), which is operational *a priori* in the core assumptions of DSGE theory, guides ‘ideal solution’ (*Musterlösungen*), thus functioning as metric for negative heuristics, i.e. the research methods and approaches not to be called into question. The ostensibly large differences in forecasts delivered by the hyperstable equilibrium models of New Classical Economics compared with the non-equilibrium-based models of Keynesianism and neo-Keynesianism are attributable to modified assumptions within the ‘protective belt’ (e.g. concerning adjustment speeds, price and quantity rigidities, expectation formation, etc.), yet these differences are not evidence of divergent paradigmatic origins.<sup>19</sup>

When criticism is raised against the core assumptions of the DSGE mainstream, we often hear the explanation that while these assumptions are an element of formal training in DSGE theory, they do not inform the work of today’s professional economists, who

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<sup>17</sup> In addition to the criticism directed at such dualism, the static nature of classificational categories is also regularly reproached, as they fail to capture the complex variation inevitably manifest in field of intellectual endeavor (see Colander, Holt & Rosser 2009). Yet this accusation cannot be leveled against the classification scheme proposed here.

<sup>18</sup> For the problems surrounding the application of Lakatos’s method to economics, see Cross (1982).

<sup>19</sup> Accordingly, both approaches are found in modern textbooks, where a distinction is made between short-term forecasts (the neo-Keynesian model) and long-term forecasts (the neoclassical model). For more, see Abel & Bernanke (2005); and Blanchard (2006).

have long since availed themselves of new approaches native to behavioral economics, neuroeconomics, and complexity economics (see e.g Davis 2006: 4 – 5). Researchers in these subfields who accept the methodological limitations imposed by the mainstream but refrain from attacking its foundations<sup>20</sup> are accepted by the mainstream, and sometimes even lauded as the vanguard of mainstream research, even as they continue to be thought of as nonconformists or dissenters (see Colander, Holt & Rosser 2009).<sup>21</sup> The same does not apply to people within the mainstream who accept the core axioms of DSGE theory along with its faith in stability and optimality, but who reject the methodological requirements of its rigorously formal deductivism. Accordingly, fields such as *Ordnungsökonomie* or Hayek’s Austrian School are recognized for their contributions but are marginalized as outdated and methodologically weak (see Schmidt & aus dem Moore 2010: 170ff.).<sup>22</sup>

Table 1: Classification of Economic Paradigms

<b>Epistemology (Core Assumptions)</b>	<b>Methodology</b>	<b>Heuristics</b>	<b>Paradigm</b>	<b>Theoretical school</b>
- <b>Rationality assumption</b> - <b>Ergodicity assumption</b> - <b>Substitutionality assumption</b>	Deductive, positivist reductionism based on formal mathematics + highly developed empiricism/experimentalism	Acceptance of the stability of market clearing as an ‘ideal solution’	DSGE	- New classical macroeconomics - Neo-Keynesianism - Standard Keynesianism
<b>Questioning Some Core Assumptions</b>	Deductive, positivist reductionism based on formal mathematics + highly developed empiricism/experimentalism	Acceptance of the stability of market clearing as an ‘ideal solution’	DSGE dissenters	- Behavioral economics - Neuroeconomics - Complexity economics - Evolutionary economics
- <b>Rationality assumption</b> - <b>Ergodicity assumption</b> - <b>Substitutionality assumption</b>	Rejection of deductive, positivist reductionism based on formal mathematics	Acceptance of the stability of market clearing as an "ideal solution"	DSGE dissenters	- <i>Ordnungsökonomie</i> - The Austrian School - Critical Neoclassicism
- <b>Rationality assumption</b> - <b>Ergodicity assumption</b> - <b>Substitutionality assumption</b> - <b>Asymmetric information as-</b>	Deductive reductionism based on formal mathematics + highly developed empiricism/experimentalism	Rejection of the stability of market clearing as an ‘ideal solution’	Dissenters/Heterodoxy	- Information economics

<sup>20</sup> When certain assumptions are shown to be invalid (rationality, say), economists confirm their loyalty to the mainstream by asserting that contradictory findings are not universally applicable (see Smith 2003: 505), or by explicitly stating that such findings are intended as a supplement to the mainstream, not an alternative: “The objective (of behavioral economics, A.H.) is definitely not to criticize the standard economic model, or accentuate the negatives,...” (Cartwright 2011: 4).

<sup>21</sup> On the relationship between the mainstream and their dissenters see Vernengo (2010: 392).

<sup>22</sup> Critical neoclassicism has a special status in this connection. Heuristically and axiomatically identical to DSGE, critical neoclassicism abandons positivism in favor of normativity (particularly with a view to distribution and the ownership of production factors) (see Vogt 1986). Due to the heuristic, axiomatic, and at least partial methodological proximity to DSGE, this theoretical school is generally not considered a ‘heterodoxy’ (see Hickel 1986). In certain cases, ‘critical neoclassicism’ is so broadly defined that it is difficult to distinguish it from neo-Keynesianism (see Schneider 1988).



sumption				
<b>Questioning Some Core Assumptions</b>	Acceptance of deduction based on formal mathematics + narrative analysis	Rejection of the stability of market clearing as an 'ideal solution'	Heterodoxy	- Post-Keynesianism - Social economics/Social economic institutionalism - Regulation theory/SSA/Radicals - The Historical School
- <b>Rationality assumption</b> - <b>Ergodicity assumption</b> - <b>Substitutionality assumption</b>	Deductive reductionism based on formal mathematics + highly developed empiricism/experimentalism	Rejection of the stability of market clearing as an 'ideal solution'	Heterodoxy	- Neo-Ricardianism

Heterodoxy is characterized by the rejection of some (or all) mainstream axioms; by methodological receptiveness to less formal, narrative deduction as well as inductive techniques; and by a rejection of the stability and optimality of market-based coordination mechanisms (which is to say, by the rejection of Walras's Law<sup>23</sup>). The schools of thought that qualify as heterodox in this sense are post-Keynesianism, neo-Marxist regulation theory and the radical school, socio-economic theories, and, provided it still exists, the Historical School. The neo-Ricardianism advanced by Piero Sraffa also saw itself as heterodox, for it rejected the stability and optimality postulate of the mainstream, even though it accepts the mainstream's research methods and core axioms. This apparent inconsistency can be explained by the outcome of the Cambridge Capital Controversy (CCC), during which the neo-Ricardians provided evidence that the stable equilibrium solutions founded on the core assumptions of the DSGE mainstream are only valid under very specific conditions.<sup>24</sup> This controversy rocked the entire deductive apparatus of the mainstream to the core, but it failed to furnish a plausible alternative.

Finally we come to information economics, which shares the core assumptions and methodology of the mainstream, but which rejects the stability and optimality ideal. This apparent inconsistency is not based on a demonstration of the deductive weaknesses in the theoretical derivation of the stability and optimality postulate, but rather, on highlighting how information is distributed among economic subjects (who can no longer be viewed as representative agents). The focus on informational aspects amounts to an alternate – and divergent – core assumption. The unclear classification of this school is revealed in the uncertain role played by the distribution of information – is it an alternate core axiom, or merely the modification of an assumption within the protective belt? Drawing attention to the asymmetric distribution of information as a cause for various forms of market failure is a core argument of neo-Keynesianism, yet most proponents of neo-Keynesianism do not view asymmetric information as a defining feature

<sup>23</sup> The idea that the establishment of a true paradigmatic alternative implies a rejection of Walras's Law was first put forward by Robert Clower (1965). Yet long before, 'heterodox' economists such as Karl Marx and Thomas Robert Malthus had questioned the predecessor to Walras's Law, Say's Theory of Markets. See Mishan (1963) for more on the relationship between Walras's Law and Say's Theory.

<sup>24</sup> Namely, we'd have to have a one-good world (such as Ricardo's corn economy) or make special assumptions about the capital intensity of the subsistence good industry and all of its input producers. But neither of these scenarios is particularly realistic.

of market activity that must be incorporated into the core axioms of mainstream thought. Rather, they see it solely as a phenomenon that manifests itself in partial markets. Obviously, the inclusion of asymmetric information as a core axiom only appears logical if it is a pandemic feature of market-based coordination; the ‘ideal solution’ of stable market equilibrium can hardly serve as a reasonable negative heuristic under such circumstances. The status of information economics in our classification is sure to remain a point of deliberation for some time to come.

### **3. Joseph Stiglitz and Paul Krugman – Mainstream Dissenter or Paradigm Warriors?**

The trajectory of an academic field cannot be determined by a single person. This is certainly even more true today than it was during the time of John Maynard Keynes or Milton Friedman. Yet we should be cognizant of the fact that particularly in the social sciences, the victor on the battlefield of ideas is not the one who makes the better argument or who develops the more incisive model or paradigm. What is crucial is acceptance and circulation within the epistemic community. And in this connection, the status of the actors – the economists participating in the struggle – plays a determinant role.

Criticism of the current state of economics has grown louder since the outbreak of the global financial crisis in 2007. Outsiders ask why a crisis of this magnitude was not anticipated, and why it has not been possible to overcome the effects of the crisis in most industrial nations (see Besley & Hennessey 2009). Yet there are also many critical voices from within the field of economics. Some of these critics attribute the current helplessness of the profession to a lack of intellectual diversity, as well as to an autistic focus on formal elegance that overlooks the problems of the real world. Still others charge that mainstream economists, with their singular fixation on equilibrium, are one of the problems besetting the real economy (see Blanchflower 2009, Caballero 2010, Kirman 2010, Pesaran & Smith 2011, Koppl & Luther 2012).<sup>25</sup> It should thus come as little surprise that heterodox economists view the current situation as an *experimentum crucis*.<sup>26</sup> Indeed, in many respects the current environment resembles the era in which Keynes sought to spark an intellectual revolution. Insofar as the above considerations are valid, the mere existence of paradigmatic alternatives that could potentially supplant the DSGE mainstream is not sufficient. Rather, support is required from influential personalities within the ranks of the elite who promulgate the current orthodoxy (see Cronin 2010: 1477)<sup>27</sup>. In the following sections we ask whether Joseph Stiglitz and Paul Krugman could contribute to a reorientation of the economics profession<sup>28</sup> – if not by

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<sup>25</sup> On the other hand, some attempt to explain the global financial crisis using the mainstream paradigm; naturally they reject the notion that economics is experiencing an existential crisis. See, for example, Lucas (2009), Cochrane (2011), Minford (2010), and Bernanke (2010).

<sup>26</sup> See in this regard the numerous contributions published since 2007 in heterodox journals such as the *Real-World Economics Review*, the *Cambridge Journal of Economics*, the *Review of Radical Political Economics*, the *Journal of Post Keynesian Economics* and the *Journal of Economic Issues*.

<sup>27</sup> This covers influential converts from the mainstream to the heterodoxy as well as ‘prestigious members of the economics profession’ who actively support plurality and diversity – without such support, the University of Massachusetts/Amherst could not have become a hub of heterodoxy in the 1970s; see Katzner (2011: 108 – 21).

<sup>28</sup> This will be done by a brief overview of their lives and achievements in order to account for their posi-

initiating a paradigm shift, then at least by making the field receptive to greater plurality. Stiglitz and Krugman have been selected because, as Nobel laureates, they qualify as members of the elite in economics<sup>29</sup>. At the same time, they have been particularly vocal in their criticism of mainstream dogma (see Krugman 2009, Stiglitz 2008a, 2008b, 2008c, 2009a).

### 3.1. Joseph Stiglitz

Joseph Stiglitz was born in Gary, Indiana, in 1943. He was educated at Amherst and MIT, earning his doctorate under the tutelage of the later Noble laureates Paul Samuelson, Franco Modigliani, and Robert Solow. Stiglitz has held positions at Yale, Stanford, Oxford, Princeton, and Columbia – a veritable who's who of elite universities. When Stiglitz was awarded the Noble prize in 2001 the decision had an air of inevitability about it (see Pressman 1999): Stiglitz was one of the most influential neo-Keynesians, a school of thought that had yet to be distinguished with a Noble prize, as opposed to 'New Classical Macroeconomics', which had received the award in the 1990s. Yet Stiglitz was not content to be a recluse in the ivory tower. He was a member of the Council of Economic Advisors under Clinton from 1993 to 1997, was chief economist at the World Bank from 1997 to 2000, and has written a number of bestselling books (see Stiglitz 2002a, 2003, 2006). According to bibliometric rankings (e.g. IDEAS), Joseph Stiglitz is one of the five most renowned economists in the world. He was formerly the Vice President of the American Economic Association (AEA), as well as editor of the AEA's 'Journal of Economic Perspectives'. In 1979, he received the John Bates Clark Medal, granted to influential economists under 40 years old. In 2008–09 Stiglitz was the president of the Eastern Economic Association (EEA), and has been president of the International Economic Association (IEA) since 2011.

In the first phase of his academic career (1966–97), Stiglitz's research centered on the effects of information asymmetries on macroeconomic development. He demonstrated that under conditions of limited information, rational actors tend to adopt behaviors that at least temporarily lead to market imbalances, thus delivering "Keynesian" results on a microeconomic basis. Examples of such behaviors include the rationing of credit on credit markets, or the payment of real wages on labor markets above the equilibrium level as so-called efficiency wages.) On the basis of this microfoundational analysis, he satisfied the methodological expectations of the growing mainstream, and by limiting his assessment of informational asymmetries to deviations from market clearing he also fulfilled the mainstream's 'negative heuristic'. In this way, he was able – in collaboration with many other colleagues, such as George Akerlof, Greg Mankiw, David Romer, and David Soskice – to reformulate Keynesianism within the mainstream paradigm.

After working outside of academia between 1994 and 2000 – and perhaps due to the experience he gathered in the 'real world' – Stiglitz's view of the profession of economics became more radical. With the outbreak of the global financial crisis, Stiglitz's calls for a new economic paradigm – both within academia and publicly, in newspaper col-

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tion in the field of academic economics. Of course, a deeper Bourdieuan analysis would have to provide much more information in order to describe more appropriately their habitus and doxa as in Bourdieu (1990).

<sup>29</sup> On the symbolic capital associated with the Nobel Prize in Economics, see Lebaron (2006).

umns, books, and interviews – have grown louder:

*“Changing paradigms is not easy. Too many have invested too much in the wrong models. Like the Ptolemaic attempts to preserve earth-centric views of the universe, there will be heroic efforts to add complexities and refinements to the standard paradigm. The resulting models will be an improvement and policies based on them may do better, but they too are likely to fail. Nothing less than a paradigm shift will do”* (Stiglitz 2010).

Stiglitz clearly lays out the stakes, calling for a veritable revolution in the field of economics, and not just for the use of alternate assumptions within the ‘protective belt’, or for greater room for dissenting views within the mainstream paradigm. But the path to be taken to achieve this revolution remains unclear. In recent articles (Stiglitz 2009b, 2011) intended for an academic audience, he sharply attacks the mainstream paradigm for its empirical anomalies, *ad hoc* parameter settings, and, in particular, the inappropriateness of its assumptions about representative agents. Yet he notes that these points of criticism have been raised many times before in the past, and that this is precisely the reason why theoretical variations exist within the mainstream paradigm. Nevertheless, he sees a burgeoning paradigm shift, from a ‘competition paradigm’ to an ‘information paradigm’, and not just a state of variation with the mainstream (like most neo-Keynesians), because he views informational asymmetries as ubiquitous, and the associated phenomenon of market failure as systematic and inevitable:

*“In the aftermath of the Great Depression, a peculiar doctrine came to be accepted, called the neo-classical synthesis. It argued that once markets were restored to full employment, neo-classical principles would apply – the economy would be efficient. ... The irony, of course, was that other strands of modern economic theory, including the theory of imperfect information to which I have contributed, were simultaneously explaining why markets often do not work so well. Bruce Greenwald and I, for instance, showed that the reason that Adam Smith’s invisible hand often appeared invisible was that it was not actually there: market equilibria were not constrained Pareto efficient whenever there were information imperfections and asymmetries and imperfect risk markets - **that is always**”* (Stiglitz 2009b: 293; my emphasis).

Under these conditions, using the optimal market outcome as an ‘ideal solution’ and as a negative heuristic of the paradigm is deeply flawed. Furthermore, a fundamental skepticism toward government intervention is untenable as an economic policy stance. Elsewhere, however, Stiglitz had to acknowledge the limitations of his critique (in particular with respect to the neo-Keynesian pole of the mainstream):

*“My research over the past thirty years has focused, however, on only one aspect of my dissatisfaction with that paradigm. It is not easy to change views of the world, and it seemed to me the most effective way of attacking the paradigm was to keep within the standard framework as much as possible. I only varied one assumption – the assumption concerning perfect information – and in ways which seemed highly plausible”* (Stiglitz 2002b: 519-20).

A truly heterodox understanding of economics is unlikely to be built on this foundation, and Stiglitz's early calls for a more interdisciplinary cooperation in economics (2002b: 520) – interpretable as a receptiveness to alternate methodologies<sup>30</sup> – have not reappeared in his work since the outbreak of the global financial crisis, despite its implications for the legitimacy of the mainstream. It should thus come as no surprise that for all of Stiglitz's emphasis on paradigm shift, we find no mention of heterodox literature in his work, much less of heterodox research programs.

### 3.2 Paul Krugman

Paul Krugman was born in 1953 in Albany, New York. After receiving his bachelor's degree in economics from Yale, he earned his Ph.D. at MIT in 1977 with a dissertation on trade theory supervised by Rüdiger Dornbusch. Since then, Krugman has held positions at various elite universities, including MIT and Princeton, and was a member of the Council of Economic Advisors (CEA) under Reagan from 1982 to 1983. In 1991 he received the John Bates Clark medal from the American Economic Association, and in 2008 he was awarded the Noble Prize in Economics for his work in developing New Trade theory (NTT). The parallels between the careers of Stiglitz and Krugman are strikingly apparent – even if Krugman achieved much more at an early age, has held fewer positions (a possible indicator of influence in the economics community), has never been the editor of a major U.S. economics journal, and has only served as president of the marginally influential Eastern Economic Association (2010). While bibliographic rankings invariably name him as one of the world's top 50 economists, Kromphardt's (2013: 180) assertion that Krugman is 'the most influential Keynesian' is somewhat tenuous, given that Krugman is specialized in the somewhat peripheral sub-field of international economics, and not in the core areas of macroeconomic theory.

Beyond his academic activities Krugman is also an author of books and columns geared to layman readers (see Krugman 1995, 1998, 1999, 2012). In his popular blog, *Conscience of a Liberal*, Krugman regularly engages in withering critiques of the economics profession. In a 2009 article in 'The New York Times' titled 'How Did Economists Get It So Wrong' Krugman offers up particularly pointed criticism. He not only chastises mainstream economists for failing to predict the global financial crisis; he also claims that their excessive faith in the efficiency of markets was a contributing factor in the crisis:

*“As I see it, the economics profession went astray because economists, as a group, mistook beauty, clad in impressive-looking mathematics, for truth. Until the Great Depression, most economists clung to a vision of capitalism as a perfect or nearly perfect system. That vision wasn't sustainable in the face of mass unemployment, but memories of the Great Depression faded, economists fell back in love with the old, idealized vision of an economy in which rational individuals interact in perfect markets, this time gussied up with fancy equations. ... Unfortunately, this romanticized and sanitized vi-*

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<sup>30</sup> Interestingly, much of this has been left out in the revised version of his Nobel Prize speech published in the *American Economic Review* (see Stiglitz 2002c: 486 - 87).

*sion of the economy led most economists to ignore all the things that can go wrong. They turned a blind eye to the limitations of human rationality that often lead to bubbles and busts; to the problems of institutions that run amok; to the imperfections of markets – especially financial markets – that can cause the economy’s operating system to undergo sudden, unpredictable crashes; and to the dangers created when regulators don’t believe in regulation” (Krugman 2009).*

Although Krugman does not directly address the need for paradigm shift, his statements exhibit the characteristics requisite for the rise of a heterodox paradigm (see Table 1): the abandonment of unrealistic core assumptions; skepticism toward reality-skewing formal deductivism; and the rejection of market efficiency and stability (the ‘negative heuristic’). Yet in the same breath as Krugman stresses the difficulty of developing an alternate paradigm, he refers generally to ‘behavioral finance’ as “the kind of economics I have in mind” (Krugman 2009), without bothering to cite existing heterodox theories that could pave the way to a new paradigm. One doesn’t have to agree with John Cochrane’s (2011) fundamental critique of Krugman<sup>31</sup> to recognize that the ‘dissenting’ approaches advanced by Krugman have long since become part of the DSGE mainstream (see Table 1). Furthermore, the only paper by Krugman that points in the direction of establishing an alternate theoretical and methodological approach to economic questions is ultimately disappointing. In Eggertsson & Krugman (2012) he describes Keynesian ‘phenomena’ such as the short-term underutilization of resources as a result of underconsumption, and explains how it is impossible to return to optimal equilibrium through price flexibility. And while the paper also endorses several ‘Keynesian recommendations’ such as price rigidities as well as monetary and financial policy interventions, none of this is done on the basis of an alternate paradigm. Instead, the paper merely posits an exogenous shock, employs a number of selective assumptions, and distinguishes between short-term outcomes influenced by disequilibrium and long-term outcomes that are not. In short, despite Krugman’s sharp anti-dogmatic rhetoric and frequent words of homage to Keynes<sup>32</sup> – which have led some commentators to erroneously designate him as a post-Keynesian (see Rezende 2009) – there is a conspicuous absence of new theoretical content in his writings, as well as a total failure to engage with important heterodox literature (see also Vernengo 2010: 392-93).<sup>33,34</sup>

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<sup>31</sup> Cochrane writes, “Krugman isn’t trying to be an economist: he is trying to be a partisan, political opinion writer ... if you do not regard economics as a science; a discipline that ought to result in quantitative matches to data; a discipline that requires crystal-clear logical connections between the ‘if’ and the ‘then,’ ... then his writing makes sense” (2011: 39).

<sup>32</sup> Krugman’s high opinion of Keynes is particularly evident in his forward to the new American edition of *The General Theory*.

<sup>33</sup> The only heterodox source that Eggertsson & Krugman cite is Minsky (1986), and here we find only passing mention. As Palley (2013) correctly observes, this approach is all too common among defenders of the mainstream who endorse a heterodox viewpoint but then co-opt the critique by incorporating it into the dominant paradigm. Such economists attempt to establish their heterodox credentials by citing standard sources such as Minsky, yet they fail to acknowledge studies that elaborate on these standard sources, and demolish the mainstream approach. While Krugman’s work points toward the need for a revolution in economic theory, closer inspection reveals that this revolution ought to be avoided. Krugman’s calls for change might be characterized as ‘rearranging the deck chairs on the Titanic’.

<sup>34</sup> Tellingly, Krugman’s response to a friendly article about the heterodox economist Wynne Godley in the *New York Times* (see Schlefer 2013) shows little knowledge of his work and takes a rather hostile position (see Krugman 2013).

#### 4. A Revolution in Economics in the Offing? Concluding Remarks

The global financial crisis has clearly been a matter of great consternation for the business-as-usual faction within the field of economics. In the years of the Great Moderation (see Summers 2005, Bernanke 2012), proponents of the mainstream heralded a veritable end of history in economics, with Robert E. Lucas (2003: 1) announcing that the “central problem of depression-prevention [has] been solved, for all practical purposes.” The breakdown in economic systems witnessed from 2007 onward was practically unthinkable, and left many economists confused and uncertain. While this jolt to the complacency of mainstream thought led to some reflective works from establishment figures such as Olivier Blanchard (et al. 2010) and Michael Woodford (2010), the awarding of the Noble Prize in Economics to two proponents of the core doctrines of the DSGE mainstream in 2011 marked the end of this ruminative period<sup>35</sup>. Despite the signal sent by bestowing the Noble Prize on two committed ideologues, it is fairly certain that the pendulum will soon swing back toward neo-Keynesianism, as this school is better suited to addressing today’s problems. Quite simply, the current awareness of market imperfections implies the need for economic policy intervention, and neo-Keynesianism furnishes better insights into how stimulative measures influence macroeconomic growth (see Bean 2010). We can also expect the trend of studies assessing the financial system and its destabilizing potential to continue, and are likely to see further growth in the subfields of behavioral economics and behavioral finance (see Allington et al. 2011: 17).

Table 2: Stiglitz and Krugman

	Stance and Contributions	Academic Influence
<b>Joseph Stiglitz</b>	<ul style="list-style-type: none"> <li>* Vehement critic of the mainstream</li> <li>* Author of important works on key theoretical issues (macroeconomics)</li> <li>* Proponent of a new information economy paradigm</li> </ul>	<ul style="list-style-type: none"> <li>* Nobel laureate (2001)</li> <li>* Editor of important professional journals:               <ul style="list-style-type: none"> <li>- <i>Journal of Economic Perspectives</i> (1986–93)</li> </ul> </li> <li>* Co-initiator of the well-endowed Institute for New Economic Thinking</li> <li>* President of professional associations:               <ul style="list-style-type: none"> <li>- The Eastern Economic Association (2008–09)</li> <li>- The International Economic Association (2011–13)</li> </ul> </li> <li>* Member of the Council of Economic Advisers (1993–97)</li> <li>* Author of influential textbooks:               <ul style="list-style-type: none"> <li>- <i>Economics</i> (with C.E. Walsh)</li> <li>- <i>Principles of Macroeconomics</i> (with C.E. Walsh)</li> <li>- <i>Economics of the Public Sector</i> (these textbooks discuss only the traditional canon of ideas)</li> </ul> </li> </ul>
	<ul style="list-style-type: none"> <li>* Vehement critic of the mainstream</li> <li>* Author of important works in trade theory, a non-core subject area in</li> </ul>	<ul style="list-style-type: none"> <li>* Nobel laureate (2008)</li> <li>* President of professional associations:</li> </ul>

<sup>35</sup> Christopher Sims and Thomas Sargent, who received the Noble Prize for their work on cause and effect in macroeconomics, purport to demonstrate that political intervention is ineffective.

<p><b>Paul Krugman</b></p>	<p>economics  * Does not advocate for a specific alternate paradigm</p>	<p>- The Eastern Economic Association (2010)  * Member of the Council of Economic Advisors (1982–83)  * Author of influential textbooks:  - <i>International Economics</i> (with Maurice Obstfeld)  - <i>Macroeconomics</i> (with Robin Wells)  - <i>Microeconomics</i> (with Robin Wells)  (these textbooks discuss only the traditional canon of ideas)</p>
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Yet at the present time we have yet to see anything like a true paradigm shift, let alone a greater receptiveness to a plurality of views (see Galbraith 2013: 312) – an attitude Lakatos (and Feyerabend) believed was necessary for the advancement of knowledge. And the assessments of Stiglitz and Krugman, perhaps the two most prominent critical voices inside the American economics establishment, leaves little room for optimism:

1. Both Stiglitz and Krugman have strong reputations (see Table 2), yet neither of them appear influential enough to initiate a revolution in thought on their own<sup>36</sup>.
2. A true change in the field of economics would require a shift in negative heuristics, which is to say, a shift in the axiomatic, methodological and epistemological openness of the discipline. While both Krugman and Stiglitz advocate a negative heuristic different from that of the mainstream, they do not support less rigorous formalism or more axiomatic openness.<sup>37</sup>
3. Ultimately, mainstream economists' ignorance of heterodox approaches (Colander 2010) needs to be countered with discussion of works by prominent researchers advocating novel approaches to economics. The near total absence of heterodox sources in papers authored by Krugman und Stiglitz underscores their reliance on mainstream views.

In this paper, we sought to assess the likelihood of a revolution in thought emerging from the economics establishment in the U.S. – that is, from the dominant center of knowledge production in the discipline. For those who believe that productive change within a branch of knowledge hinges crucially on its receptiveness to a plurality of ideas, our findings are not encouraging. Yet the conclusion that innovation is unlikely from within the discipline merely implies that momentum for change is required from without. While this momentum could potentially emerge from a broad-based social movement (such as that seen in the 1960s; see e.g. Reich (1993: 45), Lee (2004: 184ff), Mata (2009)), the adoption of new guidelines in academia (such as mandatory charters for intellectual diversity<sup>38</sup>), or massive financial incentives (such as special subsidies for

<sup>36</sup> Lebaron (20006) shows with reference to Gunnar Myrdal that not even the Nobel Prize safeguards against marginalization in an academic discipline.

<sup>37</sup> In this, both are different from other potential 'insider' critics of mainstream economics who are careful about their heuristic affiliation with mainstream economics and whose critique has been labelled as 'organized hypocrisy' (Vernengo 2010: 390).

<sup>38</sup> There is some evidence that university regulations advocating diversity were, at least, helpful in hiring the so called 'radical package' at the University of Massachusetts/Amherst in the early 1970s; see Katzner (2011: 118).



heterodox research)<sup>39</sup>, these topics lie beyond the scope of this paper. Nevertheless, one thing is clear: without meaningful change within the discipline, King's prediction that Post Keynesian economics may well be dead by 2020 is a likely scenario for the entire heterodox spectrum<sup>40</sup> (2002: 256).

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<sup>39</sup> The Institute for New Economic Thinking (INET) funded by George Soros appears to be based on these considerations. However, the very limited resources of INET can certainly not balance the economic capital position of heterodox economics with the mainstream assuming that INET really focusses on what has been classified as 'heterodox' here.

<sup>40</sup> It appears in this vein that Colander (2010) and Colander/Holt/Rosser (2010) argue in favour of a 'under-cover' inside-the-mainstream heterodoxy, which does not actively and in a hostile manner distinguish itself from the orthodoxy, yet remains critical to it. Although I am not convinced that such a 'Troian horse' strategy will work for it rests on the assumption that the differences (if not contradictions!) in methodology and heuristics can be successfully disguised, this may possible secure the odd academic position for some individuals but it certainly cannot contribute to what is at stake here: a paradigm shift or pluralisation in economics.

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