

Pragmatism and Dynamics: Does Pragmatist Adjustment Go All the Way Down?

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Abstract

Pragmatism has become an established academic topic focused on an accepted canon of works and a number of seminal authors. There is something ironic about this fixation of the Pragmatist tradition. An anticipation of transience and embrace of adaptability runs through many of the classic works of Pragmatism. Nevertheless, there seems to be a tendency to fixate Pragmatism and freeze it in its classic iterations, especially with respect to its philosophy of scientific inquiry. The article seeks to retrieve the dynamics and adaptability the classical Pragmatists built into their notion of scientific inquiry. It seeks to illustrate the need for such flexibility with recent developments in the field of economics. When the financial crisis struck in 2007-2008, this involved more than the insolvency of a number of large banks. The crisis, at the very least, also involved the bankruptcy of a dominant economic model. It raised questions about the rationality of markets and the widespread faith in soft-touch regulation. It cast doubt on decades of neo-classical economic dogma that counseled small government, privatisation, and free markets. Neo-classical economics did not float free from other concerns. It informed notions about the role of the state, the limits of public policy, and the scope of democratic decision-making. Indeed, faith in rational, self-correcting markets affected debates in disparate disciplines like law, political science, philosophy, ethics, and history in many non-trivial ways. Hence, the financial crisis is also a crisis of scientific research.

Keywords: pragmatism, dynamics, research methodology, financial crisis, social sciences

1 Introduction

Pragmatism has become an established academic topic focused on a widely accepted canon of classic pragmatist works and a number of undisputed seminal authors – from Charles Sanders Peirce, William James, and John Dewey to W.V.O. Quine, Wilfrid Sellars, Hilary Putnam and others. There is something ironic about this fixation of the pragmatist tradition. An expectation of transience, and an embrace of adaptability and adjustment, runs through many of the classic works of prag-

matism. Yet, the canonisation of pragmatism to a certain extent amounts to a fixation of pragmatism, to a freezing of pragmatism around a set of historical characteristics. Typically, this fixation is focused on pragmatism as a philosophy of scientific inquiry. The implicit assumption seems to be that even though through time pragmatism may generate new and different insights and be put in the service of new and different projects, its notion of truth and method of inquiry will remain largely unchanged. In 1930, Legal Realist Jerome Frank warned against such an ossification of scientific method in his notorious work *Law and the Modern Mind*. Science should not become ‘a new source of illusion, a new escape from change and chance, a new road to the absolute’.¹ What was needed, Frank argued, was not so much a scientific method, but a scientific ‘habit of thought’. This echoed William James’s shift from the notion that pragmatism amounted to a ‘method of inquiry,’ to the view that pragmatism was principally a guide for action, an ethic. It also tallied with John Dewey’s criticism that in their quest for certainty and immutability, modern philosophers had moved from uncovering truths about the nature of the universe to unveiling truths about the nature of knowledge. ‘If the conditions of the possibility of knowledge can be shown to be of an ideal and rational character,’ Dewey noted: ‘then, so it has been thought, the loss of an idealistic cosmology in physics can be readily borne’.²

To be sure, an acceptance of the revisability of all human knowledge, including knowledge about the gathering of knowledge, is almost a precondition for entry into the company of pragmatists. Yet, there is a wide range of belief with respect to the certainty and variability of scientific method among the adherents of pragmatism. Some – like Charles S. Peirce and Susan Haack – primarily stress the stability of scientific method and claim people have learned a great deal about the procedures that deliver dependable knowledge. This scientific practice and its attendant values and techniques deserve to be handled with care because it is our best hope for scientific progress.³ While others – most notably the late Richard Rorty – stress the changeable, even capricious, nature of research methods and claim the method of science is little more than a vocabulary to talk about reality.

1. J. Frank, *Law and the Modern Mind* (1970 (1929)), at 307.

2. J. Dewey, *The Quest for Certainty: A Study of the Relation of Knowledge and Action* (1960 (1929)), at 41-2.

3. S. Haack, *Manifesto of a Passionate Moderate: Unfashionable Essays* (1998), at 7-9.

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Pragmatists like Dewey argued for the ‘need to abandon traditional notions of rationality, objectivity, method and truth,’ according to Rorty, and moved ‘beyond method’. The history of science, in Rorty’s view, illustrates ‘the power of new vocabularies rather than the secret of scientific success’.⁴

Pragmatism navigates a course somewhere between these opposite poles of stability and dynamics, of scientific realism and nominalism, and it is difficult to pinpoint exactly what coordinates it should track. Haack has argued forcefully – and pertinently – against neo-pragmatists, like Rorty, that veer off too far to the nominalist end of the spectrum. I have argued elsewhere that these objections are cogent.⁵ Yet, that does not mean that Haack’s alternative, and the Peircean inspiration it draws on, plots a uniquely right trajectory for pragmatism, i.e. that Haack’s species of pragmatism gets the balance between scientific realism and nominalism exactly right. Indeed, in this paper I will argue that Haack’s course, in turn, strays too far to the realist end of the spectrum. This makes pragmatism look too fixed and stable and too much like another version of scientific realism. Haack’s unadulterated Peircean understanding of the pragmatist conception of science creates problems with other central aspects of pragmatism. It leads to a conception of scientific method that is out of tune with pragmatist notions about holism, situatedness, and action.

But what does the pragmatist embrace of dynamics mean with respect to inquiry? If the dynamics of pragmatism with respect to research involves more than changes in topics and subject matter, then what does it entail? Does it remain limited to theoretical changes in the way phenomena are conceived and conceptualised? Does it affect heuristics and methodology? Or does it go all the way down and affect basic notions about science and the pursuit of knowledge? I will argue that there are a number of aspects to pragmatism that suggest pragmatists should expect the practice of scientific research to change and evolve more readily and more radically, than is often assumed. Notably, the embrace of epistemological pluralism, the emphasis on scientific research as a form of action, and the belief in the continuity of means and ends conspire to make for a rather more dynamic notion of scientific practice.

I will illustrate these three aspects of the pragmatist understanding of scientific inquiry by looking at recent developments in the field of economics, most notably at the slow demise of central tenets of neo-classical economic theory, which held sway in economics and public policy since at least the 1980s. When the financial crisis struck in 2007–2008, this involved more than the insolvency of a number of large banks. The crisis also involved the bankruptcy of the business practices of these banks. It raised questions about the rationality of

the market, the belief in the wisdom of crowds, and the widespread faith in soft-touch regulation. It cast doubt on several decades of neo-classical economic dogma that counseled small government, privatisation, and free markets. For Alan Greenspan, Chairman of the Federal Reserve and high priest of neo-classical orthodoxy, the failure of neo-classical economics in the financial crisis evidently involved a failure of his whole *Weltanschauung*. At the hearings of House Committee on Government Oversight and Reform Greenspan was clearly taken aback by the events of 2008. When Chairman Henry Waxman put it to Greenspan: ‘In other words, you found that your view of the world, your ideology, was not right. It was not working’. Greenspan answered: ‘That’s precisely the reason I was shocked, because I had been going for forty years or more with very considerable evidence that it was working exceptionally well’.⁶ In Greenspan’s Damascene conversion in the wake of the financial crisis there was much more at stake than just the falsification of an economic theory. Neo-classical economics does not float free from other concerns. It is an economic world view that was extraordinarily successful in the last three decades and that informed notions about the role of the state, the limits of public policy and the scope of democratic decision-making. Hence, beyond the field of economics, faith in rational, self-correcting markets also affected debates in disciplines like law, political science, philosophy, ethics, and history in many non-trivial ways. Thus, the financial crisis undermined not only the confidence people had in their economic model, but also in their wider public philosophy; the regulatory models they had adopted,

4. R. Rorty, ‘Method, Social Science, and Social Hope’, XI:4 *Canadian Journal of Philosophy* 569, at 582 (1981).

5. W. de Been, *Legal Realism Regained: Saving Realism from Critical Acclaim* (2008).

6. This dramatic volte face of Alan Greenspan with respect to his unshakable faith in rational markets drew a lot of attention. (He has backtracked on his confession of being mistaken, since.) By no means was Greenspan alone, however. Another remarkable turnaround was the loss of faith of one of the champions of law-and-economics and self-declared pragmatist, Richard Posner. Posner had built his career as a law-and-economics scholar on the application of rational market theory to legal questions. When this theory was punctured, Posner dramatically distanced himself from decades of economic dogma and announced his embrace of Keynesianism. In a 2009 article in *The New Republic* he claimed: ‘We have learned since September that the present generation of economists has not figured out how the economy works’. As a result, the economics profession had few suggestions on how to deal with the crisis: ‘Not having believed that what has happened could happen’, Posner commented: ‘the profession had not thought carefully about what should be done if it did happen’ (R. Posner, ‘How I Became a Keynesian’, *The New Republic* September 2009, <www.newrepublic.com/article/how-i-became-keynesian> (Consulted 24-6-2013) at 1).

and the new balance they had pursued between the private and the public sphere.⁷

The crisis of the dominant approach to economics of the last three decades provides a vivid illustration of the way pragmatists looked at scientific knowledge, i.e., as warranted beliefs rooted in the world of practice that could be more or less useful in dealing with reality, not as theories that necessarily reflected the true nature of the phenomenon under study. For pragmatists like Dewey and James, the world could not be neatly carved up between disinterested scientific research and the social and economic projects people engaged in. They always understood scientific research as something that emanated from the practical concerns of a particular social, cultural, and historical setting. James proposed a holistic understanding of truth. Knowledge of the world was part and parcel of the larger context within which scientific research took place: i.e., the existential setting researchers found themselves in and the practical projects they saw themselves as part of. James and Dewey would not have been surprised about the way worldly success could push to the side hesitation and doubt like it did in the run-up to the financial crisis. Even though James is often mistakenly criticised for coarsely reducing truth to what is expedient to believe, for focusing on the ‘cash value of ideas’, he was keenly aware that accomplishment and affluence could warp your understanding and moral stance. In a letter to H.G. Wells he wrote famously: ‘The moral flabbiness born of the exclusive worship of the bitch-goddess SUCCESS. That – with the squalid cash interpretation put on the word success – is our national disease’. This article will interrogate the interconnections between science and society, including the ‘squalid’ ones on display in the recent financial crisis, and see to what extent the dynamics they set in motion fit with a pragmatist understanding of scientific inquiry. This interrogation will be organised around three central pragmatist themes and their consequences for scientific inquiry: (1) the irreducible pluralism of reality, (2) research as a form of action, and (3) the pragmatist notion of continuity between means and ends.

7. Indeed, several authors have pointed to the pervasive influence of free-market economics in recent decades, well beyond the confines of the discipline. In his short treatise on *What Money Can't Buy*, Michael Sandel claims that ‘we drifted from *having* a market economy, to *being* a market society’, which he defines as ‘a way of life in which market values seep into every aspect of human endeavor’ (M. Sandel, *What Money Can't Buy: The Moral Limits of Markets* (2012), at 10-11). Indeed, Sandel believes market reasoning is so ingrained in the U.S. that even the 2008 financial crisis has not led to a loss of faith in markets. German cultural theorist Joseph Vogl claims that the providentialist eighteenth century notion of ‘theodicy’, of the world as an expression of divine will, has secularized into the present-day notion of ‘oikodicy’, of the world as the benevolent outcome of beneficent market forces. The ghost of the free-market is everywhere and giving everyone their just deserts (J. Vogl, Joseph, *Das Gespenst des Kapitals* (2010, 2011)). Robert Skidelsky claims that today ‘mainstream economics is in fact an ideology – the ideology of the free market’ (R. Skidelsky, ‘Post-Crash Economics’ *Project Syndicate*, <www.project-syndicate.org/commentary/robert-skidelsky-knocks-the-scientific-halo-off-mainstream-economists--teaching-and-research> (Consulted 24-6-2014)).

2 Situatedness and Epistemological Pluralism

In his lecture on Pragmatism Putnam claims that William James ‘tries to “humanize” the notion of truth, to view it (as he views all notions) as a human instrument, and not as an idea that dropped from the sky’.⁸ This introduces the first problem with a static notion of pragmatism. If people are not disinterested intelligences floating free from any worldly concerns and formulating detached hypotheses about the nature of reality but situated and involved intelligences trying to find practical answers to the going concerns of their societies, then this opens the notion of science up to pluralism, to a variety of perspectives rooted in diverse contexts, and focused on the solution of diverse problems.

Pluralism is a well-known theme in James’s work, of course. In the preface to his *Talks to Teachers*, James noted that according to his pluralistic philosophy:

...the truth is too great for any one actual mind, even though that mind be dubbed ‘the Absolute,’ to know the whole of it. The facts and worths of life need many cognizers to take them in. There is no point of view absolutely public and universal. Private and incommunicable perceptions always remain over, and the worst of it is that those who look for them never know *where*.⁹

This could be interpreted to mean simply that human perspectives are limited; that people can only survey their piece of the puzzle but never the whole jigsaw; that there are supplemental points of view that are not reflected even in the most comprehensive, state-of-the-art statement of the truth we can muster.

There are good reasons to assume that such an interpretation would be too modest, though. James’s pluralism is more thoroughgoing than that. One of the reasons James was preoccupied with pluralism was his worry that a monistic world would lack freedom. A pluralistic world provided room for choice, freedom, chance, and novelty, whereas a monistic world was deterministic and closed. Moreover, in *A Pluralistic Universe* James contended that his finite experiences as a finite being precluded access to any absolutes, anyway:

What boots it to tell me that the absolute way is the true way; and to exhort me, as Emerson says, to lift mine eye up to its style and manners of the sky, if the feat is impossible by definition. I am finite once and for all, and all the categories of my sympathy are knit up with the finite world *as such*, and with things that have a history.¹⁰

8. H. Putnam, *Pragmatism: An Open Question* (1995), at 21.

9. W. James, *Talks to Teachers on Psychology: And to Students on Some of Life's Ideals* (1905 (1899)), at v.

10. W. James, *A Pluralistic Universe* (1912), at 48.

‘If we were *readers* only of the cosmic novel, things would be different: we should then share the author’s point of view’, James noted. However, he pointed out: ‘we are not the readers but the very personages of the world-drama’ and the ‘tale which the absolute reader finds so perfect, we spoil for one another through our several vital identifications with the destinies of the particular personages involved’.¹¹

In *A Pluralistic Universe*, moreover, James stressed the understanding of our concepts as the tools on hand to cope with our experience, not as absolutes that held sway beyond time and place. He praised Henri Bergson for ‘his attempt to limit the divine right of concepts to rule our mind absolutely’ and for his conception of philosophy as lying ‘flat on its belly in the middle of experience, in the very thick of its sand and gravel [...] never getting a peep at anything from above’.¹² In a similar vein, Dewey drew the conclusion from Darwin that the world was in perennial flux and that even such basic categories as natural species lacked a true and permanent nature. They should not be treated as permanent fixtures but only as temporary classifications of evolving organisms. ‘[I]n treating the forms that had been regarded as types of fixity and perfection as originating and passing away’, Dewey wrote, ‘the “Origins of Species” introduced a mode of thinking that in the end was bound to transform the logic of knowledge’.¹³

James’s pluralism, moreover, was tied to his concerns about what we would now call ethnocentrism. Overestimation of the rightness of our own understanding and ‘pronouncing on the meaninglessness of forms of existence other than our own’, James considered a serious moral failure.¹⁴ Indeed, he warned against ‘the stupidity and injustice of our opinions, so far as they deal with the significance of alien lives’, and ‘the falsity of our judgments, so far as they presume to decide in an absolute way on the value of other persons’ conditions or ideals’.¹⁶

The picture Susan Haack paints of pragmatism is quite different in tone and substance from James’s pluralistic notion. With respect to scientific knowledge, the humility of James is gone in Haack’s work. She defends science with the temperament of a confident realist, but for the classic pragmatists like Dewey and James scientific knowledge, and our procedures for gathering it, always remained provisional and tentative. They saw scientific knowledge as makeshift explanations that helped people deal with the world around them, but they made no ontological claims about the nature of reality. Haack’s account does not share this agnosticism about scientific knowledge. When it comes to defending science, she

happily adopts the title of ‘old-fashioned prig’ as a badge of honour. For Haack science is best, whether it is pre-eminently a Western invention or not and claims it is an ideal of incalculable value to the whole of humanity.¹⁷

Hence, her understanding of science leaves much less room for pluralism. Indeed, she proposes the metaphor of the crossword puzzle to exemplify what scientific research is like. Haack contends that she was struck by the notion ‘that the way a person’s beliefs about the world support one another is rather like the intersecting entries in a crossword’. Much like scientific inquiry, according to Haack, an entry in a crossword puzzle depends on three factors: ‘how well it is supported by its clue and any already-completed intersecting entries; how reasonable those intersecting entries are, independent of the support given them by the belief in question; and how much of the crossword has been completed’.¹⁸

Haack gets a lot of things right about pragmatism, but there is something distinctly un-pragmatic about this crossword metaphor. It suggests there is an underlying framework to reality, God’s own crossword, waiting there to be uncovered and filled in by scientists and researchers using a single, commensurate vocabulary. That task is vast, and there are likely to be many disagreements about the entries different researchers suggest, – hence, pragmatists are right to hedge their bets on the truth for the time being – but at the end of time the whole crossword will be filled out, and the one true solution will be known. This is a view where truth is found, not made; where absolutes may be bracketed for the time being but are assumed in the long run; and where all knowledge can be transcribed into a single discourse. It is a view that comes close to the ‘epistemologically-centred philosophy’ that Richard Rorty criticised for wanting ‘notions of “method” and “rationality” which signify more than good epistemic manners, notions which describe the way in which the mind is naturally fitted to learn Nature’s Own Language’; or in case of Haack, notions that describe the way in which the mind is naturally fitted to fill in Nature’s Own crossword puzzle.¹⁹

This crossword image is not simply an unfortunate metaphor that suggests an unrepresentative interpretation of Haack’s ideas. On the contrary, the crossword analogy ties in with Haack’s notion of scientific concepts and research terms corresponding to real categories in empirical reality, providing accurate descriptions of the furniture of the universe. Explanation and prediction, Haack states, require ‘the classification of things into real kinds’.²⁰ ‘[A] vocabulary can not only be more or less convenient or more or less transparent in meaning, but also – most importantly – more or less successful at

11. James, above n. 10, at 48-9.

12. James, above n. 10, at 277.

13. J. Dewey, *The Influence of Darwin on Philosophy and Other Essays* (1997 (1910)), at 1-2.

14. W. James, *On A Certain Blindness in Human Beings* (1900), at 45.

15. For a thorough discussion of James’s ethical concerns in relation to pluralism see: R. Bernstein, *The Pragmatic Turn*, Cambridge: Polity (2010), at 61-9.

16. James, above n. 14, at 4.

17. Haack, above n. 3, at 146-7.

18. Haack, above n. 3, at 85-6.

19. R. Rorty, ‘Method, Social Science, and Social Hope’, XI:4 *Canadian Journal of Philosophy* 569, at 573 (1981).

20. S. Haack, *Defending Science – Within Reason: Between Scientism and Cynicism* (2003), at 66.

identifying kinds of stuff, or phenomenon'.²¹ Haack's focus is on the notion that there is simply one world that exists independently from us, a world that is a certain way whatever we think of it and that falls apart into natural categories independent of the way people describe the world. Hence, even though this world can be described in different languages, ultimately these descriptions must be translatable into a single language and must conform to the way the world is to allow for aggregation into a coherent, non-contradictory representation of the *one* world.

Usually pragmatists reject this as the 'myth of the given', of course, the notion that there is a given categorical structure to the world which imposes itself on the mind.²² Whatever their differences, for the pragmatists the relation of our theories and conceptions and the empirical world was much messier. James and Dewey believed scientific questions were ultimately rooted in the practical world and continuous with the problems people faced. Different people living in different social and cultural conditions, had different angles on reality and pursued different purposes when they interacted with the world. Rorty put it succinctly when he said that Dewey saw 'vocabularies as instruments for coping with things rather than representations of their intrinsic natures'.²³ The same could be said about James. Facts were not theoretically innocent. They were creatures of the theoretical perspective. As a result, the pragmatists believed that research was always infused with the concerns of a particular time and place and always bore the hallmarks of its context of origin. It was impossible to steer clear of the perspective that informed and inspired the research. Somebody like James knew very well, Putnam notes, that when there is disagreement about scientific theories, when 'disputes break out at a fundamental level, they always cross boundaries; philosophical issues are mixed with "scientific" ones, and cultural and even metaphysical preconceptions play a role'.²⁴

From a pragmatic point of view the pursuit of science looks much less like a linear progress towards ultimate truth and much more like a succession of makeshift solutions that wed previous conceptions of reality to new, incongruous, empirical data with the least amount of disturbance. 'Any idea', James noted: 'that helps us to deal, whether practically or intellectually, with either the reality or its belongings, that doesn't entangle our progress in frustrations, that *fits*, in fact, and adapts our life to the reality's whole setting, will agree sufficiently to meet the requirement. It will hold true of that reality' (James 2011 (1907), p. 222). The metaphor of the crossword, with its pre-given spaces to fill in and implicit assumption that all truth can be transcribed into a single vocabulary, seems far too restrictive to accommodate the kind of creativity implied in James's account. Maybe a better metaphor for the pragmatic conception of knowl-

edge would be that of a city being fitted into a landscape. An urban development has to obey basic physical constraints and the lay of the land. Moreover, it has to conform to the basic social and physical needs of the people that live there. But over and above that, there is much room for different solutions and local variations in style. The city can be developed into different directions and can be planned in different ways. Nothing is permanent. Even its basic street plan could in theory be revised retroactively, although only at great cost. Within a number of basic constraints – the unyielding stubbornness of empirical reality – much remains plastic.²⁵ If James tried to 'humanise' the notion of truth, as Putnam suggests, then the recent vicissitudes of economics reveal a discipline that is 'all too human'. The pragmatists would not have been surprised by the fact that economics fell short of being a pure science, aimed at unassailable objective knowledge about economic behaviour, and simply turned out to be, in the words of Stiglitz, 'free market capitalism's biggest cheerleader'.²⁶ To a certain extent, the pragmatists would have expected a symbiotic relationship between the general push and thrust of society and the research of its social scientists and policy experts. (That is not to say that they would have approved of the, almost religious, zeal with which many politicians, bankers, business people, and academics supported rational self-regulating markets in the boom years. Indeed, the success-worship that James saw as a 'national disease' at the end of the Gilded Age, he probably would have recognized as a character flaw in what Paul Krugman has termed our 'Second Gilded Age'.²⁷

The lesson to be learned from pragmatism with respect to the role of economics in the financial crisis is that, instead of unflinching loyalty to our hard-won theories, we should take a more agnostic attitude towards our deeply held scientific convictions and be ready to abandon them when they no longer help us deal with reality

21. Haack, above n. 20, at 67.

22. The phrase 'myth of the given' derives from the work of Wilfrid Sellars.

23. Rorty, above n. 19, at 576.

24. Putnam, above n. 8, at 15.

25. Interestingly, Haack presents a similar metaphor when she talks about the social sciences. The social sciences need to fit with the truths uncovered by the natural sciences even if their subject matter – culturally heterogeneous social behaviour – does not allow for the same type of determinate scientific explanation. When thinking about the integration of the social and the natural sciences, Haack argues, a good model 'might be a map in which depiction of the roads, towns, etc. is superimposed on a delineation of the contours of the same territory, and integrated in virtue of the fact that the roads go around the lake and through the pass in the mountains, that the town is on, not in the river, and so on. The natural sciences draw a contour map of the biological determinants of human nature and the biological roots of human culture, on which the social sciences superimpose a road map of marriage customs in New Guinea, the failures of the Soviet economy, the rise of modern science in seventeenth-century Europe, and so on' (Haack, above n. 20, at 161). The drift of this landscape metaphor is very different, though. Haack is not trying to say that reality can be conceptualised differently, i.e. that different cities can be fitted into a given landscape – which I understand to be the pragmatic stance on research in both natural and social science, – but that the social sciences study a miscellany of changeable cultural and social phenomena that all need to obey a set of basic biological givens of human life established by the natural sciences.

26. J. Stiglitz, *Freefall: America, Free Markets, and the Sinking of the World Economy* (2010), at 238.

27. P. Krugman, *End This Depression Now!* (2013 (2012)), at 71-5.

and ‘start to entangle our progress in frustrations’. The economics of efficient markets, it is good to remember, had all the hallmarks of a rigorous science. The models, Krugman points out, ‘were wonderfully elegant’, and demanded ‘formidable math skills’. They were not only highly lucrative, turning business school professors in ‘Wall Street rocket scientists, earning Wall Street paychecks’, but they were also grounded in ‘a great deal of statistical evidence, which at first seemed strongly supportive’.²⁸ In short, it involved exactly the type of science that scientific realists hold up as a model. If we imagine the insights of neo-classical economics entered in a crossword, there would be a great many mutually supporting entries with independent support. And, for a while, it all worked wonderfully well.

But then the financial crisis hit and the roof caved in on the world economy. Almost overnight, for many people, neo-classical economics and its policy recommendations changed from prestigious scientific theory into ruinous scientific delusion. The queen of the social sciences became the dismal science once more. For economics to put all its eggs in the neo-classical basket proved to be a costly error. If the efficient markets model had not been embraced as the last word on economics, but only as one of several possible ways to look at economic behavior, economics would have had a wider range of theoretical resources and conceptual tools available to deal with the collapse of the financial system, a collapse that the neo-classical model had simply ruled out as a possibility. The increasing professionalisation of economics and the drive to be rigorous and scientific had led economists to embrace increasingly sophisticated mathematics and increasingly complex models of economic behaviour. This had a marked effect. Essentially it put macroeconomics – historically concerned with diagnosing systemic, economy-wide problems – on a microeconomic footing – focused on models of rational actors efficiently pursuing their interests, models that could be translated into elegant statistical equations. ‘Economists are all too often preoccupied with petty mathematical problems’, Thomas Piketty remarks, an obsession that provides ‘an easy way of acquiring the appearance of scientificity without having to answer the far more complex questions posed by the world we live in’.²⁹ Other perspectives on economics were marginalised as a result. Indeed, Keynes, or anyone who referred to Keynes, Krugman notes, ‘was banned from many classrooms and professional journals’.³⁰

Such a consensus on what constitutes valid economic knowledge can also turn out to be mere groupthink, of course. This seems a fair characterisation of the period leading up to the credit crisis. Alternative perspectives got no hearing and reports about growing imbalances were ignored. Hence, when central bankers claimed that no one had predicted the bubble before it broke, Stiglitz notes that in a sense they were right: ‘no one *with credi-*

bility in their circle challenged the prevailing view, but there was a tautology: no one challenging the prevailing view would be treated as credible. Sharing similar views was part of being socially and intellectually acceptable’.³¹ The insights into market failures and the hazards we were facing were typically assembled by people outside of the dominant paradigm and they were marginalised. The dominant paradigm was equated with success and scientific rigor: ‘The ideologues of the Right and the economists who gave them succor – supported by the financial interests who were doing very well by the deregulation movement – chose to ignore these advances in knowledge. They chose to pretend that Adam Smith and Friedrich Hayek had had the last word to say on market efficiency – perhaps updated by some fancy mathematical models corroborating the results’.³²

When we leave aside the question whether the pragmatists would have considered neo-classical economics and its market worship a contribution to human flourishing, then the intermeshing of economics, politics, and policy leading up to the credit crisis in itself is roughly in accordance with the way pragmatism understood science as a social practice. The pragmatists thought the notion of science as a detached and disinterested search for certain, and objective truth was hopelessly misguided and believed science should be seen as a human endeavor aimed at attaining human ends; as a tool in the service of human projects. Hence, while it worked, belief in neo-classical economics could be said to have been warranted. Yet, when neo-classical analyses no longer fit with events and no longer produced the consequences anticipated, pragmatists certainly would have thought this should have repercussions for the way economics was organised and economists conducted their research (which it did in fact for the one self-declared pragmatist law-and-economics scholar, Richard Posner.) Unfortunately, this is not how all economists see their own discipline. Many do not treat their economics paradigm as a tool that could be more or less useful, like Dewey and James suggested, but as an established body of objective, scientific knowledge, some outliers, and unexplained phenomena notwithstanding. (Rare exceptions like ‘an occasional world-economy-destroying crisis’ Krugman pointed out wryly.³³ These different attitudes towards scientific theory seem to play out in current debates among economists. Many of the arguments in economics, Krugman notes, are now about ‘pragmatism versus quasi-religious certainty’.³⁴ Krugman is not talking about classical, philosophical pragmatism here, to be sure, but his meaning is very much in the spirit of Dewey and James, nonetheless. Pragmatic economists who try to come up with unorthodox solutions for the current crisis, wherever they can find them, are pitted against economists who are waging religious war in the

28. Krugman, above n. 27, at 98-9.

29. T. Piketty, *Capital in the Twenty-First Century* (2014 (2013)), at 32.

30. Krugman, above n. 27, at 102.

31. Stiglitz, above n. 26, at 253.

32. Stiglitz, above n. 26, at 273-4.

33. Krugman, above n. 27, at 100.

34. Krugman, above n. 27, at 104.

name of the ‘One True Faith’ of efficient markets, no matter how discredited.

The catastrophic failure of economics in turn has led to calls to change the discipline. As Stiglitz notes, if you want to succeed in reforming the economy, you ‘may have to begin by reforming economics’.³⁵ Dick Thaler has called the assumption of rationality in question, fundamental for efficient market theory. The new field of behavioural economics, associated with name of Thaler, starts out from the assumption that people in fact are often quite irrational in their decision-making. It is an approach that does not allow for the precise modelling that has become stock-in-trade in economics. This precision is illusory at any rate, Thaler contends, because ‘human nature is a mess’. The choice between efficient market economics and behavioural economics, he notes, is ‘a choice between being precisely wrong or vaguely right’.³⁶ Robert Skidelsky, in turn, suggests taking the study of macroeconomics out of the business school ‘to protect macroeconomics from the encroachment of the methods and habits of mind of microeconomics’ and ‘mitigate the departmental concentration of maths-driven economics’. In graduate schools macroeconomics should be taught as a joint degree, Skidelsky believes, teamed up with disciplines like history, philosophy, sociology, politics, international relations, biology, or anthropology, to train macroeconomists ‘whose main value to society will lie as much in their philosophical and political literacy as in their mathematical efficiency’. Economics, Skidelsky believes, should abandon the drive ‘for uniting the whole of theory under the umbrella of rational expectations’ and acknowledge that ‘different knowledge assumptions are appropriate for different kinds of activity’.³⁷

It remains to be seen whether economics departments will engage in this type of restructuring. So far, the main drive to change economics as an academic discipline has come from students. Already in 2000, economics students at the University of Paris started what has become the Post-Autistic Economics Movement with a petition against the dominance of the neoclassical approach in the economics curriculum. In their petition they complained: ‘We no longer want to have this autistic science imposed on us’. Economics, they believed, had become an ‘autistic science’ with the instruction of neo-classical economics as if it were ‘THE economic truth’: ‘We do not accept this dogmatism. We want a pluralism of approaches, adapted to the complexity of the objects and to the uncertainty surrounding most big questions in economics’.³⁸ This protest spread across the world and led to an open letter from economics stu-

dents from seventeen countries calling on economics departments to reform their curriculum.

The call for reform picked up again after the 2008 financial crisis. At the University of Manchester, students founded the Post-Crash Economics Society as a response to the dearth of change in the economics curriculum after the 2008 crash. Their initiative led to similar revolts at economics departments across the UK. Five years after, the crash the students at the lamented the ‘monoculture in public and academic economics’ and argued for a broadening of the curriculum:

A situation in which the vast majority of professional economists, economic commentators, politicians and academics have studied only one economic paradigm is unacceptable as we struggle to manage [an] economic crisis and achieve sustainable prosperity. As a result our society has no organized ability to critically question the foundations, assumptions and practices of the economic status quo.³⁹

Even though reforms have so far been modest, the financial crisis and the Great Recession that followed it have called into question the intellectual premises on which economics is based in the academic world, the way research agendas are set, and the way educational programs have weeded out heterodox perspectives. From a pragmatic perspective such a willful evasion of the capriciousness of social reality and such a glaring failure to employ alternative perspectives to get to grips with it is certainly not in accordance with the ethic they wanted to instill in scientists. It is not clear what Haack would make of the evident failures of economics in the years that followed the credit crisis. Her conception of pragmatism as a methodological position, however, clearly vitiates against pluralism and agnosticism about the truth of scientific knowledge.

3 Action

A second reason pragmatism is at odds with a notion of scientific method that remains stable and unchanging is the centrality of action. Scientific research, according to the pragmatists, did not involve passive registration of a pre-given order in reality but required active intervention and manipulation of the world. John Dewey, famously, criticised the ‘spectator theory’ of knowledge. In *The Quest for Certainty* – tellingly subtitled *A Study of the Relation of Knowledge and Action* – he wrote that many of the classic problems of epistemology follow from this conception of the passive spectator involved in detached observation:

35. Stiglitz, above n. 26, at 238.

36. J. Fox, *The Myth of the Rational Market: A History of Risk, Reward, and Delusion on Wall Street* (2009), at 298.

37. R. Skidelsky, *Keynes: The Return of the Master* (2010 (2009)), at 189-90.

38. Post-Autistic Economics Network, ‘A Brief History of the Post-Autistic Economics Movement’, <www.paecon.net/HistoryPAE.htm> (Last visited 10 July 2014).

39. Post-Crash Economics Society, ‘Economics, Education and Unlearning: Economics Education at the University of Manchester’, <www.post-crash-economics.com/economics-education-and-unlearning/> (Last visited 13 July 2014).

They spring from the assumption that the true and valid object of knowledge is that which has being prior to and independent of the operations of knowing. They spring from the doctrine that knowledge is a grasp or beholding of reality without anything being done to modify its antecedent state – the doctrine which is the source of the separation of knowledge from practical activity. If we see that knowing is not the act of the outside spectator but of a participator inside the natural and social scene, then the true object of knowledge resides in the consequences of directed action.⁴⁰

This is a conception of knowledge that is pregnant with potentialities. Indeed, Dewey observes that one could even say “there are as many kinds of valid knowledge as there are conclusions wherein distinctive operations have been employed to solve the problems set by antecedently experienced situations’. Since these experienced situations and the operations dealing with them ‘never exactly repeat one another’, they ‘do not determine exactly the same consequences’. To be sure, it is only when the operations fall into ‘certain kinds or types’, i.e., only when we act in an organised, premeditated manner, that they fall within the ambit of science.⁴¹

For pragmatists science is continuous with our efforts as a species to shape and control our environment, in other words. As an organised and disciplined form of acting on the world, science is only a subset of a much more nebulous cluster of practical human interactions with the living environment. When you see science this way, when you see it as part of a larger and fluid continuum of activity, it becomes difficult to demarcate and define with any precision. Hence, when the pragmatists discuss inquiry, they do not provide us with a protocol, a set of rules, or a detailed plan of action, rather they describe a process and a mindset. ‘For Peirce and Dewey’, Putnam notes: ‘inquiry is cooperative human interaction with an environment; and both aspects, the active intervention, the active manipulation of the environment, and the cooperation with other human beings, are vital’.⁴² This lists all the key elements in the pragmatist conception of science. Inquiry is empirical and experimental – the ‘active intervention’ and ‘active manipulation’ part – and it is theory driven, i.e., guided by open and reasoned debate in the research community about what theories and hypotheses are most warranted – the ‘cooperative human interaction’ part. It is not so much a theory, as a description of a process or practice. In the words of Hilary Putnam: ‘Peirce and James and Dewey would have said that democratically conducted inquiry is to be trusted; not because it is infallible, but because the way in which we will find out where and how our procedures need to be revised is through the process of inquiry itself’.⁴³ James Conant makes a similar observa-

tion with respect to the James’s understanding of pragmatism. ‘James is not offering any arguments which will logically compel us to assent to a particular thesis’, Conant notes: ‘He proposes pragmatism not as a theory (something that might be true or false), but as a guide for action (something which might or might not serve us well in “our conduct of the business of living”’).⁴⁴

It is important to keep in mind, here, that for the pragmatist ‘action’ was genuinely open-ended and creative. For them truth in a very real sense was not found, but made. This aspect perhaps comes out most clearly in the work of James. ‘The truth of an idea is not a stagnant property inherent in it’, James asserted, ‘Truth *happens* to an idea. It *becomes* true, is *made* true by events. Its verity *is* in fact an event, a process: the process namely of its verifying itself, its *veri-fication*. Its validity is the process of its *valid-ation*’.⁴⁵ Obviously, this was a process that involved researchers not as passive witnesses of a given order, but as creative actors.

This voluntaristic conception of scientific research comes out clearly in James’ critique of social Darwinism and its deterministic bearings. In reaction to the work of his highly influential contemporary Herbert Spencer who emphasised a static notion of the fitness of human beings to their environment, James stressed the adaptability and creativity of human beings. For Spencer the ‘fit’ were naturally adapted to the unchangeable and static circumstances of life and the ‘unfit’ inevitably went under. Social science, Spencer argued, could uncover these eternal laws of nature. James could not disagree more:

The knower is an actor, and coefficient of the truth on one side, whilst on the other he registers the truth which he helps to create. Mental interests, hypotheses, postulates, so far as they are bases for human action – action which to a great extent transforms the world – help to make the truth which they declare. In other words, there belongs to mind, from its birth upward, a spontaneity, a vote. It is in the game, and not a mere looker-on; and its judgments of the *should-be*, its ideals, cannot be peeled off from the body of the cogitandum as if they were excrescences, or meant, at most, survival.⁴⁶

According to Conant, this notion that knowers are actors who make the truth, should be taken quite literally. For James, Conant argues, there were beliefs ‘that have the peculiar characteristic that, by virtue of one’s having adopted them, they become true’. With this James did not mean that in the sense that you adopt a truth and then discover it is actually true, ‘but in the sense that, in the course of allowing the conduct of one’s

40. Dewey, above n. 2, at 196.

41. Dewey, above n. 2, at 197.

42. Putnam, above n. 8, at 70.

43. Putnam, above n. 8, at 74-5.

44. J. Conant, ‘The James/Royce Dispute and the Development of James’s “Solution”’, in R.A. Putnam (ed.), *The Cambridge Companion to William James* (1997), 186, at 200.

45. W. James, ‘Pragmatism’s Conception of Truth’, in J.R. Shook (ed.), *The Essential William James* (2011 (1907)), at 217.

46. W. James, *Remarks on Spencer’s Definition of Mind as Correspondence* (1878).

life to be informed by them, one actually brings into being (or at least contributes to bringing into being) the very conditions which make them true'.⁴⁷ Indeed, Conant argues that James also thought of pragmatism in these terms. For James, Conant argues, a pragmatist 'is – not just someone who affirms a particular thesis after a chain of argument has convinced him of the truth but rather – a kind of person one *becomes* through a particular way of life'. This is a conception of pragmatism, Conant argues, that 'is bound to exhibit in its results a certain degree of agent-relativity'.⁴⁸

This might seem a rather idiosyncratic notion of truth, but it ties in with quite familiar processes in the social sciences and legal and political theory. Social theorists have long grappled with the problem of reflexivity, of course, with the problem that theories describing social behaviour affect the social behaviour described. It is also a notion of truth that Haack has no truck with. The pragmatist notion of 'action' is not a central concept in Haack's theory, but she is fairly critical of this notion of reflexivity in social science. For Haack, this is a form of 'self-aggrandisement', a misplaced belief that the social scientist's theories about social institutions affect the way these institutions function. Fortunately, she claims, 'it isn't true, and sociologists aren't really quite so powerful as some of them like to think they are'. After all, Haack states, it is clear that '[S]ocial scientists no more brought child abuse or schizophrenia or homosexuality into existence by their intellectual activities than biologists brought anthrax into existence by theirs'.⁴⁹

As a rhetorical flourish these examples might work. However, as instances of supposed reflexivity – 'supposed' because you have to wonder whether any contemporary sociologist is actually suggesting that child abuse, schizophrenia, and homosexuality are reflexively constructed phenomena – they are fairly weak and over the top. Social scientists did not bring about homosexuality, but they certainly may have had an influence on the attitudes towards homosexuality, and other minority groups. Nor did social scientists call forth schizophrenia, but you only have to read up on the history of mental illness to realise that there are considerable shifts in the classification and diagnosis of mental illnesses. 'Female hysteria' was perceived to be a widespread problem in the nineteenth century, but has disappeared as a diagnosis in our time. 'Neurasthenia' a kind of nervous exhaustion allegedly caused by the fast pace of modern society was once a common ailment in the United States. Indeed, William James coined the phrase 'Americanitis' for it. Clearly these pathologies are more than simply objective physiological states. And for those who believe we have outgrown such unfounded diagnoses: Who will tell whether Attention Deficit Hyperactivity Disorder (ADHD) will still be recognised as a genuine problem in the twenty-second century? Economics did not create trade or the marketplace, but it may very well

have affected the way people perceive their role in the market place and the way they think they should behave when they enter the market place.

If we go back to the example of neo-classical economics, one could certainly raise the question whether the notion that economic agents are modelled as rational and self-interested individuals, suggests to people that rational pursuit of their self-interest is appropriate behaviour for the marketplace. The descriptive model then becomes a guideline for behaviour and creates its own corroboration. In this respect, Joseph Vogl is quite right to claim in a recent interview that 'Economics tries to understand a world that it has itself created'.⁵⁰ Rationality, self-interest, and greed are timeless and universal aspects of human behaviour, no doubt. Nevertheless, in recent decades the basic assumptions of neo-classical economics about the rationality of economic agents and the efficiency of the market developed into something more than mere descriptions of human behaviour and scientific hypotheses to be tested. These assumptions became part of a drive to privatise public services, to liberalise markets, to de-regulate, to introduce market incentives in regulatory regimes, and to fall back on the power of social and economic domains to regulate themselves. These tied in with a big historic narrative of the road *out* of serfdom, the story of the fall of communism, the end of ideology, and the victory of democracy and free-market capitalism. Indeed, the vocabulary of the market has entered into the very language of many public institutions and organisations, who now talk of delivering products, managing processes, serving clients, and achieving targets.

Michael Sandel has described in vivid detail how widely the values of the market have spread in contemporary societies. He contends that 'what is striking is how potent this image has become – not only in academia but also in everyday life. To a remarkable degree, the last few decades have witnessed the remaking of social relations in the image of market relations'.⁵¹ In his book, Sandel provides a wide variety of examples to illustrate the extent to which market notions now pervade our everyday life, from commercials in the classroom to the hiring professional queue standers for public hearings. For him the financial crisis and the greed it exposed only illustrates the larger story: i.e., the propagation of market-oriented thinking into all corners of society. This, according to Sandel is 'one of the most significant developments of our time'.⁵²

Korean economist Ha-Joon Chang, in turn, has drawn attention to the way the ethic of the free market tends to crowd out non-selfish, altruistic behaviour. 'Assume the

47. Conant, above n. 44, at 205-6.

48. Conant, above n. 44, at 206.

49. Haack, above n. 20, at 163.

50. Interview with Joseph Vogl in: *The European*, 'The Spectre of Capital: Capital and Money Are Profane Gods', <www.theeuropean-magazine.com/371-vogl-joseph/370-the-spectre-of-capital> (last visited on the 5th of June 2015).

51. M.J. Sandel, *What Money Can't Buy: The Moral Limits of Markets* (2012), at 51.

52. Sandel, above n. 51, at 7.

worst about people', he asserts: 'and you get the worst'.⁵³ Yet, even with this crowding-out process, self-interest can only explain human behaviour to a degree. A great deal of human behaviour remains unselfish and is driven by other motives. Hence, management regimes that appeal only to people's self-interest lead to suboptimal performance.

Stiglitz has also noted that economics theory is a kind of self-fulfilling prophecy, i.e., that people who study economics start conforming to its basic tenets:

Most of us would not like to think that we conform to the view of man that underlies prevailing economic models, which is of a calculating, rational, self-serving, and self-interested individual. There is no room for human empathy, public spiritedness, or altruism. One interesting aspect of economics is that the model provides a better description of economists than it does of others, and the longer students study economics, the more like the model they become.⁵⁴

The model of economic man may be a poor approximation of actual human behaviour, but for people engaged in economic activity it functions as a prescriptive model and tells them what would be rational for them to do in that context.

It would be grossly unfair to associate William James with this process without some strong qualifications. When he talked about people 'making the truth which they declare' he did not mean that they should create a world of selfish scoundrels, by acting on the assumption that everybody was a selfish scoundrel and adopting the lifestyle. He was not arguing for a race to the bottom, a vicious circle where people conformed to the basest expectations they had of their fellow citizens. Rather, he was arguing for a virtuous circle, where through sheer will people lived according to their highest aspirations and helped create a world where those aspirations became operative principles and true.

If one takes the notion of 'action' seriously, that lies at the heart of pragmatism, and the way it is bound up with freedom, novelty, and creativity, it becomes hard to fit it into the type of quantitative empirical social science that reached a high point in neo-classical economics. Economics is interested in routine behaviour, not creative action. It is interested in the standard, the regular, the predictable, in causal patterns. James suggests, however, that this does not capture what is most interesting about human beings. What is more, he contends that this is not how researchers should conduct themselves in scientific inquiry. Scientific research is also pre-eminently a domain of creative action that cannot be reduced to simply following the right procedures and routines.

53. H-J. Chang, *23 Things They Don't Tell You About Capitalism* (2010), at 41.

54. Stiglitz, above n. 26, at 249.

4 Continuity of Means and Ends

A final problem for a static notion of scientific method is the pragmatist claim that there is a continuity between means and ends. In practice, pragmatists suggest, it is impossible to separate the end being pursued from the means through which people are trying to pursue it. According to Dewey, we do not start with some clear idea of an end and then decide on the best means to bring it about. Rather, we only realise what end we are striving for, when we start forming notions about how to achieve progress in that direction:

The connection of means-consequences is never one of bare succession in time, such that the element that is means is past and gone when the end is instituted. An active process is strung out temporarily, but there is a deposit at each stage and point entering cumulatively and constitutively into the outcome. A genuine instrumentality *for* is always an organ *of* an end. It confers continued efficacy upon the object in which it is embodied.⁵⁵

If you make action central to your conception of research, then this continuity of means-ends, or means-consequences, is also relevant to the conception of that practice of course. Dewey clearly shared James's notion of science as a form of creative action. He very much approved of the 'alteration in the "seat of authority"', that James advocated 'looking forward instead of backward, looking to what the world and life might become instead to what they have been'.⁵⁶

Nevertheless, the continuity of means and ends was mainly a theme in the work of John Dewey. There is no explicit counterpart to that tenet in the work of William James, but Putnam rightly points out that 'One of the chief characteristics of James's philosophy is its *holism*'. Indeed, Putnam claims 'there is an obvious if implicit rejection of many familiar dualisms: fact, value, and theory are all seen by James as interpenetrating and interdependent'.⁵⁷ Obviously, this interpenetration raises all kinds of questions about scientific method. If we reverse 'the seat of authority' in research, as the pragmatists suggested, i.e., if we look forward and actively try to learn from premeditated manipulations of reality, then a change in the ends we pursue will have repercussions for the way we adjust reality and the way we conduct our research. Vice versa, the methods we have ready at hand, the kinds of procedures available to us to act on the world, will shape our notion of what ends we can pursue. In a pragmatist perspective, scientific research welds these different elements, the availability of certain instruments, techniques or sets of raw infor-

55. J. Dewey, *Experience and Nature* (1997 (1925)), at 298.

56. Dewey, above n. 2, at 284-5.

57. H. Putnam, 'James's Theory of Truth', in R.A. Putnam (ed.), *The Cambridge Companion to William James* (1997), 166, at 7.

mation can help to shape what ‘ends’ we can try to achieve. While the hazy notions of what ends we want to pursue will suggest ways to develop our instruments, hone our techniques, and provide directions for the collection of data.

Again with respect to the continuity between means and ends, Haack’s account of pragmatism seems to diverge in tone and substance from the ideas of James and Dewey. To be sure, the continuity between means and ends does not figure prominently in Haack’s discussion of pragmatism. However, some parts of Haack’s analysis seem difficult to square with a continuity between means and ends. As we saw earlier, the notion of situatedness is not central to Haack’s account of pragmatism. Haack, rather, recommends the notion of the disinterested inquirer standing aloof from the concerns and projects of his, or her, social and cultural setting. Indeed, she seems to prefer people to get involved with inquiry without any form of prior engagement with the object of study altogether, ‘because it’s their job’ or ‘because they have to write a dissertation on *something*’.⁵⁸ This ideal of the lone outsider-observer is difficult to square with the idea of the situated researcher engaging with the going projects of his, or her, day and applying existing tools and instruments – including the existing conceptual apparatus – into new territory. Moreover, the idea that scientific knowledge is progressing towards Peirce’s ‘Final Opinion’ throws a different light on the issue of the continuity between means and ends. The concepts, the vocabularies, and the way the data are conceived may change through time, and these conceptual tools may be symbiotically connected to the scientific theories under consideration, but that does not necessarily mean pluralism and incommensurability for Haack. If these changes are part of the progress towards the Final Opinion, then they should just be seen as a form of progress and refinement. Peirce, Haack argues, ‘sees the growth of meaning as contributing to the progress of science’. According to Peirce, Haack states, ‘devising concepts and developing vocabularies, that match up adequately to real “generals”, i.e., to real kinds of stuff, is an important element of that enterprise’.⁵⁹ This recasting of pragmatic notions of pluralism and conceptual change as simply a form of scientific progress does not do justice to the work of Dewey and James, however.

There is also a dimension of the continuity between means and ends in the recent dominance of the efficient markets model. Perhaps it is no surprise that the rise of sophisticated mathematical modelling in economics coincided with the ready availability of computers. Complicated statistical equations, that would have taken a great deal of time and skill to do manually, can be run through a computer relatively easily. Data sets that used to be stored on punched cards or magnetic tapes can now be called up with the click of a button. Good data sets used to be hard to come by, now they are ubiqui-

tous. It is a lot easier to be an economic ‘rocket scientist’, when the computer does a lot of the work for you.

These ubiquitous data, in turn, were not conceived immaculately. Data are collected for a purpose. They are engendered with theoretical notions and practical applications in mind. They measure such phenomena as performance, value, output, usage, choice, cost and quantify measurable aspects of human behaviour. Data only provide a partial representation of the social world, of course. They highlight certain aspects of social and economic life and push others into the background. In a way they are creatures of the theoretical paradigm they feed into, they co-evolve with the theories they provide empirical input for. With such interpenetration everything is continuous; to a certain extent data, theories, methods, and policy objectives stand or fall together. This does not mean they form a hermetic, self-referential, and un-falsifiable conglomeration. Indeed, neo-classical economics was thoroughly disproven (even if many politicians and high profile economists do not recognize that fact). But it does mean that when theories run into trouble, these troubles also affect methods and the framing of data.

How the available data and the existing body of theory hang together and interpenetrate was illustrated vividly by Richard Posner recently. Posner explained he had read John Maynard Keynes’ classic work *The General Theory* (1936), to see what it had to say about the financial crisis. He soon found out that it was a work that was difficult to understand. It is a book from a different age, Posner claimed, based on a different conception of economics: ‘it [...] bristles with unfamiliar terms, such as “unit-good” (an hour’s employment of ordinary labor), and references to unfamiliar economic institutions, such as a “sinking fund” (a fund in which money is accumulated to pay off a debt)’.⁶⁰ These difficulties have turned *The General Theory* in an unread classic, an inaccessible treatise that demands a great deal of effort to make sense of.

This suggests that the reason economic theory is obstinate and resistant to change is in part institutional. Economists work in an intellectual environment in which certain understandings of economic behaviour are dominant, understandings that affect the way data are conceptualised and collected. This creates an in-built inertia, a bias against change in the discipline. Hence, contrary to what the pragmatists might have expected, not dominant interests in society or a longing for familiarity are obstacles to social change, but the very research community that is supposed to analyze social developments and infer possible consequences. It should come as no surprise, then, that scholars are among the most reluctant to change. The economist Richard Thaler has warned that there will be no reconsideration of intellectual positions. With respect to the effects of the financial crisis on the economics discipline, he stated: ‘What is

58. Haack, above n. 20, at 170.

59. S. Haack, ‘The Meaning of Pragmatism: The Ethics of Terminology and the Language of Philosophy’, 28:3 *Teorema* 9, at 15 (2009).

60. R. Posner, ‘How I Became a Keynesian’, *The New Republic* (September 2009), <www.newrepublic.com/article/how-i-became-keynesian> (Last visited 24 June 2013).

the old line – that science progresses funeral by funeral? Nobody changes their mind. What will happen is that the economists [in their thirties and forties] are pretty open to these ideas. They don't think it is very controversial. That's where economics will be in ten years'.⁶¹

5 Conclusion

The pragmatist theory of knowledge is often taken to be the most significant part of pragmatism and is often described as a fairly static theoretical doctrine containing a number of familiar premises. This paper has called into question this static notion of pragmatist epistemology. For the pragmatists the theory of knowledge was not a timeless set of instructions, but an ethic, a posture, a loose guide for how scientists should conduct themselves.

There are a number of reasons for this role-centered outlook on epistemology. Pragmatism understands scientific enquiry as a situated endeavour, as a practice that is part of the going projects of society. This casts scientific inquiry as an instrument in the service of a wide variety of interests reflecting the irreducible social and cultural pluralism of the world. This pluralism vitiates against an unchangeable method of science. Moreover, the pragmatists saw scientific inquiry as a form of creative action. For them science is not backward, but forward looking. Science is not about registering what has been, but about employing your intelligence to actively manipulate the world and bring about the results predicted. This exercise is fundamentally unpredictable and creative and will betray a certain degree of agent relativity. Finally, the pragmatists believed there was a continuity of means and ends, between research methods and research findings. This makes research contingent on the going approaches available and the theoretical and epistemological context in which the research takes place. These will differ according to time and place.

61. J. Cassidy, 'Interview with Richard Thaler', <www.newyorker.com/online/blogs/johncassidy/2010/01/interview-with-richard-thaler.htm> (Last visited 3 April 2014).