

## **A Post-autistic Approach to the Study of Real Estate Investment Decision Making.**

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## **Key Words**

Behavioural finance  
Critical realism  
Investment decision making  
Modern finance theory  
Post-autistic economics

## **Abstract**

Investors are making decisions about buying and selling real estate representing, in total, billions of dollars of transactions in any one year. Given the economic impact of these decisions it is surprising that there isn't greater understanding of how they are made. The traditional academic explanation for real estate investors' actions follows a neoclassical economic framework and borrows from the discipline of finance. Finance theory offers portfolio and capital market models to answer the question of how investors should optimise their investment decisions (Brown and Matysiak, 2000).

This approach provides elegant mathematical solutions to the optimising question but the models seem poor in explaining the operation of real estate investment markets. What can be done to remedy this situation?

This situation is replicate of that in mainstream economics where traditional neoclassical models and econometric modelling provides the dominant academic approach. Frustration with the persistence of this approach, given the low level of empirical support for its explanatory power, has given rise to a movement of dissent amongst economists (Fullbrook, 2003). The dissenters have christened themselves as the post-autistic economics movement, part of a wider move towards critical realism within the discipline of economics (Fleetwood, 1999).

What lessons might be learned for the study of real estate investment decision making from this dissenting movement of economists? Well, the post-autistic economics movement rejects a narrow focus on positivism and mathematical modelling and argues for a wider pluralist approach; such a pluralist approach offers the prospect of providing greater understanding of real estate investment markets.

Behavioural finance can be viewed as part of a more pluralistic approach, drawing in particular, on findings from the discipline of psychology (Shefrin, 2000; Thaler, 1993).

The paper considers whether behavioural finance offers a better understanding of how real estate investment markets work and critically examines the potential dangers of adopting the results of psychological research based on laboratory experimentation (Lipshitz et al, 2001).

## **Introduction**

Real estate together with equities and bonds are the three major asset classes that institutional investors construct their portfolios from. Real estate is still sometimes referred to as 'the forgotten asset class' in the UK (Golding, 2003) in recognition of its declining value share of institutional portfolios during the 1980s and 1990s. However recent years has seen resurgent interest in the benefits of the asset class particularly in a climate of falling equity investment values. This resurgence results from a reassessment of the risk of high exposure to equities following world stock market declines and the establishment for real estate of a competitive performance profile (taking a ten year historical view). This may be a temporary resurgence, particularly as 2003 has seen equity prices rise on world stock markets. But even if equity returns outperform real estate in the short term, real estate's diversification benefits to a multi-asset portfolio will ensure that it retains its position as a component in the majority of institutional portfolios.

Institutional decision makers therefore are making buy, sell or hold decisions with regard to the allocation of investment funds to the real estate sector. Similarly decision makers in property companies with investment portfolios and individual investors have to decide which properties to buy and which to sell. These decisions underlie transactional activity within the real estate markets.

This paper considers the traditional theoretical framework that is used to study investment markets. The dominant mainstream economic and finance approaches that are applied to the study of investment appear to be of limited value in describing how investors make decisions and how investment markets operate. The paper considers some of the criticisms that are levelled at the dominant neoclassical paradigm within economics and finance.

The paper also examines whether alternative methodological approaches offer the potential to provide an increased understanding of how real estate investment decision makers and investment markets function.

Before these are considered the next section will examine the academic context for the study of real estate investment.

## **The Academic Foundation for the Study of Real Estate Investment**

The study of real estate provides a diverse vocational field with aspects ranging from land use and planning studies, construction, property management, to valuation and appraisal, and investment and finance.

In the UK the historic dominance and pre-eminence of the Royal Institution of Chartered Surveyors (RICS) as the primary professional body with a wide remit across real estate matters has given real estate a broad academic framework (Schulte, 2003). This broad academic framework is reflected in the positioning of UK real estate courses in broad based 'Built Environment' faculties and this in turn has encouraged the output of a wide range of research influenced by the diverse academic frameworks with inputs from the fields of, among others; geography, sociology, economics and finance. However, perhaps not surprisingly, given real

estate's status as a financial asset the study of real estate investment is largely defined by the fields of economics and finance.

In the US the study of real estate is even more highly defined by economics and finance. This is probably because of academic real estate study being located, in the majority of cases, within universities' finance departments (Webb and Albert, 1995). This has inevitably led to an embedding of real estate within the disciplinary culture of finance and led to a finance focus to a large body of the real estate research undertaken. Black et al (2003) have noted that whilst this has been fruitful in the production of a body of quality research, it has also provided artificial constraints on the boundaries of real estate research.

This paper concerns real estate investment and it is clear that in both the US and UK and the rest of the world the study of real estate investment has been defined by the application of theories from the academic disciplines of economics and finance. The academic study of finance is effectively a study of applied economics and it will be seen that modern finance draws heavily on the neoclassical economic framework.

This applies even in the UK where the study of real estate draws from many disciplines; the approach to real estate investment is largely defined by economics and finance. The application of finance theory to real estate is embraced by the leading real estate investment textbooks produced in recent years (e.g. Brown and Matysiak, 2000, Hoesli and MacGregor, 2000). These texts present modern finance theory and in particular Markowitz's portfolio theory, Sharpe's capital market theory and Fama's efficient market theory as the underlying normative framework for the investigation of real estate investment.

The desire to embed the study of real estate investment within the finance framework is emphasised in the introduction to one of the most comprehensive real estate investment texts:

"We want to raise the level of understanding of financial and economic principles within the property profession so that the next generation of property investment managers and researchers is equipped to compete with highly skilled managers in other areas of finance. We also want to show that property is an important part of capital markets and can be treated like any other financial asset."

(Brown, G.R. and Matysiak, G.A. 2000: xvii)

This expressed desire is not unreasonable and perhaps stems mainly from an admirable objective to ensure that real estate professionals speak the same language and compete on equal terms with their counterparts in the wider investment community. In this way all that Brown and Matysiak are attempting to achieve is that the academic framework which has governed the study of equities and bonds for the last thirty years is applied to real estate. From the outside, including the wider investment community, real estate is sometimes considered as a quaint 'old fashioned' culture with its own distinctive way of doing things and where the latest academic research and trends take time to filter through.

Therefore the adoption of finance theory for the study of real estate results from a logical desire on the part of real estate practitioners and researchers to ensure that the asset class does not become marginalised and perceived as out of touch with developments in the mainstream investment and finance markets.

Modern finance theories about the optimisation of portfolio holdings and the efficient pricing of assets within markets were first applied to the equity and bond markets. As this 'scientific' approach to the study of investment became assimilated within the fund management industry it became inevitable that if real estate was to enhance its standing in the mainstream investment community that modern finance theory should also be applied to the management of real estate investment portfolios.

The embedding of modern finance theory within the general investment community did not happen overnight. Markowitz provided the foundation stone for modern finance theory in the early 1950s with his article on portfolio selection specifying a mean-variance framework that enabled investors to select their optimal portfolio based on risk and return criteria. For the first time the risk of equity holdings had been quantified by the variance, measuring the volatility of a share's return around its mean (Markowitz, 1952, 1959).

Modern finance theory owes its existence to the pioneering work of Markowitz and grew to encompass other important theories that defined how investors should make decisions to maximise their investment wealth within efficient markets. Modern finance literature includes; portfolio theory (Markowitz's original mean-variance framework), capital market theory (including the capital asset pricing model), arbitrage theory and option pricing theory, and the efficient market hypothesis (Lofthouse, 2001). Together they form the bedrock of the academic discipline of modern finance and they have become the benchmark for the academic consideration of investment operation over the last thirty years.

Initially attracting a limited amount of academic attention, it was not until the aftermath of the equity bear market of (1973-74) that the US investment management industry took an interest in modern finance theory. Following average equity price falls of around 50% during the bear market, the fund management industry readily adopted the quantitative and analytical tools of modern finance theory as a defence against client criticism that undue regard had been paid to the riskiness of their equity portfolios (Bernstein, 1996).

Therefore finance theory was first applied with reference to the relatively perfect and very liquid equity and bond markets. Consideration of the relevance of finance theory for the much less perfect and relatively illiquid real estate market came later. In the UK, Gerald Brown examined the potential relevance of modern finance for real estate investment management (Brown, 1983). The application of modern finance to the study of real estate gathered pace during the 1980s with attempts on both sides of the Atlantic to apply portfolio theory to the allocation of real estate investment funds (for example in the US: Ross and Zisler, 1987; in the UK: Sweeney, 1988). However, within the real estate profession, modern finance theory has never gained the extensive support and acceptance accorded to it in the equity and bond markets.

The lack of extensive acceptance in the real estate markets can, in part, be attributed to the fact that the theories are developed around assumptions that include

perfect market conditions. Portfolio and capital market theory tell investors how to allocate funds given the existence of a perfect market. But, real estate markets are far from perfect; their characteristics include, among other things; the lack of a central trading place, imperfect information flows, a heterogeneous product and extensive illiquidity. Real estate markets are recognisably imperfect, practitioners and academics have cautioned against the validity of the simplistic application of portfolio and capital market theory to them.

These imperfections provide extensive problems for the adoption of finance theory. Indeed the application of portfolio theory to calculate optimal holdings of real estate within the multi-asset portfolio has been criticised as fundamentally flawed (MacGregor and Nanthakumaran, 1992). These criticisms include, the use of historic valuation based data with a consequent potential underestimation of property risk, the indivisible nature of real estate investments and inadequate attention to liquidity differentials between asset classes.

It is such imperfections in the real estate markets and the consequent presumption by many that these imply that the real estate investment market is inefficient that has prevented total acceptance that modern finance theory can be highly predictive. This view emphasises the distinctiveness between real estate and the other main asset classes and classifies the imperfections as reasons why modern finance theory may be less relevant for the study of real estate.

However, this view ignores the other assumptions concerning rational economic behaviour that underpin modern finance theory. There is no reason to suppose that real estate investment decision makers are any different from those operating in the other investment markets. Indeed in many instances they may be the same people. Finance theory not only relies upon assumptions of perfect conditions. Other assumptions concern the behaviour of investors. Investors are assumed to be rational, that is, they maximise the utility of their investment wealth. The assumption about investor behaviour is therefore equally important in enabling the construction of mathematical theories that attempt to solve the investment allocation problem.

The assumptions must reflect what people actually do and how investment markets operate if modern finance theory is to have good predictive power. But as modern finance theory gained increasing prominence over the last thirty years its relevance also became challenged by empirical evidence that found little support for its explanatory and predictive powers.

It is this debate that defines the battleground between traditional finance and the younger field of behavioural finance. Behavioural finance places investor behaviour at the centre of its study and seeks to provide descriptive theories that have greater explanatory power than modern finance theory. Behavioural finance utilizes models and concepts from the discipline of psychology and judgement and decision making research and applies them in the context of financial markets.

In the discipline of economics, similar battles are being fought. Modern finance theory is applied economics and the traditional neoclassical economics framework is open to the same criticisms as those aimed at modern finance. As disciplines economics and psychology have continued to develop largely independently of each other with few points of reference between them. Economics has appeared to be

content to build models based on the axiomatic notion of rational economic man and to leave the study of behaviour to the discipline of psychology.

The world of traditional economics however has plenty of dissenters and their voices and aspirations have been given increased prominence by the recently created movement of post-autistic economics.

The post-autistic economics movement is young. It was only initiated in the summer of 2000, but it has quickly gathered support and now provides a popular focus for widespread criticisms against the positivist tendencies in economics, emphasised in the neoclassical approach, still dominant in mainstream economics. But what is post-autistic economics and what does the movement represent? The next section will provide an introduction to the movement and an overview of its aims.

### **The Post-autistic Economics Movement**

The post-autistic economics movement was started by a group of French economics students in June 2000. They published a petition on the web protesting against the current state of economics teaching and suggesting how to provide an improved approach. The authors of the petition and its initial signatories were students associated with France's Grande Ecoles, the most elite academic establishments in France; they therefore were from among France's brightest students and their protest did not evolve out of struggling with complicated mathematics. They almost certainly didn't realise the impact that their initial protest would have.

The students were unhappy with the state of economics teaching in France. Fullbrook (2003) details the full extent of the students' protest. Their protest was against:

- the lack of realism in economics teaching;
- economics "uncontrolled use" and treatment of mathematics as "an end in itself," with the result that economics has become an "autistic science," lost in "imaginary worlds";
- the repressive domination of neoclassical theory and approaches derivative from it in the university economics curriculum; and
- the dogmatic teaching style in economics, which leaves no place for critical and reflective thought.

To improve the teaching of economics, they argued in favour of:

- engagement with empirical and concrete economic realities;
- prioritising science over scientism;
- a pluralism of approaches adapted to the complexity of economic objects and to the uncertainty surrounding most of the big economic questions; and
- their professors initiating reforms to rescue economics from its autistic and socially irresponsible state.

The current teaching of economics was therefore considered to be 'autistic' because of its distance from the realities of the social world. The students wanted a 'post-

autistic' economics that would encourage a pluralism of approaches to studying economic realities.

The students' petition quickly gathered momentum with support coming from students in many other countries. It soon attracted widespread attention not least comment and correspondence in *Le Monde*. Edward Fullbrook, a UK academic critical of mainstream economics, picked up the baton by republishing the original petition as the first Post-autistic Economics Newsletter in September 2000, an electronic newsletter now circulated monthly as the Post-autistic Economics Review which by November 2003 had over 6500 subscribers from approximately 145 countries (Post-autistic Economics Review, No 22, 24<sup>th</sup> November, 2003, [www.paecon.net](http://www.paecon.net)).

Events in France moved quickly. Less than a month after the launch of the student petition, a group of French economics professors circulated one of their own giving their full support to the students protest. They reinforced the call for pluralism:

“Pluralism must be part of the basic culture of the economist.....The preponderant space it (neoclassical theory) occupies is, of course inconsistent with pluralism.”

(Petition for the Debate on the Teaching of Economics in Fullbrook 2003:16)

The movement did not fade away as economists committed to the neoclassical hegemony may have liked. In France its influence was such that by Autumn 2000, the Minister of Education, Jack Lang, announced the setting up a commission, headed by Jean-Paul Fitoussi, President of l'Observatoire Francais des Conjonctures Economiques (OFCE), to investigate the state of economics teaching.

As the circulation of the post-autistic economics newsletter increased it spread the aspirations and demands of the movement across the world and students and economists continued to be drawn to the movement.

In the summer of 2001 three similar initiatives lent support to the cause; 'The Cambridge 27', 'The Kansas City Proposal' and the 'Mission Statement' from Harvard University students.

'The Cambridge 27' refers to a group of PhD students at Cambridge University, England who issued their own proposal in June 2001; 'Opening up Economics', citing dissatisfaction with the current health of economics and calling for a move away from the domination of the neoclassical approach:

“As defined by its teaching and research practices, we believe that economics is monopolised by a single approach to the explanation of economic phenomena. At the heart of this approach lies a commitment to formal modes of reasoning that must be employed for research to be considered valid. The evidence for this is not hard to come by. The contents of the discipline's major journals, of its faculties and its courses all point in this direction.

...We are not arguing against mainstream methods, but believe in a pluralism of methods and approaches justified by debate. Pluralism as a default implies that alternative economic work is not simply tolerated, but that the material and social conditions for its flourishing are met, to the same extent as is

currently the case for mainstream economics. This is what we mean when we refer to an 'opening up' of economics."

(Opening up Economics, The Cambridge 27 in Fullbrook 2003: 36 and 37)

'The Kansas City Proposal' came out of the meeting of students, researchers and professors at the Second Biennial Summer School of the Association for Evolutionary Economics held at the University of Missouri, Kansas City in June 2001.

The 'Kansas City Proposal' supported the Post-autistic Economics Movement and the 'Cambridge Proposal'. It lamented economics' abstract formalist and narrow methodology which it believed limited its ability to produce pragmatic and realist policy prescriptions and to engage in productive dialogue with other social sciences. Amongst other things, it called for procedures such as participant observation, case studies and discourse analysis to be considered as legitimate methods of economic analysis and research as well as the mainstream's methods of choice, econometrics and formal modelling (Fullbrook, 2003).

'The Kansas City Proposal' emphasised the need for a wider methodological debate and also called for the expansion of the field of economic analysis to include a greater focus on human behaviour, and the cultural and historical contexts of any economic study:

"Although strong in developing analytical thinking skills, the professional training of economists has tended to discourage economists from even debating – let alone accepting – the validity of these wider dimensions. Unlike other social sciences and humanities, there is little space for philosophical and methodological debate in the contemporary profession.

...Ours is a world of global economic change, of inequality between and within societies, of threats to environmental integrity, of new concepts of property and entitlement, of evolving international legal frameworks, and of risks of instability in international finance. In such a world we need an economics that is open-minded, analytically effective and morally responsible. It is only by engaging in sustained critical reflection, revising and expanding our sense of what we do and what we believe as economists that such an economics can emerge."

(The Kansas City Proposal in Fullbrook 2003: 40 and 41)

Also in summer, 2001, economics students from Harvard University issued their own 'Mission Statement'. Although this was directed locally at seeking change in the Harvard curriculum the reasons for the students' dissatisfaction were supportive of the post-autistic movement; the dominance of the neoclassical model and the almost complete lack of any consideration of alternatives or non-mainstream approaches.

Those economists who favoured the status quo may have been hoping that the contents of Fitoussi's report due to be published in the autumn of 2001 would give little support to the demands of the movement and therefore help to defuse the pressure on mainstream economics. However, they were disappointed. The report did not appease those hoping for the retention of the status quo, but instead it called for important changes to the teaching of economics in support of the students' views. First, it called for economics courses to contain more debate on alternative approaches to contemporary economics and secondly, it wanted a multidisciplinary

approach with economics students being required to study cognate disciplines, such as psychology, sociology or history.

So the French students who rebelled against the dominant neoclassicism of their economics education were vindicated and they were successful in instigating some real change. Is that all there was to it? Clearly not - the popularisation of the cause and the support attracted to it from around the world indicated that the central issues of the ensuing debate were of far greater significance than a local argument about French economics education. It struck at the very heart of the economics profession. The French students' cause became a rallying call and focus for the voices of many economists who did not live and work in the dominant mainstream of the profession but considered themselves to be part of the heterodox economics movement. This heterodox movement consists of groups, such as; evolutionary economists, new institutional economists, Austrian economists, behavioural economists and postmodern economists.

These heterodox groups are diverse and provide a range of different approaches for the explanation of economic behaviour. Perhaps the one thing in common across the whole of the heterodox movement is that they are outside of the mainstream and opposed to the domination of neoclassical economics and its reliance on positive methods. For example, postmodern heterodox economists occupy the opposite extreme of the methodological scale to positivists and they would include for example, feminist economists. They reject the deductivist nature of positivism and would deny the existence of any external reality outside of human existence. Such economists are likely to be advocates of interpretist and/or constructionist research agendas which could include, for example, studying the rhetoric of economics (e.g. McClosky, 1986).

In the next section one particular economics project, that of critical realism will be examined. This project has been championed by Tony Lawson, Reader in Economics at Cambridge University (and one of the initial signatories to the 'Cambridge 27 Proposal'). The project can be considered as part of the heterodox movement and it is opposed to the hegemony of positivism within economics. It doesn't however take the extreme polar view of postmodernism that there is no external reality outside of our own constructions of it. Methodologically, the approach can therefore be considered to lie somewhere in the middle between the extremes of positivism and interpretivism/ constructivism.

Those who follow a critical realist approach are firmly of the belief that positivism and its closely allied alternatives are not appropriate methodologies for the study of economics and that they have failed to deliver models and theories that fully explain economic activity.

However critical realists do not believe that this implies that economics can not be studied 'scientifically'. They believe it can and that critical realism offers a basis for the scientific study of economic activity.

## **The Critical Realist Project in Economics**

This section will firstly describe how the critical realist project evolved and then outline some of the main characteristics of the approach. First how did the project come about?

Over the last twenty years Tony Lawson at Cambridge University, UK has been developing his project concerned with applying critical realism to the discipline of economics. His ideas have been conveyed in numerous journal publications and two books that provide a useful summary of the project to date, *Economics and Reality* and *Reorienting Economics* (Lawson; 1997 and 2003). In developing the project Lawson has acknowledged his debt to the philosopher Roy Bhaskar and his philosophy of transcendental realism (see Bhaskar; 1978, 1979). Bhaskar's transcendental realism was initially developed with the natural sciences in mind; critical realism is the term used for the further development by others into a philosophy for the social sciences. Lawson's work has been at the forefront of its application to the social sciences.

The impetus for Lawson to develop the project came from dissatisfaction with mainstream economics and its methods and echoes the cause of the post-autistic economics movement. In particular Lawson bemoans the current state of economics:

“There is little doubt that the modern discipline of economics is in a state of some disarray. Or at least this is true of its hugely dominant mainstream component. By the latter I simply mean that which is concerned in a central way with formalistic modelling of some kind.

...As I said, if the formalistic modelling project, or the deductivist enterprise it sustains (see below), is constitutive of the modern mainstream position, it is also a project that is not in a particularly healthy state. Although rarely revealed in opening chapters of introductory text-books and the like, the problematic nature of modern mainstream economics, continually emphasised by opponents of that project of course, is often acknowledged even within the mainstream tradition itself, especially, but not only, when its leading proponents provide reflective overviews of the discipline in presentations prepared for special occasions. On such occasions, it is seemingly readily admitted that the mainstream project is, for example, poor at forecasting (e.g. Kay 1995); unrealistic (Hahn 1994); arbitrary (Leontief 1982); without clear direction (Rubinstein 1995; Kirman 1989); riddled with inconsistencies (Blaug 1980; McClosky 1986; Leamer 1978, 1983; Hendry, Leamer and Poirier, 1990); in crisis (Bell and Kristol 1981), and; basically in a state of disarray (Wiles and Routh 1984).”

(Lawson 2001: 155-156)

Lawson writing in *Reorienting Economics* (2003) begins by summarising his dissatisfaction with mainstream economics and he lists his four basic 'theses' that characterise the state of modern economics:

- “1 Academic economics is currently dominated to a very significant degree by a mainstream tradition or orthodoxy, the essence of which is an insistence on methods of mathematical-deductivist modelling.
- 2 This mainstream project is not in too healthy a condition.

- 3 A major reason why the mainstream project performs so poorly is that mathematical-deductivist methods are being applied in conditions for which they are not appropriate.
- 4 Despite ambitions to the contrary, the modern mainstream project mostly serves to constrain economics from realising its (nevertheless real) potential to be not only explanatorily powerful, but scientific in the sense of natural science.”

(Lawson 2003: 3)

Lawson believes that a critical realist approach can counter problems of the mainstream project and enable economics to fulfil its real potential referred to in 4 above.

Having explored the background to the critical realist project it is now possible to turn to an outline of its underlying characteristics. This is not the place for a detailed exposition of the approach; readers are referred to the works of Bhaskar and Lawson (particularly, Bhaskar; 1978, 1979 and Lawson; 1997, 2003). But a brief outline of some of its basic characteristics will enable a consideration of what it has to offer the study of economics and how it relates to the post-autistic movement.

The critical realist position emphasises ontology over epistemology. Critical realism believes that there is a reality that exists independently of the researcher. In this way it counters postmodernism and its contention that there can be no external reality and that research should concern itself only with the analysis of interpretations and discourse.

Critical realism has at its centre a concern to identify and distinguish natural and social reality. This concern for ontology distinguishes critical realism from positivist philosophy which Lawson argues is flawed not least because it is grounded in an ‘epistemic fallacy’:

“And we are in a position to see that, ultimately, the basic error underpinning the now discredited positivist conception of science is precisely the abandonment of explicit ontological reasoning.

.....This entails giving an epistemological category an ontological task and constitutes a specific example of a general mistake which, following Bhaskar once more, can be labelled the *epistemic fallacy*. This fallacy consists in the view that statements about being can always be reduced to, or analysed solely in terms of, statements about knowledge, that matters of ontology can always be translated into epistemological terms.”

(Lawson 1997: 33)

Lawson contends that the discipline of economics has suffered from a lack of serious engagement with methodology issues. He notes that restraints on the discussion of methodological issues include reluctance on the part of mainstream journals to publish such discussion and the lack of its promotion by central research funding agencies. He is also critical of mainstream economists who continually downplay the relevance of methodology by:

“...the perpetual repetition of such quips as ‘don’t think about it’; or ‘methodologists are crazy’ or ‘those who can, do economics while those who cannot, do methodology’.”

(Lawson 1997: 11)

However, it would be misleading to give the impression that the discipline of economics exists within a methodological vacuum. Backhouse (1994) notes a growth in the interest of methodological issues within economics since the 1980s with the publication of an increasing number of monographs and textbooks and the establishment of dedicated journals such as *Research in the History of Economic Thought and Methodology* (1983), *Economics and Philosophy* (1985) and *Methodus* (1989). He considers that economic methodology had become a recognisable sub-discipline within economics by the end of the 1980s. Lawson’s work is clearly at the forefront of this trend towards a greater consideration of methodological issues.

Lawson (2003) contends that positivism has been unsuccessful because of its use of inappropriate ‘law seeking’ modelling with the inherent attachment to deductivism. This may be successful in ‘closed’ systems but not the ‘open’ systems of the social world. Indeed even in the natural world closed systems are limited probably to cosmology. Laboratory experiments create closed systems and the assumptions and axioms underlying mainstream economic theory are there to achieve a similar objective.

Closed systems have the benefit of event regularities where the impact of one variable on another can be quantified and applied to all spatial and temporal situations. However, the social world is open; individuals act independently and are influenced by others’ actions and there are different historical, social and institutional settings. Universal laws do not apply.

Deductivism is mistaken in presupposing that event regularities are a characteristic feature of economic systems:

“An important observation here is that event regularities of the sort presupposed in deductivism actually occur only under rather specific conditions. In fact, outside astronomy, event regularities of interest in science usually occur only in conditions of experimental control. Once this is recognised, it is easily seen that any conception which ties science to activities involving the elaboration of event regularities serves systematically to fence off science from most of the goings on in the world.”

(Lawson 1999: 4)

Lawson contends that the application of his social ontology helps to identify causal mechanisms operating within the underlying structure of social systems and that this can be used to inform scientific study of the social world.

Critical realism builds upon an adaptation of Bhaskar’s transcendental realism and rejects the empirical realism seemingly still beloved by mainstream economists. Lawson draws two key distinctions between transcendental realism and empirical realism:

“The first is that according to transcendental realism...the world is composed not only of events and states of affairs and our experiences or impressions,

but also of underlying structures, powers, mechanisms and tendencies that exist, whether or not detected, and govern or facilitate actual events. The second difference is that, on the transcendental realist conception, the different levels of reality are out of phase with each other.”

(Lawson 1997: 20-21)

Critical realism distinguishes between the objects of scientific study whether natural or social (intransitive dimension of knowledge) and theories and discourse (transitive dimension of knowledge). The theories and discourses themselves, as part of the social world can also be regarded as objects for study.

Crucially, critical realism identifies the intransitive domain as consisting of three levels; the real, actual and empirical.

The real is whatever exists whether it be natural or social irrespective of whether it can be empirically observed. It is at the real level where we find objects, their structures and powers.

The actual level refers to what happens if and when the powers (at the real level) are activated.

The empirical level is the domain of experience and may refer to the real or actual. Some structures may be observable, others may not. Structures that are not observable may create effects that can be inferred by their existence.

Critical realism therefore defines a stratified ontology. Implicit in this ontology is a recognition that powers may exist unexercised and hence what has happened or has been known to happen does not exhaust what could have happened or did happen. (Sayer, 2000).

This stratified ontology leads critical realism to a distinct analysis of causation. The activation of causal powers can result in different outcomes depending on the conditions that apply.

Lawson distinguishes between surface phenomena and the underlying structures and mechanisms:

“Not only does the autumn leaf pass to the ground and not only do we experience it as falling but, according to the perspective in question, underlying such movement and governing it are real structures and mechanisms such as gravity (or curved space).

Similarly the world is composed not only of such ‘surface phenomena’ as skin spots, puppies turning into dogs, and relatively slow productivity growth in the UK, but also of underlying and governing structures or mechanisms such as are entailed in the workings of, respectively, viruses, genetic codes and the British system of industrial relations.

....not only are the noted three domains ontologically distinct and irreducible (the real cannot be reduced to the actual nor the latter identified with the empirical) but also, and crucially, their characteristic components (mechanisms, events and experiences) are unsynchronised or out of phase

with one another....Thus, just as experience is out of phase with events, allowing the possibility of contrasting experiences of a given event, so events are typically unsynchronised with the mechanisms that govern them.....The independence of mechanisms from the events upon which they bear is illustrated by the example of autumn leaves which are not in phase with the action of gravity for the reason that they are also subject to aerodynamic, thermal and other causal factors. Events, in other words, are conjointly determined by various, perhaps countervailing, influences so that the governing causes, though necessarily 'appearing' through, or in, events can rarely be read straight off."

(Lawson 1997: 21-22)

The above brief discussion provides only a very superficial introduction to some of the characteristics of critical realism, particularly with regard to Lawson's project for a social economics. Hopefully it provides enough detail to give an appreciation that the realism being proposed is far more complex and detailed in terms of its reading of causal relationships than that provided by positivism.

This brief overview will also, hopefully, have illustrated the relevance of critical realism to the post-autistic economics movement. In particular, there is a similar criticism of mainstream economics and its adherence to mathematical modelling and a positivist methodology. Critical realism provides a foundation for moving beyond the creation of positivist models based on unrealistic assumptions to the development of a new social theory applicable to economics and related to the realities of the social world.

The pluralistic call from the post-autistic movement is also reflected in critical realism. Critical realism's search for generative mechanisms and for investigations into how mechanisms manifest themselves in various contexts calls for the appropriate use of both qualitative and quantitative approaches. In critical realism there is a distinction between intensive and extensive research methods:

"The way in which intensive and extensive procedures relate to qualitative and quantitative methods can be described thus: the intensive empirical procedure contains substantial elements of data collecting and analyses of a qualitative kind. The extensive procedure has to do with quantitative data collecting and statistical analysis. It is important to keep in mind that the different data collection and analytical methods are set in a particular metatheoretical context, that of critical realism."

(Danermark et al 2002: 163)

Critical realism's pluralism in methods also distinguishes it from some other methodologies. Positivism is generally associated with quantitative methods while at the opposite end of the scale research following a postmodern, interpretive or constructionist methodology is generally associated with qualitative methods. However, it would be misleading to stress this point too much given that a lot of current research, from different methodological standpoints, now employs mixed methods.

The next section will consider whether behavioural finance, with its focus on the behaviour of economic agents, is in a position to challenge the dominance of the mainstream modern finance paradigm. It has already been noted (Page 6) that

behavioural finance is a rival to modern finance theory. Does this rivalry suggest that financial economics is in better health than its parent discipline of economics?

### **Modern Finance and Behavioural Finance**

Does the growing development of behavioural finance imply that financial economics has successfully (or is successfully) overcoming the dominance of modern finance theory and hence that financial economics is on a healthier footing than its parent discipline of economics? The answer may be a qualified yes, but behavioural finance may be at risk of being subsumed by the dominant paradigm rather than becoming a stand alone methodological alternative.

The sub-discipline of finance has less variety within it than economics. Modern finance theory has become the dominant paradigm within the last fifty years and there is no great tradition of alternative heterodox movements as in economics itself. However, behavioural finance could potentially provide an alternative to the modern finance paradigm. Behavioural finance has received increasing recognition over the last twenty years and potentially offers an approach which, because of its focus on the behaviour of economic agents, could provide much greater explanatory power than modern finance theory.

Behavioural finance has developed over the last twenty years in response to observed anomalies in financial markets that were perceived as evidence that modern finance and its theories did not provide models of great explanatory or predictive power. In particular, the axiom of rational economic behaviour that was applied to investors seemed to run counter to a lot of observed behaviour (Thaler; 1991, 1992). Behavioural finance recognises that individuals' behaviour is important in determining how financial markets operate and researchers in the field seek behavioural explanations for market phenomena. Behavioural finance therefore seeks to describe the behaviour of economic agents and markets. Modern finance tells investors what they *should* do to maximise their wealth but behavioural finance finds empirical evidence of non-maximising behaviour and then seeks to *describe and explain* the cause of that behaviour (Thaler, 1993).

Behavioural finance is about what investors do and the impact of their actions on the operation of investment markets. It applies a knowledge base derived from the disciplines of psychology and behavioural judgement and decision making.

Shefrin (2000) has produced an extensive textbook aimed at practitioners. In it he identifies three major themes within behavioural finance; heuristic bias, frame dependence and inefficient markets.

The theme of inefficient markets recognises that the behaviour of investors, in particular their disposition towards heuristic bias and frame dependence cause markets to be inefficient. Modern finance theory is built upon the notion of efficient markets (the efficient market hypothesis); that assets are fairly priced in relation to their level of risk and hence that allocation decisions will be rationally based.

Both heuristic bias and frame dependence are examples of individual behaviour deviating from a normative definition of rationality.

However it is unfortunate that findings that do not support economic rationality may lead to a consideration of economic agents as irrational. Whilst accepting that the findings confirm that the particular type of rationality that underpins normative economic theory is not followed, the reasons for their behaviour traits are perhaps presented more clearly by a consideration of two distinct definitions of rationality offered by Evans and Over (1996):

“Rationality<sub>1</sub>: thinking, speaking, reasoning, making a decision, or acting in a way that is generally reliable and efficient for achieving one’s goals

Rationality<sub>2</sub>: thinking, speaking, reasoning, making a decision, or acting when one has a reason for what one does sanctioned by a normative theory”

This clarifies that decision makers may well be acting with reason in pursuit of their own objectives but in doing so will be violating the precise rationality required by normative theory.

It should come as little surprise that human decision makers are not able to fulfil the demands asked of them by expected utility theory (used as an axiomatic normative standard). To be able to define all possible choice outcomes in relation to subjective probabilities asks for unreasonable powers of data collection and analysis way beyond the limitations of human cognitive abilities. It is because of this that heuristics are employed. They are used to make the decision process manageable within data and cognitive constraints. By pursuing this logic it therefore becomes clear that behavioural finance is to some extent defined by the accepted rational economic man axiom of modern finance.

Should the development of behavioural finance lead us to determine that finance is indeed post-autistic and not in the same parlous state that economics finds itself in? Or is financial economics still autistic?

Rather than becoming the dominant paradigm, behavioural finance may become assimilated into the mainstream of modern finance. Is this happening? Richard Thaler who established the anomalies literature in the early 1980s has more recently written of the “End of Behavioral Finance”:

“I predict that in the not too distant future, the term “behavioral finance” will be correctly viewed as a redundant phrase. What other kind of finance is there? In their enlightenment, economists will routinely incorporate as much “behavior” into their models as they observe in the real world. After all, to do otherwise would be irrational.”

(Thaler, R.H.1999: 16)

His comments recognise that behavioural finance had been controversial in the mid 1980s but has increasingly become respectable as a “moderate, agnostic approach to studying financial markets.” (Thaler, 1999). Its rise can be evidenced by the increasing numbers of finance professors with sympathy for behavioural explanations, an increasing volume of relevant academic papers, and the appearance of specialist textbooks and journals such as the Journal of Behavioral

Finance (first published in 2000 as the Journal of Psychology and Financial Markets).

In declaring the “end of behavioral finance”, Thaler was certainly not predicting its demise but equally his comments are not necessarily implying that behavioural finance will overturn the dominance of modern finance theory (whether or not this is considered a desirable outcome). A more realistic interpretation is that Thaler is recognising behavioural finance’s ascendancy into mainstream finance theory, i.e. its assimilation into the established paradigm.

In many ways, behavioural finance does offer a different approach. Its use of findings from the fields of psychology and the decision sciences are welcomed. This approach helps to broaden the methods that finance may call into use to provide explanations for the behaviour of investors and the operation of investment markets. The cognitive psychology literature is primarily derived from experimentation and this body of work therefore adds to the small but growing body of work that makes up experimental economics (Friedman and Sunder, 1994). Experimental economics can be applauded for its desire to test the prescriptive power of economic models albeit that in its use of laboratory settings it is engaging with only a very restricted view of the realities of the real world.

But in other ways, behavioural finance can be seen as little more than a relaxation of the axiomatic view of investor rationality and from this perspective it achieves little more than all the other work in the mainstream that considers the effect of relaxing one or more assumptions. Some of behavioural finance’s greatest exponents have achieved their prominence because they have taken their findings about human economic behaviour and used them to develop revised mainstream models, applying the appropriate mathematics. In doing so they are tacitly accepting the mainstream models and the methodology underpinning them. They are largely ignoring the complexity of the social world and they could potentially learn a lot by considering the implications of critical realism for financial economics (in particular, what it has to say about underlying structures and causal mechanisms).

Many advocates of mainstream finance have often reduced behavioural finance to what they call ‘the anomalies literature’. By doing this, behavioural finance is defined by its relationship to the models of the dominant modern finance paradigm, (paradoxically this relationship is also characterised by behavioural finance’s criticism of modern finance models):

“Unfortunately for behavioural finance, its practitioners are drawn like a doomed species into the tractor beam of financial economics, and their work is concentrating on proofs of market efficiency, or lack thereof, using the same statistical methods (and methodology) that proponents of the EMH have been using from time immemorial. An alternative and more promising avenue would be to define behavioural finance’s methodology without paying attention to the vapid issue of whether markets are efficient or not.”

(Frankfurter and McGoun 2003: 210)

Finance would undoubtedly benefit from an increased interest in methodological issues, as recently witnessed in economics, (arguably more prevalent in heterodox than mainstream economics). In finance, methodological issues appear to be virtually ignored:

“Academic finance (aka financial economics) espouses a methodology that has been largely discredited (or, at the very least, challenged) in all other disciplines, not to mention the philosophy of science itself. And this methodology is so ingrained that it is never seriously addressed, let alone debated; rather, differences in mere *method* are referred to as *methodological* issues. The term *behavioural finance*, which ought to be applied to a different, more experimental methodological approach to finance, is instead applied to a set of papers that make slightly different assumptions in their mathematics/statistics without even using different methods.”

(Frankfurter and McGoun 2002: 115)

Frankfurter and McGoun are in no doubt that finance is weakened by its ignorance of methodology and its adherence to mathematical modelling:

“The most serious problem with finance is that the lack of alternatives is clear evidence of lack of vitality. Paradigms define what questions are important, and financial economics is not able to answer, or in some cases even to ask, the questions that concern finance practitioners. It has become a glass bead game, intricate and elegant and *efficient* in its artificial world, but irrelevant to the real world – unless it can induce the real world to imitate it.”

(Ibid.:116)

Whilst the cross fertilisation of ideas from the discipline of psychology with those from finance that behavioural finance engenders is welcomed as potentially providing economic models with greater explanatory power, it is interesting to note that in fact the methods used to establish the heuristic bias and framing literature in psychology are predominately experiments and surveys. These methods have traditionally been associated with the positivist methodology and it could be argued that behavioural finance is therefore unlikely to advance the call for greater pluralism that the post-autistic economics movement advocates.

However the discipline of psychology and the decision sciences are dynamic and there is a relatively young naturalistic decision making research programme which offers a distinct alternative to the experimentally determined and normatively benchmarked behavioural research described above. The next section will outline a naturalistic decision making research approach as an alternative to the heuristic bias and framing behavioural research agenda and considers the implications of its adoption within the finance discipline.

### **Naturalistic Decision Making**

The study of naturalistic decision making in the decision sciences takes research out of the laboratory and into the real world. Naturalistic decision making is an attempt to understand how people make decisions in real-world settings that are meaningful and familiar to them (Lipshitz et al 2001). Naturalism has two opposing meanings that shouldn't be confused:

- “1 That the methodologies of the natural and physical sciences (e.g. physics) provide a blueprint that should be followed by the social sciences.

- 2 The necessity to investigate human action in its natural or everyday setting and that the researcher must avoid disturbing that setting.”  
(Gill and Johnson 2002: 227)

It is the second definition that relates to naturalistic decision making.

Almost fifty years ago, Herbert Simon and his colleagues at the Carnegie-Mellon University, drew attention to what they considered to be the inadequacies of the rational choice model. Simon's work has left the legacy of two concepts that have taken on a common parlance; bounded rationality and satisficing.

The first of these concepts is bounded rationality (Simon, 1956). This concept recognises the limitations of decision makers but also that decision makers can use their limited time and other resources in an adaptive way within environments where further simplification of choice mechanisms may take place. Bounded rationality is therefore intended to be a description of how decisions are made within environments and is concerned with procedural rather than substantive rationality. Simon described the concept of bounded rationality with regard to two blades of a pair of scissors; one blade being the cognitive limitations of human decision makers and the other blade being the structure of the environment in which the decision maker operates. The concept is not concerned with optimisation but with decision makers' adaptive heuristic use within different environment structures (Simon, 1986).

Simon's second and related concept concerns the use of satisficing behaviour by decision makers. When decision makers employ satisficing behaviour they will not undergo the testing of all possible choices to find the optimal one but they will stop their search once a satisfactory choice has been identified.

Naturalistic decision making research is therefore concerned with investigating decision makers within their natural setting; Simon's world of boundedly rational but adaptive decision makers. Naturalistic decision making research has regard to both of Simon's blades; the cognitive abilities (rather than limitations) of decision makers together with the environmental setting. By contrast the heuristic bias and framing research programme was initially characterised by finding systematic bias in decision makers not by examining decision makers in real world settings but by undertaking experiments in artificial laboratory settings.

One significant feature of the naturalistic decision making programme is that its advocates are not concerned with the limitations of decision makers but they are instead interested in the expertise that decision makers exhibit when they tackle real world problems. For example, Klein (1998) has studied firefighters, pilots, nurses, military leaders, nuclear power plant operators with the objective of understanding:

“how people use their experience to make decisions in field settings. We try to understand how people handle all of the typical confusions and pressures of their environments, such as missing information, time constraints, vague goals, and changing conditions.”

(Klein 1998: 1)

Olsen (2002) notes that naturalistic decision making has not been formally studied in relation to investment decisions but he believes that the domain is suitable for such research:

“Prominent naturalistic decision attributes are:

1. The problem is ill-structured and complex
2. Information is incomplete, ambiguous and changing
3. Goals are ill-defined, shifting and competing
4. Stress is high due to time requirements and/or high stakes
5. Decisions may involve multiple participants.”

.....naturalistic decision theory....focuses on how people recognise and respond to indeterminate decision situations. In a naturalistic decision situation, an expert with extensive domain-specific knowledge and experience faces a complex and ill-structured decision task and analyzes it in a non-mechanical and holistic fashion, making use of situationally specific cues and patterns. The key to realizing a good decision outcome primarily lies in correctly “sizing up” or “framing” the situation, not in the mechanical application of “context-free” optimization rules, procedures, or formulas. Also, in contrast to most classically based procedures, a good decision outcome is viewed from a dynamic perspective, where increased emphasis is placed on how a current decision fits into a longer-term plan leading to a desired future state.”

(Olsen 2002: 161 and 162)

The naturalistic decision making framework offers an alternative to the heuristic bias and framing research programme. Naturalistic decision making research rejects the artificial setting of the laboratory and instead undertakes field studies in messy and complicated real world settings. The naturalistic decision making approach is therefore likely to include case study work and arguably a predisposition towards qualitative rather than quantitative research methods; but with a mixed method approach being frequently employed (Lipshitz, 2002).

The approach does offer potential for the study of investment decision makers, although investors making routine decisions are somewhat distinct from the domain settings that have been favoured by naturalistic decision researchers to date.

In fact, there is little published behavioural research on real estate investment decision makers, albeit with some notable exceptions (Gallimore and Gray, 2002; Gallimore, Hansz and Gray 2000). There is more literature concerning behavioural studies of valuers and appraisers (for example Diaz; 1990a, 1990b, 1997, Black; 1997, Gallimore, 1994, Gallimore and Wolverton; 1997, 2000, Harvard, 1999). However in a review of behavioural studies in real estate valuation (Wang and Wolverton 2002: 24-26) it is noticeable that all of the studies examined have employed either controlled experiments or surveys.

Therefore, there is great potential for the application of naturalistic decision making studies to real estate contexts. The naturalistic decision making programme also provides a direction for future behavioural finance research. Such a direction could help to steer behavioural finance away from the mathematical model building default that it seems to be becoming trapped in because of its subservience to the dominant modern finance paradigm. It could help to rescue behavioural finance from being assimilated into the modern finance paradigm.

## **Conclusion: Is the study of real estate investment autistic?**

Is the study of real estate investment autistic?

If the study of real estate restricts itself to the methodologies and methods of the mainstream cores of economics and finance, it will suffer from the same autism that can be found there. However, the inherent imperfections of real estate markets has arguably led to a lesser acceptance of mathematical modelling and neoclassical theory and a greater awareness of their limitations and restrictive nature than is found in economics and finance.

The study of real estate has the potential to be informed by a range of approaches from different disciplines, e.g. geography and sociology. A good example of this can be found in a stream of recent research about the real estate development market and developers (see Guy and Henneberry (eds), 2002). The research is interdisciplinary and uses a variety of methodologies and methods.

The study of real estate investment is more narrowly defined by economics and finance. There is a danger that a restrictive methodological outlook will dominate if real estate's investment researchers and practitioners look to modern finance and its 'achievements' and apply that body of theory to the real estate investment market. This paper suggests that such an approach would be misguided and repeat the mistakes that mainstream economics has made in its 'physics envy' and scientism; that of applying inappropriate methodologies and methods to the study of the social world i.e. using closed system modelling for the inherently open social world.

There is an alternative; adopt a critical realist approach. Critical realism develops a much more complicated and realistic vision of the causal mechanisms that operate within the structures of the social world. It offers a scientific approach that is more relevant to the realities of the social world than the simplistic closed system modelling of the positivist approach.

Behavioural finance offers another alternative that is more commensurate with the realities of the real world and in particular the behaviour of economic agents. However, behavioural finance has a tendency to use its behavioural findings to adapt the theories and models of the mainstream modern finance paradigm. From this perspective behavioural finance offers a very limited alternative and is itself in danger of becoming assimilated into the mainstream of finance rather than developing as a separate methodology.

It was also noted that the mainstream psychology research base relies heavily on the use of experiments. Such an approach is another example of closed system modelling and the findings from such experiments may have only limited relevance to how economic agents behave in the real world.

The alternative research approach that has recently developed in psychology and the decision sciences is that of naturalistic decision making. This leaves behind the laboratory and directly engages with the world of the decision maker. The approach can use any method appropriate to furthering the understanding of how decision makers operate in their natural settings. The results from such research will not be able to offer the internal validity of controlled experiments but will be high in external validity because of the real world context.

If the study of real estate investment decision making limits itself to a direct application of modern finance theory it will be autistic. It will be genuinely post-autistic if its practitioners and researchers use variety in their chosen methodologies and methods and if they seek to explain the complexities and realities of real estate investors and markets. This paper has discussed the potential of various approaches to achieve this. It suggests that a pluralistic and open minded approach is required.

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