Peter E. Earl, *Principles of Behavioral Economics: Bringing Together Old, New and Evolutionary Approaches*

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Behavioral economics has burgeoned in the past few decades, both in terms of its impact on the economics discipline and via its influence on public policy-making. In the late 1990s, many mainstream economists viewed behavioral economics with scepticism, perhaps because it challenged the dominant view then held by many economists – that decision-making is a strictly rational, mathematical process. Now, behavioral economic concepts are routinely embedded into otherwise mainstream models. Behavioral economics' influence on policy has grown in tandem – with behavioral insights teams around the world adapting behavioral economic policy "nudges" to address a wide range of economic policy problems. This rapid growth in the reach and influence of behavioral economics has spawned a plethora of behavioral economics books in various guises, saturating the market with textbooks, primers and "pop" introductions. Against this backdrop, Peter Earl's latest book – *Principles of Behavioral Economics: Bringing Together Old, New and Evolutionary Approaches* – is a distinctively original contribution. The depth of Earl's analysis reflects his extensive knowledge of the history of behavioral economic thought – a knowledge which is possibly unrivalled, given Earl's continual interest and contributions to behavioral economics over the past forty years. (His first behavioral economics book – *The Economic Imagination – Towards a Behavioral Analysis of Choice* – was published in 1983.)

Earl's vision ranges over contributions from John Maynard Keynes, Friedrich von Hayek, G.L.S. Shackle, Joseph Schumpeter, Hyman Minsky, George Katona, Herbert Simon, Daniel Kahneman, Amos Tversky and Richard Thaler and many, many others. Earl is a unique position to explore these divergent contributions from behavioral economics' "big" names, even whilst those names seemed unaware of each other's contributions. Earl utilises Esther-Mirjam Sent's categorisation of behavioural economics into the epochs of Old Behavioral Economics (OBE) and New Behavioural Economics (NBE) (Sent 2004). OBE draws on discoveries that were developed before1980 – especially those of Herbert Simon around bounded, procedural and substantive rationality. New Behavioral Economics (NBE) draws on the more commonly known ideas of Kahneman, Tversky and Thaler about heuristics, bias and prospect theory, with newer versions embedding behavioral "tweaks" within essentially standard mainstream economic models. Earl blends OBE and NBE together, embedding fundamental principles from psychologists such as George Kelly and Abraham Maslow, and adding in key principles from evolutionary economics – thus constructing a complex, complicated and multi-faceted mixture of insights from economics and psychology.

Motivation is fundamental to economic decision-making and is central to Earl's analysis of behavioral economics and its underlying evolutionary principles. Essential to understanding motivation, and another central theme in behavioral economics generally, is the nature of rationality and the links between rationality, choice and problem-solving in a world of uncertainty and ambiguity. In developing these ideas, Earl sets-out Herbert Simon's ideas about bounded rationality – focussing on the cognitive constraints – including memory limitations and shifting conceptions of utility and happiness. In exploring motivation, Earl explains the disconnect between standard economic theory and key insights from psychology by drawing on psychologist Abraham Maslow's hierarchy of needs: we have basic physiological needs, which operate within a

hierarchy of other "higher" needs – including needs for safety, social belonging, esteem from others, and self-actualisation. Higher-*level* needs may conflict with higher-*priority* needs, even whilst high-priority needs must be satisfied first. For example, access to drinking water is a high-priority need, but a lower-level need; conversely – initiatives to reduce environmental impacts might be a low-priority, high-level need, but ultimately, the need to drink water will dominate. Earl develops these Maslowian theories about hierarchically ordered needs in arguing that the conventional economic view of preferences and their link to maximising utility cannot capture these complex interactions of needs – especially as there is no single source of utility in a world in which people have different preferences and motivations operating alongside one another in fundamentally different ways but all at the same time. This sort of complexity is impossible to capture in the utilitarian approach which characterises mainstream economics and its NBE offspring.

Earl further develops his psychological analysis of the limits to mainstream economic theory by drawing on George Kelly's personal construct theory. Kelly developed the idea that people operate as scientists in their attempts to predict and control the world around them and developed the "repertory grid technique' (RGT) as a tool via which people can reveal the personal repertories that govern their lives. For example, in the context of unravelling people's preferences and choices for mobile phone plans, Earl and his colleagues asked people to list alternatives (whether currently available or available in the past or future) and then think about ways in which these alternatives were similar or different. This formed the basis of a person's repertory grid. If a person's grid might include their first mobile phone, an iPhone and a Samsung Galaxy; they would then be asked to think about the similarities and differences between these different phones, such as their first mobile phone might not have had a touchscreen so they would prefer an iPhone or a Samsung Galaxy. In this way, the constructs that motivate people can be explored and exposed in more systematic ways.

Earl blends these psychological foundations to develop an approach to behavioral economics built on evolutionary foundations, focussing on the role played by of emotions in forming and driving preferences. The role of emotion in decision-making is something that economists have largely neglected until recently, with the exception of the political theorist Jon Elster's early contributions exploring the links between rationality and emotions (Elster 1996). Earl brings in key insights from the neuroscientist Antonio Damasio about the role that emotions play as somatic markers: the bodily feelings which we associate with emotions constitute an essential guide to decision-making. We would often paralysed if we had no emotions to guide and drive us (Damasio, 1994). Earl develops these insights to explore how early humans evolved by using their emotions to develop stable and comprehensive systems of preferences, ensuring that humans were hard-wired to experience and use emotions to guide their decisions. For example, we have evolved to be dependent on our emotions to guide our searches for water, food, shelter and mates, as well as to escape dangers and live harmoniously with others.

In later chapters, Earl leavens his, at times, esoteric analysis of the links between behavioral economics, psychology and evolutionary theory with some applications of the principles to central economic questions. Highlights include his analyses of key themes often neglected in other analyses of behavioral economics – including behavioral theories of the firm and behavioral macroeconomics.

Behavioral theories of the firm provide an alternative to mainstream economic analyses of firms focus on the profit motive in which all firms are pursuing the simple goal of maximising profits and minimising costs. (In the stylised models of mainstream microeconomics, these two

goals go together – maximising profits necessitates minimising costs.) In mainstream economics, the firm is envisaged as a single unit and the process via which inputs are transformed into outputs by a firm is treated as a black-box – inputs of labour, etc. go in and products and services come out and what happens within the black-box of the firm is not the focus of economic analysis. Drawing on managerial and psychological insights, as well as fundamental principles from Cyert and March's (1963) behavioral theory of the firm, Earl explores how and why real-world businesses pursue a much wider and more nuanced range of objectives, especially when their decision-making is hampered by risk and uncertainty. The firm is not one homogenous whole – different decision-makers at different levels of the firm might be motivated by very different and competing? goals. Some managers might engage in 'satisficing' if they want a stable and comfortable work life. Executives might want to maximise growth rather than profits, or to target market-share, or to boost share-holder value. The structure of a firm and the extent of trust and co-operation within a firm and its teams might make a significant difference to its success. One of the important contributions of Earl's book is that it reminds us that there is much more for behavioral economists to do in exploring and analysing the role of decision-makers within real-world businesses.

Analysing the macroeconomy remains as a major challenge for behavioral economists because all the behavioral complexities which are capable of measurement and analysis at a microeconomic level (for instance, via experiments) are very difficult to capture and measure at an aggregate level. Earl introduces some broad insights about the role of happiness and confidence in the macroeconomy, as well as the role played by "animal spirits" – a concept developed by Keynes to capture entrepreneurs' spontaneous instincts just to get things done – instincts that have their roots in psychology and emotions rather than utilitarian motives to maximise profits. His analysis of speculation and its role in macroeconomic instability is more developed – drawing especially on analyses of housing markets and the role played by the collapse of the US sub-prime market in the 2007/8 global financial crisis. An interesting and novel idea that he introduces in this context is the idea of "*decision-rule* cascades". In economics, *information* cascades emerge when people use others' decisions as a source of information for their actions?: when I see a lot of people are buying a particular share, or a particular house in a particular area I might assume that they know something I do not know so I copy them. Other people coming along after me, might infer something similar from my choices – they use my choice as a source of information and copy *me*. In this way, information cascades through a group of people. Earl's idea about a rule cascade is novel because it is about people copying each other's rules, not just the information conveyed via their choices – for example, a person who does not have much experience in real-estate might study and copy what a successful real estate professional does, copying their rules (Earl *et al.* 2007). Another example would be the large number of financial investors who copy Warren Buffett's trading "rules". Developing the idea that we follow each other's rules is, in my view, one of the most powerful and promising ideas in Earl's book, especially in the context of an evolutionary theory of behaviour founded on rules.

Another novel aspect of Earl's approach to behavioral economics comes in his focus on distinctions between micro, meso and macro. Economists are well-used to the distinction between microeconomics – operating at the level of individual firms, workers and consumers; and macroeconomics – the broad economic experience of a country, economy or society as a whole, for example the relationships between macroeconomic inflation and unemployment in aggregate. But Earl also presents some important ideas from evolutionary economics about the role of

"meso" – that which comes in the middle, between the micro and the macro – and the role of the meso in structural change. Rules operate at a "meso" level – for example, as represented by a specific production method, product or model of organisation. He illustrates this with the example of a bicycle – it might have started as a hobby horse, then evolved into a penny farthing and then all the way various iterations until embodied in our modern mountain bikes, road bikes and BMX bikes. Structural change is characterised by the evolution of these processes over time through from origination, adoption, retention to decline. The structural change that accompanies this process is responsible for macroeconomic fluctuations, as identified by twentieth-century Austrian political economist Joseph Schumpeter in his analysis of the roles played by imitative innovation and creative destruction in generating business cycles.

Throughout his book, Earl illustrates his ideas with accessible, telling? examples – including findings from his own research, experience and observations – such as his research into mobile phone users' preferences, and choices around car models and makes. In his final chapter, he concludes by unifying all his different themes and insights via a couple of simple narratives, comparing the environmental choices, attitudes and norms driving the decisions of two couples: the "Materialists" – Melissa and William versus the "Greens" – Emma and Jude. This is an effective device for stripping down the complexities of his preceding analyses via a clear and salient analysis of exactly the sort of dilemmas we are all facing in the context of climate change and environmental degradation.

Overall, Earl's book is rich in insight. His contribution to the literature is unique in its combination of behavioral and evolutionary themes and in terms of its breadth and density. It offers an extensive and multi-faceted coverage of behavioral economics – in its old, new and emerging forms. Its coverage is perhaps too ambitious (it could be 3-4 books) and, at times, reads like a stream of consciousness with respect to all areas of economics – and perhaps a less ambitious approach would have delivered a more easily-digestible book. Economics is a vast discipline, impossible to capture effectively in one volume. *Principles of Behavioral Economics* also suffers from the limitation, common in critiques of the economic orthodoxy (whatever that might be, these days) in its caricature of "mainstream" economics and the reliance on unrealistic assumptions. In my experience at least, most modern academic economists are not believers in the old-fashioned neoclassical economics which is the target of Earl's criticisms. Also, Earl asserts that his book could be used as a textbook and draws parallels with Thaler and Sunstein's "pop" behavioral economics book *Nudge: Improving Decisions About Health, Wealth and Happiness* (first published in 2008, updated in 2022) but, in truth, Earl's book shares little in common with *Nudge* beyond the broad behavioral economics themes. *Principles of Behavioral Economics* is (I estimate) 200,000 words plus – with scarcely any repetition of content: it is a rigorous and learned contribution, unlikely to be easily useable for any except the most talented and enthusiastic of today's undergraduate students. As a textbook, it would need more structure and concision to suit modern students' tastes and preferences. However, for any passionate graduate student, researcher or other scholarly person interested in a fresh perspective on behavioral economics it is a worthwhile read and will reward its reader with plenty of innovative insights, all collected together one ambitious volume.

References

Cyert, R.M. and March, J.G. (1963), *A Behavioural Theory of the Firm*, Prentice Hall, Englewood Cliffs NJ.

Earl, P.E., Peng T-C., and Potts J (2007). 'Decision rule cascades and the dynamics of speculative bubbles', *Journal of Economic Psychology*, vol 18, no. 3, pp. 351-364.

Damasio, A. (1994), *Descartes' Error: Emotion, Reason and the Human Brain*, Putnam, New York.
Elster, J. (1996), 'Rationality and the emotions', *Economic Journal*, vol. 106, no. 428, pp. 1386-1397.
Sent, E-M. (2004), 'Behavioral economics: How psychology made its (limited) way back into economics', *History of Political Economy*, vol. 36, no. 4, pp. 735-760.

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