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## Introduction: Behavioural economics, business decision making and applied policy analysis

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### Nathan Berg

School of Economic, Political and Policy Sciences (EPPS)

University of Texas at Dallas

Box 830688, GR 31 Richardson, TX 75083, USA

and

Max Planck Institute for Human Development-Berlin

Center for Adaptive Behavior and Cognition (ABC), Germany

E-mail: nberg@utdallas.edu

**Biographical notes:** Nathan Berg is an Associate Professor of Economics in the School of Economic, Political, and Policy Sciences (EPPS), University of Texas at Dallas and a Senior Research Scientist at the Max Planck Institute for Human Development-Berlin, Center for Adaptive Behavior and Cognition. Berg was appointed to the editorial board of *Journal of Socio-Economics* and elected to the Board of the Society for the Advancement of Behavioural Economics in 2006. He has published 25 articles and chapters in behavioural economics since 2001 in journals such as *Journal of Economic Behaviour and Organisation*, *Social Choice and Welfare* and *Contemporary Economic Policy*. Berg was a Fulbright Scholar in 2003 and his research has been cited in *Business Week*, *Canada's National Post*, *The Village Voice*, *The Advocate* and *Atlantic Monthly*.

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The emergence of behavioural economics has provided new insights into economic and business phenomena by integrating elements of economic theory and experimental psychology. So far, the behavioural economics research agenda has concentrated on the empirical validity of foundational assumptions, producing new descriptive accounts of behavioural patterns that are difficult to explain using traditional neoclassical assumptions. This agenda has now developed sufficiently to begin exploring how to apply these descriptive findings to improve human performance, business decision making and economic policy.

Forging a new normative economics based on behavioural theory is an ambitious project. There is not yet consensus, among behavioural economists or otherwise, that standard normative theories in economics such as the Fundamental Welfare Theorems built on axiomatic assumptions of self-interest, self-consistent utility maximisation and perfect information are in need of revision. From the observation that individual behaviour systematically deviates from textbook prescriptions for rational decision making, a broad range of sometimes conflicting conclusions about normative economics can be drawn. For example, some argue that when behaviour deviates from textbook prescriptions, policy should seek to revise people's behaviour rather than economists revise their normative models, *e.g.*, teaching MBA students to correctly apply Bayes Rule

rather than abandoning Bayes Rule as a criterion for rational decision making. Others argue that, because individuals fail to meet the idealised standard of perfect economic rationality, behavioural theory provides a new rationale for paternalistic intervention aiming to 'de-bias' individual behaviour, *e.g.*, taxing potato chips and subsidising carrots to correct for impulsive consumer decisions at the grocery store. Still others argue that normative benchmarks such as transitivity, expected utility axioms, set-theoretic logic and probability theory, are largely irrelevant criteria for deciding whether a particular decision process works well in its respective environment.

Eagerly venturing into disputed terrain, this special issue seeks to help bridge the gap between behavioural economic theory and its normative application in business decision making and applied economic policy analysis. The title of Matsumoto's lead article, 'Seeking a realistic way of individual decision making', could serve as a subtitle for virtually every article in this issue. Indeed, the search for improved empirical realism provides an important unifying theme. Matsumoto introduces a new theoretical model which shows that self-consistency over an individual's life course is not a necessary condition for rationality. A critical problem with the standard model is its assumption that individuals make high-stakes life decisions by considering an exhaustive list of possible actions and, when risk is involved, payoffs associated with the multiple possible outcomes that are associated with each action. Matsumoto's model deals explicitly with the fact that the individual cannot fully anticipate future choice sets, or the mapping from current actions into future opportunity sets, in a meaningful way. Serendipity indeed appears to play a large role in the lives of many leading voices in business, arts and letters.

The next three articles in this issue draw on original data sources to investigate bounded self-interest and bounded information processing. Chakravarty, Haruvy and Wu use survey data to investigate discrepancies between standard models of innovation and real-world facts surrounding open source software development. Interestingly, they find that bounded self-interest coexists alongside usual self-interested profit motives in spurring on different dimensions of product performance. Tisdell shows that policymakers intent on using survey methods to elicit voters' willingness to pay for environmental resources face formidable challenges because of the extreme sensitivity of stated willingness to pay with respect to minor variations in the information provided to survey respondents. Tisdell demonstrates cases for which cost-benefit considerations reach the same conclusion over the entire range of willingnesses to pay, suggesting a technique that may provide useful output despite its inherent imprecision. Li and Pingle report new experimental results on positional concern, asking whether it helps or hurts aggregate performance to provide individuals with information about their relative standing in the group. In contrast to the view that more feedback about relative position will reduce performance by discouraging low performers, these experimental results suggest that more information, or better transparency, about relative standing can facilitate bargaining and deal-making that result in aggregate gains.

The next four articles focus on accurately describing the thought processes that go into high-stakes financial decisions and accounting for their practical consequences. Schwartz boldly proposes two tax policy modifications that take explicit account of anomalous risk preferences and choice patterns discovered in the psychology and economics literature. Schwartz's proposals attempt to redirect investment capital into the hands of entrepreneurs who are more likely to take risk, thereby achieving improved aggregate returns on investment capital. Wennberg and Nykvist describe decision

processes and performance of professional financial forecasters in Sweden, finding strong divergence between their empirical findings and standard economic models, yet little evidence of economic harm. Wennberg and Nykvist, like Schwartz, use an innovative in-depth interview methodology that is unusual in economics. Otto, Davies and Chater introduce a new tool for improving individual savings decisions, using survey data to take account of a variety of savings strategies and decision processes underlying financial decisions. Finally, Yu investigates the Austrian-school psychological theory of entrepreneurial decision making, drawing on Hayek and Shutz to argue that subjective pattern recognition, codified as rules of thumb, results in performance-enhancing simplifications that create socially beneficial order out of otherwise randomly distributed fields of information.

The final four articles in this issue engage traditional themes in political economy with the question of what behavioural economists' revised assumptions add in terms of new insights about macroeconomic policy. Austin and Wilcox report experimental evidence about the statistical determinants of subjects' policy views and the malleability of these views when presented with new information. Kokinov argues that cognitive psychologists now know enough about the determinants of risk attitudes to apply them in transition economies with the goal of encouraging greater risk taking and cultivating entrepreneurial attitudes. Altman pursues the connections between contemporary behavioural theory regarding worker effort with new interpretations of the writings of Adam Smith, discovering more, not fewer, reasons for optimism concerning globalisation. Finally, Berg and Maital argue that globalisation is better described as a collection of discrete phenomena with multiple, nation-specific causes rather than a singular, inevitable phenomenon, with behavioural economics suggesting new reasons why heterogeneous policy approaches rather than one-size-fits-all institutions are helpful for improving well-being.

The articles in this issue reveal an exciting research field that will remain active for years to come. Rather than achieving a unified consensus, there clearly are multiple approaches with different priorities for bringing the descriptive findings of behavioural economics' early years to bear on normative economics. The contributors to this issue collectively prove that behavioural economics' goal of improved empirical realism will necessitate more attention among researchers to the problem of connecting theory to applied problems and contemporary debates in business, economics and political economy.