Evaluate the merits and feasibility of integrating research findings from behavioural economics with social psychology

Gareth Stack

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Introduction

Behavioural Economics (BE) is a developing interdisciplinary field of research, integrating findings from the Psychology of Thinking, Judgement, and Decision Making (TJDM), with contemporary economic theory and methodology. Within BE, cognitive research on the boundaries and biases of, and errors implicit in, human rationality, as well as descriptive theories of underlying adaptive heuristics - evolved cognitive problem solving tools, inform updated models of micro and macro economic behaviour (Camerer & Loewenstein, 2004). This essay will examine how the methodologies and findings of interdisciplinary economics have been applied, and provide the promise of future application to Social Psychology.

Behavioural Economics, a Brief Overview

TJDM research has its routes in the information processing paradigm of the cognitive revolution, and more specifically in experimental research into the limits of human capacity - originating with Herbert Simon's 'Bounded Rationality', and George Millers 7±2 'Magic Number' (Eysenck & Keane, 2002) - and the mechanisms and limitations underlying human decision making (especially decisions under conditions of less than perfect information - uncertainty or risk). While cognitive resource scarcity places practical limits on the rationality of individual decision making (Payne & Bettman, 2007), humans have developed two systems of reasoning to enable successful problem solving. System 1 is associative, rapid, unconscious and informed by an affective, embodied knowledge base (Damasio, 1994); while System 2 is controlled, effortful, serial and flexible (Kahneman, 2003). Both reasoning systems are subject to heuristic distortions. Additionally, human culture has evolved normative, probabilistic models of rationality, for example Bayesian inference - a statistical methodology for adapting predictions to the addition of novel evidence (Lee, 2004), and developed a variety of institutionally aggregated decision making mechanisms (Glaeser, 2004).

Two important theories categorising the deviations individuals make from normative rationality are Daniel Kahneman and Amos Tversky's Prospect Theory (Kahneman & Tversky, 1979, cited in Kahneman, 2003), which focuses on the overweighting of

arbitrary references points (e.g.: hyperbolic discounting of future costs) during risky decision making, and Richard Thaler's Mental Accounting model, which provides a description of how counterfactual budgets are utilised to cognitively isolate spending and utility (Thaler, 1980, cited in Thaler, 1999).

While BE has primarily impacted microeconomic research, some theorists now argue for the establishment of BE's more detailed models of human reasoning as microfoundations for macroeconomic theory (see Holden, 2004). George Akerlof, 2001, suggests one such model, correcting many of the assumptions of new classical macroeconomics - including the impossibility of involuntary unemployment, the ineffectiveness of monetary policy, and the impossibility of under-saving (Akerlof, 2001).

Applying Behavioural Economics to Social Psychology

In contrast to Akerlof's desire for a greater interaction of psychology and economics (Akerlof, 2001); some neoclassical theorists, while accepting the validity of imperfect human rationality, suggest that in aggregate humans behave rationally - and further, that the tools of macroeconomics can be applied to psychology to inform it's predictive utility; maintaining the normative political implications of laissez-faire economics.

Glaeser, 2004, describes the areas of bounded human rationality mapped by Prospect and Mental Models theories, as identifying the impact of situational influences at an individual level, while ignoring the rationality which emerges in collective and institutional behaviour, precisely the level of modelling at which economics excels. Further, Glaeser critiques social psychology's focus on the effect of social influences on individuals, rather than the psychology of groups. This is distinct from an emphasis on the transformative effects of group membership (see Greenwood, 2003, for one such critique), rather referring to the neglect of Interacting Cascade, Swarm Intelligence (Couzin, 2007), and Cognition in the Wild (Hutchins, 1995) models of collective computation and emergent cognition (Crutchfield, 1994). Glaeser's solution is to propose the use of economic theories to account for the supply of cognitive

distortions, positing a top down supply-side account of the spread of irrational beliefs (specifically an 'Economics of Hate'), as governed by the demand and supply of utility maximising ideas (subject to cognitive distortions, such as loss avoidance) (Glaeser, 2004). To Glaeser, critical BE economic theorists, who argue for government intervention to ameliorate the cognitive limitations of individual human foresight, risk greater damage due to the weaker aggregate rationality of the political marketplace (which is slower to punish irrationality).

Don Ross, 2008, posits a more complex view of how aggregate behaviour implicitly facilitates rationality. To Ross, many decision-making problems are essentially insoluble at the individual level. Not only must individuals rely on uncoordinated modular brain systems and phenotypic traits (developed from the application of environmental cues to predetermined genetic diathesis), each motivated by their own utility; but decision making at the social level becomes an 'unbounded n game' - an interaction in which each move affects multiple games (and informs multiple players) simultaneously (Ross, 2008). This problem is solved through the collaborative development of narratives, autobiographical accounts explaining and predicting behaviour to the group and the individual themselves - a microsociological corollary of Mark Howard Ross's model of psychocultural narratives - common sense explanations of events that tie together a society's world view (Ross, 2007). Narratives allow individuals to infer their utility from similar other, and combine with institutions to create rationality and return to usefulness, rational actor based models of economic behaviour (Ross, 2008). Slovic et al, 2004, cite a variety of research evidencing the effectiveness of narratives at producing affectively weighted imagery, used to facilitate judgements, for example the generation of verdicts by trial juries (Slovic et al, 2004).

While economics has responded to the development of more sophisticated models of individual choice by abandoning (at a micro level) it's conception of a probabilistically reasoning, utility maximising 'homo economicus' (Anderson, 2000); Social Psychology has not yet incorporated significantly the methodologies, models or research findings of Economics. This is not to suggest that Psychology, and in particular Social Psychology, in it's examination of the "psychological processes that people have in common...that make them susceptible to social influence" (Aronson et

al, 2002, cited in Glaeser, 2004), could not benefit from the increased methodological anarchism (Feyerabend, 1993), rigour, or triangulation (Knudsen, 2006), provided by the addition of behavioural economic theory and methodology.

One economic tool that might successfully be imported into social psychology is the concept of incentives. Stephen Levitt distinguishes between economic, social and moral incentives, motivating leavers with which to pro-socially modify behaviour (Levitt & Dubner, 2005). Of particular interest is the notion that incentives can interact, financial removing moral for example, as in Levitt's example of a day care levee that acted to increase the amount of parents leaving their children past collection time (Levitt & Dubner, 2005).

Economic techniques have been already been applied to a variety of areas of psychological research. Political scientist Robert Axelrod and Evolutionary Biologist William Hamilton used the Prisoners Dilemma, a subtype of non-cooperative Game Theory, the branch of mathematics used to model dynamic competition in markets (Kreps, 1990), to postulate a mechanism for the development of reciprocal altruism in humans (Axelrod & Hamilton, 1981, cited in Buss, 2004).
In the early 1980's the behavioural researcher Steven Hursh pioneered the use of Economic concepts such as open and closed economies, elastic and inelastic demand, and substitutive vs complementary goods, to account for laboratory findings contradicting 'simple action' stimulus response behavioural theories (Hursh, 1984). Hursh's research could signal a way to approach the problem of mutually interacting variables in social science. Hursh found that in certain conditions, the consumption by animal subjects of one reinforcer could substitute or complement the consumption of another, leading to an interaction of two or more response schedules. Hursh applied the concept of a demand curve to model this interaction, systematically altering the price of one good, whilst measuring the 'cross price' change in demand for another (Hursh, 1984). Economics has developed a variety of such tools to deal with dynamic complementarities, with potential applications to social problems involving interacting systems, such as group dynamics and interpersonal relations.

Psychology has invested much effort in the development of psychometric testing or attitudes or personality, but has a limited ability to predict or assess ipsative change "a

change in the configuration of variables within an individual across time" (Roberts et al, 2001), and can be construed as overemphasising the importance of articulated attitudes (Greenwald, 1998).

Richard Easterlin's work provides an example of BE research overcoming the reliance of psychology on unreliable attitudinal reports (Easterlin, 2005). Easterlin accuses psychology of adopting a nihilistic perspective on well-being, as phenotypically derived, while in turn accusing Economics of positing an overly exogenous impact of income on well being (maximal utility) (Easterlin, 2005). Easterlin used cohort survey data to attack the notion, prevalent within psychology, of a hedonic 'set-point', about which shifts in well-being are temporary and limited in size. By contrasting nationally representative samples of disabled and non-disabled, population statistics on happiness related to health, longitudinal studies of bereavement, and comparisons of married and unmarried within the same cohort, Easterlin evidenced a failure to adapt to worsening in quality of life. Contradictorily, Easterlin found that life cycle income increases do not necessarily increase well-being, a finding he explains with reference to the desire for goods increasing on a hedonic treadmill as they are attained. Similarly, the reference point for income increases as income rises, while by contrast opinions on the desirability of marriage, good health, and a set (close to average) number of children remain relatively constant. Easterlin's model provides support for the adaptive psychological mechanisms proposed by evolutionary psychology; as it holds constant fitness maximising behaviours (a small number of highly invested offspring, dual parenting etc), while proposing an unquenchable thirst for more unequally distributed resources.
Easterlin’s triangulation of a variety of population and representative sample statistics and surveys, in an analysis of ipsative change, points to the strength of BE's methodological diversity, and the utility of the statistical techniques of BE to cope with complex inter-cohort, cross domain, metastudy comparisons; while integrating theoretical perspectives from psychology and economics.

Paul Frijter provides another example of the use of large, nationally representative data sets from BE research, utilizing German and Russian survey panels to compare life satisfaction changes across domains; finding only a weak effect of dissatisfaction

and intention to change on behaviour, evidencing a gap between life satisfaction and ordinal utility (Frijter, 2000).

Approaches like those of Frijter and Easterlin, evidence the need for more sophisticated national measures of well-being than GDP, a development advocated by researchers in the emerging field of Psychology of Happiness (Gilbert, 2007). Nicholas Sarkozy, the newly elected president of France, recently proposed replacing GDP measures with metrics of wellbeing developed by welfare economists Amartya Sen and Joesph Stiglitz (Bennhold & Shannon, 2008).

Andrew's Clark and Oswald, 1996, utilised an economic model of the utility of work, in combination with the theoretical framework of relative deprivation taken from the literature of social psychology - the idea that utility is judged not by the possession of absolute capital but rather social comparison, to account for differences in job satisfaction across a large British data set. Clark and Oswald found comparative income with a reference group significantly predictive of job satisfaction (Clark & Oswald, 1996), a rejection of Induced Value Theory (Smith, 1976) - which posits that in normal circumstances payments represents preferences. This finding accounts for the diminished utility of relatively lower wages, and has implications for health and mortality outcomes (Marmot & Brunner, 2004) - although research in this area is inconclusive (Vallone, 2003) (Deaton, 2001); and for economic policies such as the desirability of indefinite economic growth (Easterlin, 1974, cited in Clark & Oswald, 1996).

Barry Schwartz has suggested that increased choice can be a cost rather than a benefit, especially in situations where the comparison of numerous complex alternatives has serious long-term consequences, such as the purchase of insurance and pension plans (Schwartz, 2003). Schwartz et al, 2002, identify a subset of individuals, maximizers who seek to avoid regret aversion (buyers remorse). Schwartz suggests that if the search space of choice is too wide, and as a result optimisation is not possible, an inability to attain greater expected utility could lead to 'depressogenic' attribution styles, higher in social comparison, less optimistic, and lower in life satisfaction (Schwartz et al, 2002). However as Schwartz et al admit, this may confuse the course of causation, as those who tend toward depression may also adopt a maximising consumption style over a satisficing one.

While the methodologies of economics may be of benefit to experimental and field research within social psychology, experimental economics (EE) - often seen as equivalent within BE to psychological laboratory experimentation, has been criticised for lacking psychology's experimental rigour (Camerer & Loewenstein, 2004). George Loewenstein critiques EE on the basis of external validity, questioning the practises of 'stationary replication' (repetition of trades between the same actors), lack of awareness of experimenter and context or framing effects in theoretically 'neutral' experimental environments, and ignorance of the potential impact of implicit incentives (e.g.: altruism, fairness, revenge, social comparison) and biases (e.g.: loss aversion) distorting subject motivation (Lowenstein, 1999). Loewenstein additionally attacks the internal validity of EE experiments, pointing out that basic safeguards of psychological testing - such as random group assignment, are frequently not carried out. Stephen Levitt and John List, share this critique, pointing out the multiplicity of demand characteristics affecting subject behaviour in laboratory experiments derived from awareness of external observation, context, and self selection (Levitt & List, 2007).

Experimental Psychology is not however, immune to criticism on the basis of external validity, as college undergraduates (unrepresentative of the wider population on the basis of IQ, level of education, age, income etc) are frequently used to test social psychological theories (Smith and Mackie, 2007). Camerer & Loewenstein do point out that Experimental Economics with its emphasis on replicability, and the retention and publication of methodological and experimental data, provides a template for the improvement of the reporting of Psychological research (Camerer & Loewenstein, 2004). Additionally, the statistical techniques of economics could help combat the selection biases and power limitations common to Social Psychological research. For example, Heckman's Two-Step Estimation provides a methodology to estimate the error created by artificially differentiated population samples (Bushway et al, 2007).

Conclusion

This essay has demonstrated the utility of BE to Social Psychology from a variety of perspectives - the application of statistical tools to dynamic complementarities and ipsative change; the use of incentives to motivate behavioural change; the measurement and causes of well being, life satisfaction and happiness; the potential for economic models of supply and demand to account for prejudice and erroneous beliefs; the emergence of social cognition; and the utility of the methodology of economic experimentation.

However an integration of BE into Social Psychology, is not without it's potential drawbacks. Integrating economic models of group behaviour risks a reductive loss of some of the most valuable conceptual tools of social psychology, constructs that remain difficult to operationalise, or fail to tally with dominant neo-classicist 'Chicago School' economics - ideas like class, relative deprivation, social norms, or moral development (Colby & Kohlberg, 1987). Mathew Rabin warns of the danger of an over rigorous application of mathematical precision, losing the complexity of psychological models in favour of measurability (Rabin, 2001).

Evolutionary Psychology is often criticised for its reliance on 'just so' stories, reductive adaptionist accounts positing an evolutionary justification for socially derived behaviours (Buller, 2005). BE runs the risk of a similar over emphasis on adaptive heuristics and cognitive limitations, of pat explanations reliant on correlation to predict causation. Levitt and Dubner's explanation of abortion as responsible for crime rate drops, has been criticised for over emphasising unintended consequences at the expense of planned interventions - specifically the application of zero tolerance policing in accordance with the broken window hypothesis (Gladwell, 2006), and of misapplying cohort statistics (Lott, & Whiley, 2007). Akerlof's integration of macroeconomics and psychology is marred by simplistic explanations of group identity; in common with other economists, he suggests that the counterproductive behaviours of minority groups in poverty are the result of an historically created 'oppositional culture', rejecting the normative values of the ethnic majority (Wilson, 2002).

Similarly, Glaeser's appeal to laissez-faire (Glaeser, 2001), arguably ignores the developmental, neurobiological and ultimately economic externalities of poverty

(Bertrand et al, 2004) and environmental destruction (Uzawa, 2003), and the important distinction between equality of opportunity, and equivalence of outcome (Berlin, 2002).

In conclusion, Behavioural Economics provides an important emphasis on assessing the major impacts of minor interventions into social problems, but the ideological baggage of much prominent Economic theory cannot be ignored.

References

Akerlof, G.A. (2002). Behavioural Macroeconomics and Macroeconomics Behaviour. *The American Economic Review*. 92(3), 411-433.

Anderson, E. (2000). Beyond Homo Economicus: New Developments in Theories of Social Norms. *Philosophy and Public Affairs*, 29(2), 170-200.

Bennhold, K., Shannon, V. (2008). *Sarkozy proposes taxing technology to finance the old. International Herald Tribune*. Retrieved January 9, 2008 from http://www.iht.com/articles/2008/01/08/business/france.php

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Berlin, I. (2002). *Liberty: Incorporating Four Essays on Liberty*. USA: Oxford University Press.

Bertrand, M., Mullainathan, S., Shafir, E. (2004). A Behavioral-Economics View of Poverty. *American Economic Review*. 94(2), 419-423.

Buller, D. (2005). *Adapting Minds: Evolutionary Psychology and the Persistent Quest for Human Nature*. USA: MIT Press.

Bushway, S., Johnson, D.B., Slocum, L.A. (2007). Is the Magic Still There? The Use of the Heckman Two-Step Correction for Selection Bias in Criminology. *Journal of Quantitative Criminology*. 23(2), 151-178.

Buss, D.M. (2004). *Evolutionary Psychology: The New Science of the Mind.* London: Pearson.

Camerer, C., Loewenstein, G. (2004). Behavioral Economics: Past, Present and Future. In C. Camerer G. Loewenstein & M. Rabin (Eds*.), Advances in Behavioral Economics* (pp 3-51). Princeton: Princeton University Press.

Clark, A.E., Oswald, A.J. (1996). Satisfaction and Comparison Income. *Journal of Public Economics*. 61, 359-381.

Colby, A. Kohlberg, L. (1987). *The measurement of moral judgment. Volume 1. Theoretical foundations and research validation.* New York: Cambridge University Press.

Couzin, I.D. (2007). Collective minds. *Nature.* 445, 715-715.

Crutchfield, J.P. (1994). Is Anything Ever New? Considering Emergence. In Complexity: Metaphors, Models and Reality. In G.A. Cowan, D. Pines, D. Meltzer, (Eds.), *Complexity: metaphors, models, and reality* (pp 515-537). USA: Addison-Wesley.

Damasio, A.R. (1994). *Decartes' Error: Emotion, Reason, and the Human Brain.* Grosset/Putnam.

Deaton, A. (2001). *Relative Deprivation, Inequality, and Mortality.* NBER Working Paper 8099. Cambridge, MA: NBER.

Easterlin, R.A. (2005). Building a Better Theory of Well-being. In L. Bruni & P.L. Porta (Eds.), *Economics and Happiness – Framing the Analysis* (pp 29-64). Oxford: Oxford University Press.

Eysenck, M.W., Keane, M.T. (2002). *Cognitive Psychology: A Student's Handbook, 4th Edition.* UK: Psychology Press.

Feyerabend, P. (1993). *Against Method.* USA: Verso.

Frijters, P. (2000). Do individuals try to maximise general satisfaction*? Journal of Economic Psychology.* 21(3), 281-304.

Gilbert, D. (2007). *Stumbling on Happiness.* USA: Vintage.

Gladwell, M. (2006). *Levitt and Dubner Respond.* Retrieved December 20, 2008, http://gladwell.typepad.com/gladwellcom/2006/03/levitt_and_dubn.html

Glaeser, E.L. (2004). Psychology and the Market. *American Economics Review.* 94(2), 408-413.

Greenwald, A.G. McGhee, D.E. Schwartz, J.L.K (1998). Measuring Individual Differences in Implicit Cognition: The Implicit Association Test. *Journal of Personality and Social Psychology.* 74(6), 1464-1480.

Greenwood, J.D. (2003). *The Disappearance of the Social in American Social Psychology.* UK: Cambridge University Press.

Holden, S. (2004). Behavioural Macroeconomics and the Aggregate Supply Puzzle. *American Economic Review.* 92(3), 411-433.

Hursh, S.R. (1984). Behavioural Economics. *Journal of the Experimental Analysis of Behavior.* 42, 435-452.

Hutchins, E. (1996). *Cognition in the Wild.* USA: MIT Press.

Kahneman, D. (2003) A Perspective on Judgment and Choice: Mapping Bounded Rationality. *American Psychologist.* 58(9), 697-720.

Knudsen, E.I., Heckman, J.J., Cameron, J.L., Shkoff, J.P. (2006). Economics, Neurobiological and Behavioural Perspectives on Building Americas Future Workforse. *Proceedings of the National Academy of Sciences of the United States of America.* 103(27), 10155-10162.

Kreps, D., M. (1990). *Game Theory and Economic Modelling (Clarendon Lectures in Economics).* Clarendon Press: UK.

Lee, P.M, (2004). *Bayesian Statistics: An Introduction.* USA: Hodder Arnold.

Levitt, S.D., Dubner, S.J. (2005) *Freakonomics: A Rogue Economics Explores the Hidden Side of Everything.* UK: William Morrow.

Levitt, S.D., List, J. (2007). What Do Laboratory Experiments Measuring Social Preferences Reveal About the Real World? *Journal of Economic Perspectives.* 21(2), 153-174.

Lott, J.R., Whiley, J.E. (2007) Abortion and Crime: Unwanted Children and Out-of-Wedlock Births. *Economic Inquiry.* 45(2), 304-324.

Lowenstein, G. (1999). Experimental Economics from the Vantage-Point of Behavioural Economics. *Economic Journal.* 109, F24-F34.

Marmott, M., Brunner, E. (2004) Cohort Profile: The Whitehall II Study. *International Journal of Epidemiology.* 34(2), 251-256.

Payne, J. W., & Bettman, J. R. (2004). Walking with the scarecrow: The information-processing approach to decision research (pp 110-133) . In N. Harvey and D. Koehler (Eds.) *Blackwell Handbook of Judgment and Decision Making.*

Roberts, B.W., Avshalom, C., Moffitt, T.E. (2001). The Kids are Alright: Growth and Stability in Personality Development From Adolescence to Adulthood. *Journal of Personality and Social Psychology.* 81(4), 670-683.

Rabin, M. (2001). Alfred Marshall Lecture: A Perspective on Psychology and Economics. *European Economic Review.* 46(4-5), 657-685.

Ross, D. (2008). Economics, Cognitive Science and Social Cognition. *Cognitive Systems Research.* In Press.

Ross, M.H. (2007). *Cultural Contestation in Ethnic Conflict.* UK: Cambridge.

Schwartz, B., Wald, A., Monterosso, J., Lyubomirsky, S., White, K., Lehman, D.R. (2002). Maximizing Versus Satisficing: Happiness is a matter of choice. *Journal of Personality and Social Psychology.* 83(5), 1178-1197.

Schwartz, B., (2003). *The Paradox of Choice: Why More Is Less.* USA: Ecco.

Slovic, P., Finucane, M., Peters, E., & McGregor, D.G. (2004). Risk as Feelings: Some thoughts about affect, reason, risk and rationality. *Risk Analysis.* 24(2), 1-12.

Smith, E.R., Mackie, D.M. (2007). *Social Psychology.* 3rd Edition. UK: Psychology Press.

Smith, V.L. (1976). Experimental Economics: Induced Value Theory. *American Economic Review.* 66(2), 1976.

Thaler, R.H. (1999). Mental Accounting Matters. *Journal of Behavioral Decision Making.* 12, 183-206.

Uzawa, H. (2003). *Economic Theory and Global Warming.* UK: Cambridge.

Vallone, D.A. (2003). *Relative Deprivation and Resource Utilization as Explanations of SES Differentials in Adult Morbidity and Mortality.* Ph.D. dissertation, Columbia University, United States - New York. Retrieved January 3, 2008, from ProQuest Digital Dissertations database.

Wilson, J.W. (2002). from The Truly Disadvantaged: The Inner City, the Underclass, and Public Policy, in G. Bridge & S. Watson (Eds.), *The Blackwell City Reader.* (pp 261-270) UK: Wiley-Blackwell.

Shamosh, N.A., & Gray, J. (2007). The Relation between Fluid Intelligence and Self-Regulatory Depletion. *Cognition and Emotion*, 21, 8, 1833-1843.