CEAR Workshop: Risk and Theories of Agency

January 21 and 22, 2011

General Information

How do risk attitudes manifest themselves at different levels of "the agent"? The term agent here refers to the decision unit. In many theoretical models and policy applications the unit is the individual, but it could also be a group, a household, a village, a corporation, a network, or a political entity. In the other direction, it could be different parts of the brain, or even the gene or meme. And often one agent makes decisions that have consequences for another agent. How do these different levels of agency, and relationships between agents, change our modeling of risk, and how can the analysis at different levels inform each other? This workshop will bring together researchers interested in the implications of modeling risk with explicit attention to the level of agency.

Organizers

Glenn Harrison and Don Ross are the organizers of this workshop, which is funded by the Center for the Economic Analysis of Risk (CEAR) at Georgia State University. See cear.gsu.edu for more information on CEAR. Contact Ross at don.ross@uct.ac.za about the substance of the workshop, and contact Mark Schneider at cear@gsu.edu with questions about participation and logistics.

Dates & Times

Friday 1/21 – 9am to 5.15pm. Refreshments and lunch will be provided.
Saturday 1/22 – 10am to 4.30pm. Refreshments and lunch will be provided.
Contact Mark Schneider at cear@gsu.edu for special dietary needs.

Location

The CEAR Seminar Room is on the 11th floor of the J. Mack Robinson College of Business at Georgia State University. Here is a map link to CEAR; the physical address is 35 Broad Street, **11th Floor**, Atlanta, GA 30303.

Program

Friday January 21

9.00	Glenn Harrison (GSU and CEAR) *Welcome and General Introduction* Don Ross (UCT and CEAR) *Workshop Introduction*
9.15 – 10.30	John Quiggin (Queensland) *Unitary, Collective and Multi-level Agency* Discussant: TBA
10.30 – 10.45	Coffee Break
10.45 – 12.00	Don Ross (UCT and CEAR) *Coordination and the Foundations of Social Intelligence* Discussant: TBA
12.00 – 1.00	Lunch (buffet in CEAR Seminar Room)

1.00 – 2.15 Bob Sugden (East Anglia) *Responsibility: How to Live with Inconsistent Preferences Without Self-paternalism*

Discussant: TBA

2.15 – 2.30 Coffee

2.30 – 3.45 George Ainslie (VA and University of Cape Town) *Maximand or MacGuffin? A Rationale for Human Ambivalence Toward Risk*

Discussant: TBA

3.45 – 4 Coffee

4.00 – 5.15 Glenn Harrison (GSU and CEAR) *Experimental and Econometric Implications of Agency*

Discussant: Nat Wilcox (Chapman and CEAR)

TBD Dinner for invited guests (Location TBD)

Saturday January 22

10.00 – 11.15 Andreas Ortmann (New South Wales) *Self-Command and the Mysteries of Morality*

Discussant: TBA

11.15 – 11.30 Coffee

11.30 – 12.45 Arthur Robson (UBC) *Status, Intertemporal Choice, and Risk-Taking*

Discussant: TBA

12.45 – 1.45 Lunch (buffet in CEAR Seminar Room)

1.45 – 3.00 Ken Binmore (UCL) *Sexual Drift*

Discussant: TBA

3.00 – 3.15 Coffee

3.15 – 4.30 Open discussion led by Glenn Harrison and Don Ross

Abstracts and Co-Authors

George Ainslie (VA and University of Cape Town) *Maximand or MacGuffin? A Rationale for Human Ambivalence Toward Risk*

One complication that plagues theories of risk-taking behavior is that sometimes risk has a positive absolute value, notoriously in problem gamblers and other thrill-seekers, but detectably in most people in many contexts. Hyperbolic discount functions describe an impatience for reward that reduces aggregate reward over time in those situations where building optimal appetite requires deferral of satisfaction. In those cases the most hedonically productive strategy will be to pursue objectively rational goals whose occurrence and timing are unpredictable. That is, you should seek scenarios that generate appetite while you try to reduce it, as in the plot devices that Alfred Hitchcock called MacGuffins. A MacGuffin differs from a maximand in requiring difficulty or risk for a significant portion of its value. Because it resists arbitrary replacement (which deteriorates into daydreaming) an ostensible maximand often makes the best MacGuffin, but only to the extent that the person does not recognize the MacGuffin component. Thus there may be an incentive for both your short and long range interests to interpret MacGuffins as rational maximands, a motivated cognitive distortion that is clearly evident in problem gamblers. I will discuss the implications of having two conflicting long range interests that in principle cannot be weighed against each other.

Ken Binmore (UCL) *Sexual Drift*

Why did evolution invent sex? This paper explores the possibility that the variability that sex allows through the reshuffling of genes may allow a species to move from what has become a bad equilibrium as a game changes to what is now a good equilibrium. Among other things, the model raises the question of the appropriate level of selection: what should count as a player?

Glenn Harrison (GSU) *Experimental and Econometric Implications of Agency*

How do we modify experimental designs and econometric models of decisions under risk to allow for multiple levels of agency?

Andreas Ortmann (New South Wales) *Self-Command and the Mysteries of Morality*

I extend my earlier work on the game-theoretic structure of Adam Smith's theory of self-command (which is at the heart of his Theory of Moral Sentiments) by pairing it off with recent work in evolutionary psychology on the mysteries of morality (Scioli & Kurzban 2009) and evidence from neuroscience on the architecture of cognition.

DeScioli & Kurzban (2009), "Mysteries of Morality," *Cognition* 112, 281-299.
Meardon & Ortmann (1996), "Self-Command in Adam Smith's Theory of Moral Sentiments. A Game-Theoretic Re-interpretation," *Rationality and Society* 8.1., 57 - 80
Meardon & Ortmann (1996a), "Yes, Adam Smith was an Economist -- A Very Modern One Indeed. A Reply," *Rationality and Society* 8.3., 348 - 352.
Ortmann (2008), "Prospecting NeuroEconomics," *Economics & Philosophy* 24.3., 431 - 448.

John Quiggin (Queensland) *Unitary, Collective and Multi-level Agency*

An important class of theories of social processes may be characterized as relying on unitary agents, in the sense that outcomes are derived from the interaction of unitary agents with well-defined objectives. These include

- Gene-level theories: Explanations of behavior driven by the differential replication of (real or hypothetical) genes in a (real or hypothetical) evolutionary environment
- Rational actor theories: Theories of social process driven by the interaction of rational individuals seeking to maximize an objective function, with income and/or consumption as argument
- Class & Interest group theories of politics: Theories of political outcomes driven by conflict and-or cooperation between social classes or interest groups, considered as unitary actors with well-defined objectives
- International realism: Theories of international politics based on the assumption that nation-states can be regarded as unitary actors pursuing well-defined national interests

It is not uncommon to find these ideas entertained simultaneously. On the face it, however, any lower-level explanation of this kind trumps all higher level explanations. For example, if behavior is driven by a collection of gene-level mechanisms, rational actor theories make no sense. In this paper, I consider two questions. First, is it possible to formulate a coherent multi-level theory derived from a set of unitary actor theories at different levels? Second, what are the implications of allowing for collective agency at various levels of explanation?

Arthur Robson (UBC) *Status, Intertemporal Choice, and Risk-Taking* (with Debraj Ray)

This paper takes the position that an individual's concern for relative status is expressed in her preferences. We embed this hypothesis in an otherwise conventional model of economic growth, and examine its consequences. The model generates two kinds of equilibrium. In the first, all individuals always follow a deterministic consumption and investment strategy. Such a strategy must be linear in output, is independent of payoffs and technology, and only depends on the discount factor. This sort of equilibrium exists when the individual cares only about status and the individual production function is convex in investment. In contrast, the other kind of equilibrium involves convergence to a steady state in which there is persistent and endogenously generated gambling. This kind of equilibrium exists in more plausible circumstances. The individual has a utility function that may depend on consumption per se as well as implied status and individual production functions are concave. We characterize the unique steady state in such a situation, and prove that any dynamic equilibrium path must converge to it. Risk-taking arises not from the presumption of a utility function with strictly convex segments (as in Friedman-Savage), but naturally from a view of utility as depending on relative status. Our steady state is broadly consistent with the stylized facts that individuals both insure downside risk and to gamble over upside risk, and generates similar patterns of risk-taking and avoidance across environments with quite different overall wealth levels. Finally, in contrast to Friedman (1953), endogenous risk-taking here is generally Pareto-inefficient.

Don Ross (UCT and CEAR) *Coordination and the Foundations of Social Intelligence*

Inspired by the popularity of the social intelligence, Machiavellian and social brain hypotheses about the evolution of primate intelligence generally, and human intelligence specifically, the paper critically considers the following question: to what extent is the evolution of social intelligence explained by appeal to the difficulty of coordination? The question is examined from the perspectives of game theory and experimental economics. The review does not call into question the tight co-evolutionary relationship between sociality and intelligence. However, the picture of initially isolated individuals under pressure to develop ingenious strategies for achieving coordination is held to be almost exactly backwards. Primates and other social animals

are equipped by basic and non-mysterious biological devices and behavioral dispositions to coordinate, at least in the statistical sense relevant to selection of mixed strategies without backward induction. But capacities for easy coordination are potential barriers to specialization of labor and to efficient exploitation of private information. The social evolution of norms that encourage and maintain individual variation among human selves are best understood in light of this. Self construction necessarily reduces the strategy sets available in coordination dynamics, since the predictability of the socialized individual depends on foreclosing some possibilities for action that would otherwise be available. At the same time, it reduces the loss of private information in imitation cascades. Socially optimal trade-offs between these effects are sensitive to specific levels of risk, environmental change, and transparency of information about contingent relationships between present states and possible outcomes.

Bob Sugden (East Anglia) *Responsibility: How to Live with Inconsistent Preferences Without Self-paternalism*

In the recent literature on reconciling normative and behavioral economics, there is a recurring tendency to conflate inconsistent preferences with self-control problems. The idea is that individuals whose preferences are inconsistent are in need of self-paternalistic commitment mechanisms. Paternalistic interventions by others are then justified by appeal to the individual's assumed preference for self-control. This approach can be seen as a restatement of a traditional (and arrogant) neoclassical thought, that when individuals deviate from the theory of rational choice, it is they and not the theory that is at fault. Economics needs a normative understanding of preference inconsistency that does not assume a lack of self-control. Developing ideas in some of my previous papers (especially 'The opportunity criterion', *AER* 2004 and 'The value of opportunities over time when preferences are unstable', *Social Choice and Welfare* 2007), I propose such an understanding. The key idea is to give up the concept of rationality as a normative standard, and to replace it with the concept of responsibility. A responsible person identifies with her decisions, past, present and future, irrespective of whether they can all be rationalized by a single system of preferences. For a responsible individual, opportunity is valuable independently of how it might be used.

<u>Invited Non-GSU Participants</u>

- George Ainslie (VA and University of Cape Town)
- Ken Binmore (UCL)
- Harold Kincaid (University of Alabama at Birmingham)
- Andreas Ortmann (University of New South Wales)
- Arthur Robson (University of British Columbia)
- Don Ross (University of Cape Town)
- John Quiggin (University of Queensland)
- Bob Sugden (University of East Anglia)
- Nathaniel Wilcox (Chapman University)
- John T. Wilcox