

Research Statement

of Jason Ralston (Economics PhD applicant for Fall—2017)

During my time as a PhD student at UCI, I have sought to create original pieces of research which draw from other disciplines while keeping the focus squarely on topics of economic interest. My aims are to gain a more nuanced understanding of human decision making than traditional economic models currently provide and then to draw meaningful and applicable conclusions about how these insights can be used to predict micro-level behavior. I consider myself a microeconomist with interests in the empirical and theoretical fields, though I strongly feel that no theory is complete without solid evidence using rigorous statistical analysis. In this pursuit, I have attempted to take on projects which impact others as well as being personally interesting.

Rational Suboptimality: In the field of behavioral economics, I have contributed to the area of the effects of cognitive load on effort. My paper “Not Worth the Effort: Cognitive Load and Suboptimal Behavior” focuses broadly on fast and slow thinking systems, first introduced by Daniel Kahneman. It not only investigates the triggering of the two systems, but the degree to which they are triggered and how a specific trigger, cognitive load, affects real effort and self-valuations of one’s own effort.

I find that the effects of cognitive load on performance in a real effort task is complex: increases in cognitive load can lower performance and that increased reward does not mitigate the effects of increased cognitive load, suggesting that the activation of fast and slow thinking systems may not be a conscious decision or that the cost to exerting mental effort under high cognitive load is excessively high. Another major finding is that the order in which a person encounters different levels of cognitive load has a larger impact on their performance. That is to say, the effects of cognitive load on performance are much stronger when transitioning from low to high cognitive load than the reverse.

This paper serves to diversify the small amount of research currently done on cognitive load and its effects. It first shows that the effects of cognitive load can be different than what has been found in previous studies, exemplifying how the specifics of the methodology involved in studying cognitive load can greatly influence findings. Not only this, but a more nuanced understanding of its effects was achieved through a novel experimental design as well as careful analysis of the data.

This experiment led me to my current working paper with John Duffy entitled “Innovate versus Imitate: Rational Suboptimality” wherein two new research and development games are explored. First, a theory is derived by which we can predict when agents should end the pursuit of the optimal outcome, and then, this theory is applied to these new games which are further explored through an experiment.

Savings Behavior: One of my projects fits into the broader experimental macroeconomics literature, and focuses specifically on consumer savings and borrowing behavior. My paper “Debt Aversion and the Impact of Natural Borrowing Constraints: Evidence from an Experiment” seeks to find ways to alleviate debt aversion found in previous experiments and consumption smoothing behavior. This paper shows that as the planning horizon, or life cycle, increases in periods, that a non-binding natural borrowing constraint can push borrowing behavior closer to the optimal value. This research suggests that for certain types of consumption, imposing the correct borrowing limits on consumers may make them feel more at ease with their borrowing decisions. If a consumer is able to rule out the possibility of losing utility relative to some reference point, they tend to be more aggressive in their borrowing, which was initially depressed. Alternatively, one may want to allow the possibility of larger losses to discourage those with riskier prospects from borrowing. This paper suggests that there may be even better borrowing constraints than the natural borrowing constraint which might improve consumer welfare.

Cultural Transmission: A second working paper done with Jean-Paul Carvalho is in the field of evolutionary game theory and is the first to explore endogenous group formation in models of cultural transmission by way of group requirements. This will also be the first model of cultural transmission to be tested in a laboratory setting. This project has been ongoing since August 2017.

Concluding Remarks: In the future I anticipate studying and exploring the complexities of human behavior at a more basic level using the economics tool set. There are many topics that continue to draw my interest with the two biggest being behavior under different emotional states and group effects on optimization. In the first vein, I plan on tackling how embarrassment affects human-to-human interaction and how artificial intelligence systems might be used to mitigate some of the negative effects. In the latter branch of research I plan to explore how optimization costs might be spread out across multiple agents in a group and the implications this might have for the survival of small and large size firms. Though I am well versed in experimental design, I am also trained in many applied econometric methods. I am eager to incorporate more conventional econometric data analysis to help with these future projects. With the wide array of methodologies at my disposal, I am committed to expanding the knowledge base of the social sciences.