

Written Exam at the Department of Economics winter 2017-18

The Psychology of Choice

Final Exam

16 January 2018

(3-hour closed book exam)

Please note that the language used in your exam paper must correspond to the language for which you registered during exam registration.

This exam question consists of 3 pages in total

NB: If you fall ill during an examination at Peter Bangsvej, you must contact an invigilator in order to be registered as having fallen ill. In this connection, you must complete a form. Then you submit a blank exam paper and leave the examination. When you arrive home, you must contact your GP and submit a medical report to the Faculty of Social Sciences no later than seven (7) days from the date of the exam.

(1) Experimental Method

Experiments are a well-established methodological tool used to the psychology of choice. The development and the diversification of experimental methods have equipped the field with powerful means of scientific investigation. Their worth is readily demonstrated in the exciting and promising results they have produced, and will continue to produce. In the following questions, you will be asked to consider different experimental methodologies and how these methodologies can be used to analyze choice situations.

- a. Levitin, D. (2002) "Experimental Design in Psychological Research", In Levitin, D. (ed.): *Foundations of Cognitive Psychology: Core Readings*, Cambridge: The MIT Press, list three broad classes of scientific studies: controlled studies ("true experiments"), correlational studies, and descriptive studies. Explain the difference between these types of scientific studies and discuss the limits of each of these.
- b. An important methodological difference between experimental economics and experimental psychology is the use of deception (Hartwig, R. and Ortmann, A., 2001, "Experimental Practices in Economics: A Methodological Challenge for Psychologists?", *Behavioral and Brain Sciences*, 24, 383--451). Why can deception be a problem? Can deception be justified? Are different degrees of deception (e.g. lying and withholding information) equally troublesome? Discuss these questions.
- c. Luck, Steven, J. and Vogel, E.K., 1997, "The Capacity of Visual Working Memory for Features and Conjunctions", *Nature*, 390(6657), 279--281, use a within-subject design in their experimental investigation. Discuss the strength and weaknesses of such an experimental design.

(2) Ref. Dependence, Framing and Loss Aversion

The economic theory of the consumer is a combination of positive and normative theories. Since it is based on a rational maximizing model it describes how consumers *should* choose, but it is alleged to also describe how they *do* choose. Thaler, R. (1980), "Toward a Positive Theory of Consumer Choice", *Journal of Economic Behavior and Organization*, 1(1), 39-60, identifies certain well-defined situations where this is not so.

- a. One example that Thaler gives of this is the *endowment effect*: "Mr. R bought a case of good wine in the late 50s for about \$5 a bottle. A few years later his wine merchant offered to buy the wine back for \$100 a bottle. He refused, although he has never paid more than \$35 for a bottle of wine."

Describe how prospect theory can explain this prediction. Describe how the rational maximizing model also can explain this prediction. Discuss the two explanations with a specific focus on why prospect theory may offer a more parsimonious explanation.

- b. Another example that Thaler gives of this is the *sunk cost effect*: "A man joins a tennis club and pays a \$300 yearly membership fee. After two weeks of playing he develops a tennis elbow. He continues to play (in pain) saying 'I don't want to waste the \$300!'"

Describe how prospect theory can explain this prediction. Describe what the rational maximizing model will predict. Discuss the two explanations with a specific focus on experienced and anticipated consumption.

- c. Finally, Thaler also gives an example of *regret*: “Mr. A is waiting in line at a movie theater. When he gets to the ticket window he is told that as the 100,000th customer of the theater he has just won \$100. Mr. B is waiting in line at a different theater. The man in front of him wins \$1,000 for being the 1,000,000th customer of the theater. Mr. B wins \$150. Would you rather be Mr. A or Mr. B?”

Use prospect theory to explain why many people chooses to be Mr. A. Explain what the rational maximizing model will predict. Discuss the two predictions with a specific focus on the incentive to eliminate choice.

(3) Overconfidence

During the course we talked about overconfidence. One of the facets of overconfidence is miscalibration. Please explain the concept of miscalibration and how it is usually measured. What are the potential problems with this measure?

- a. How does the measure of ‘true overconfidence’ presented in Glaser, Langer and Weber (2013) “True Overconfidence in Interval Estimates: Evidence Based On a New Measure of Miscalibration”, *Journal of Behavioral Decision Making*, 26(5), 405–417 solve this problem?
- b. Do Camerer and Lovallo (1999) “Overconfidence and Excess Entry: An Experimental Approach”, *The American Economic Review*, 89(1), 306-318 also use the concept of miscalibration in their study? Explain the concept of overconfidence they use. Furthermore, explain their analysis and results.