Behavioral Economics

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Homework 1

Due Tuesday 10th February

NOTE: Please answer questions 1 and 2 on a separate sheet to questions 3 and 4

Question 1 Show that a decision maker who makes choices by maximizing a utility function must satisfy properties α and β from the lecture notes

Question 2 Utility maximization is not the only choice procedure that are consistent with α and β. There are also other choice procedures that will satisfy these conditions and so are indistinguishable from rational choice. Consider the following decision making procedures. Show that the resulting choices will satisfy α and β : A decision maker (DM) is choosing between books from a set B. They have a utility function $u : B \rightarrow \mathbb{R}$, and a 'threshold utility' level u^*. In any choice set, they search through the books alphabetically by title, and choose the first book that has utility level u that is equal to or above u^*. If they have not found any such book by the time they reach the end of the choice set, they will choose the book with the highest utility.

Question 3 Show that the data from the Tversky and Shafir [1992] paper we talked about in class[1] violates conditions α. In other words, show that if every subject in their sample obeyed this condition then they would not have generated the data that the authors observed.

Question 4 Imagine you observed the following choices over bundles of guns and healthcare at

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[1] i.e. the pens/money experiment from Tversky, Amos, and Eldar Shafir. "Choice under conflict: The dynamics of deferred decision." Psychological science 3.6 (1992): 358-361.

different prices per unit

Observation	Price G	Price H	Amount G	Amount H
1	2	2	6	1
2	1	3	4	2
3	3	1	1	4

1. Which bundles are revealed directly preferred to which other bundles?

2. Which bundles are revealed preferred to which other bundles?

3. Which bundles are revealed strictly preferred to which other bundles (assuming local non-satiation)?

4. Is this data rationalizable by a strictly monotonic utility function? If not, why not?