Behavioral Economics

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Homework 1

Due Tuesday 31st January

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

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 Remember that we say that choices satisfy the Weak Axiom of Revealed Preference (WARP) if the following is true: for any x and y in X, if $\{x, y\} \in A \cap B$ and $x \in C(A)$, and $y \in C(B)$ then $x \in C(B)$. Show that a choice correspondence satisfies WARP if and only if it satisfies the properties α and β described in the lecture notes.

Question 3 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. Prove whether or not they will result in choices that satisfy α and β

1. A decision maker (DM) is choosing between books from a set B. They have a utility function $u : B \to \mathbb{R}$, 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.
2. A DM assigns a utility number to each alternative and chooses the alternative with the lowest utility

3. The DM ranks the alternatives according to a utility function, and in any choice set chooses the median element