

## Representation Theorem for guilt aversion

Guilt is the experience of discomfort that follows when we violate a personal or social standard. If an individual's action raises his income but at the same time harms someone else, the higher income will come with a feeling of guilt. Any individual who is sufficiently averse to this discomfort may therefore refrain from taking the action in the first place. Economic experiments indicate that aversion to guilt is important in many strategic situations and can explain a vast array of behaviours, including cooperation, altruism, conformism, group favouritism and reciprocity. An increasingly popular way to model emotions such as guilt, is to include them as inputs in agents' utility functions. Particularly important for experimental work are utility functions with money and guilt as the two inputs. This paper's main objective is to put such functions on a firm footing by axiomatizing utility representations of guilt-averse preferences. Specifically, axioms are presented that are necessary and sufficient for (i) an existing linear representation, and (ii) a novel representation that is logarithmic in money and linear in guilt. We apply both models in three well-known games and show that representation (ii) yields sharp predictions consistent with experimental observations.