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Outcomes versus intentions: On the nature of fair behavior and its development with age

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Abstract

Economic decisions depend on both actual outcomes as well as perceived intentions. In this paper, we examine whether and how the relative importance of outcomes or intentions for economic decisions develops with age. We report the results of ultimatum games with children, teens and university students. We find that children and teens react systematically to perceived intentions, like university students do. However, children and teens reject unequal offers much more often than university students, indicating that outcomes are relatively more important than intentions for younger subjects. Hence, the relative importance of intentions increases with age.

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PsycINFO classification: 2800

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1. Introduction

Whereas the standard economic approach would judge an action only by its outcome (or utility), recent economic research has stressed the importance of intentions for judging actions. In fact, the perceived intentions of an interaction partner are often considered as equally important as the actual outcome of the partner's action (Charness & Levine, 2003).

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To illustrate the significance of intentions, Falk, Fehr, and Fischbacher (2003) and Nelson (2002) have shown that *identical* offers in an ultimatum game generate *different* rejection rates, depending on the available alternative offers. A particular unequal distribution is much more often rejected if the proposer could have offered a more equitable distribution as the alternative than if the only available alternative was an even more unequal distribution. Burnham, McCabe, and Smith (2002) and McCabe, Rigdon, and Smith (2003) have examined – and confirmed – the importance of intentions in trust games. Rather than manipulating the available alternatives, Burnham et al. (2002) have manipulated the framing of the trust game by denoting the counterpart either "partner" or "opponent". Indeed, the "partner"-treatment elicits much more trust and reciprocity, probably because intentions of "partners" are perceived to be friendlier than those of "opponents". McCabe et al. (2003) have manipulated the outside options of the first mover in a trust game, showing that trust and trustworthiness are higher when the first mover has positive opportunity costs of being cooperative than when opportunity costs are zero. In the former case, a cooperative move signals good intentions whereas in the latter case the second mover cannot infer the benevolence of the first mover's intentions.

In this paper, we address the question whether the relative importance of outcomes versus intentions changes with the age of the subjects. Using an experimental ultimatum game with a restricted set of offers, we study whether the influence of outcomes and intentions develops from childhood to early adult age. For this purpose we ran an experiment with children (7–10 years old), teens (11–15 years) and university students (19–33 years) as subjects.

Both Murnighan and Saxon (1998) and Harbaugh, Krause, and Liday (2002) have previously studied the behavior of children in ultimatum games. Possibly due to differences in the experimental protocol concerning anonymity and real financial consequences, they have arrived at opposite results concerning proposer behavior. Younger children make larger offers than older ones in the study of Murnighan and Saxon (1998), but Harbaugh et al. (2002) find the opposite result. With respect to responder behavior, both studies show that younger children accept relatively smaller offers more often. Since responders, however, faced only one single offer and since the set of alternative offers was not restricted in the way we will do it, both studies remain silent on the relative importance of outcomes and proposers' intentions for responders' decisions.

Given that numerous experimental studies with student participants have led to new approaches in modeling economic decision-making and the influence of outcomes and intentions,[1] whether these models are suitable for describing and predicting behavior of subjects who are not students in their early twenties should be considered a relevant issue for economics.

In fact, evidence from developmental psychology suggests that behavior that is relevant for economic situations is prone to substantial changes in the span of a lifetime, particularly in the phase from childhood to (early) adulthood (Kail & Cavanaugh, 2004). For instance, Eisenberg and Fabes (1998) show that prosocial behavior is increasing from

[1] Concerning the interplay of outcomes and intentions in bargaining situations, many of the recent models on social preferences have concentrated *either* on outcomes *or* intentions (see, e.g., Bolton & Ockenfels, 2000; Fehr & Schmidt, 1999; on outcome-based models, or Dufwenberg & Kirchsteiger, 2004; Rabin, 1993; on intentions-based models). Only a few models incorporate *both* outcomes and intentions (see Charness & Rabin, 2002; Falk & Fischbacher, 2006).