

# Pro-social behavior in a natural setting

Bruno S. Frey<sup>a,b</sup>, Stephan Meier<sup>a,\*</sup>

<sup>a</sup> *Institute for Empirical Research in Economic, University of Zurich, Bluemlisalpstrasse 10, CH-8006 Zürich, Switzerland*

<sup>b</sup> *CREMA—Center for Research in Economics, Management and the Arts, Zürich, Switzerland*

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## Abstract

Empirical evidence is provided for the importance of pro-social behavior of individuals in an anonymous, n-person public good setting. A unique panel data set of 136,000 observations is matched with an extensive survey. Even under anonymous conditions, a large number of individuals are prepared to donate quite a significant sum of money. Cooperation conditional on giving by specific other persons is present, but the causal relationship is ambiguous. The manner in which one is asked to donate is crucial. Identification with the organization, and with specific groups, is also important.

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## 1. Beyond self-interest

Assuming the self-interested behavior of human beings has been a powerful approach when studying the economy. The self-interest hypothesis works well for predicting individuals' choices in most competitive markets. This also holds for most types of behavior outside of the traditional economic markets. "Economic imperialism" or, more generally, rational choice analysis building on the self-interest assumption has had great success in many areas outside of economics, examples being politics, history, law, the arts and the family (e.g. Becker, 1976, 1996; Stigler, 1984; Frey, 1999; Lazear, 2000).

Not all applications of the self-interest hypothesis, however, meet the necessary conditions under which it works well; many markets are characterized by rigidities, incomplete

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\* Corresponding author. Tel.: +41-1-634-37-28; fax: +41-1-634-49-07.

*E-mail addresses:* bsfrey@iew.unizh.ch (B.S. Frey), smeier@iew.unizh.ch (S. Meier).

contracts, or by a small number of traders. Warnings have been issued that the application of the calculus of self-interest may face decreasing marginal returns (e.g. [Hirshleifer, 1985](#); [Frey, 2001](#)). A recent book on giving and altruism, appearing under the auspices of the *International Economic Association*, even describes itself as an “obituary of homo oeconomicus” ([Kolm, 2000](#), p. 32). Studies of important activities, such as charitable giving (e.g. [Andreoni, 2002](#); [Weisbrod, 1998](#)), voting (e.g. [Mueller, 2003](#)), and tax paying (e.g. [Slemrod, 1992](#); [Andreoni et al., 1998](#)), have convincingly argued that such actions cannot be explained by relying on the strict self-interest axiom. Thus, for example, it has been stated that “[A] purely economic analysis of the evasion gamble implies that most individuals would evade if they are ‘rational’, because it is unlikely that cheaters will be caught and penalised” ([Alm et al., 1992](#), p. 22; similarly [Graetz and Wilde, 1985](#); [Skinner and Slemrod, 1985](#)). But most people actually pay their tax dues. Tax payment can therefore be considered a “quasi-voluntary act” ([Levi, 1988](#)). The self-interest model has been clearly rejected in a great number of laboratory experiments (see [Ledyard, 1995](#); [Davis and Holt, 1993](#) for surveys). Most importantly, experiments of the Ultimatum Game in 15 societies, exhibiting a wide variety of economic and cultural conditions, reveal that “the canonical model of the self-interested material pay-off maximizing actor is systematically violated” ([Henrich et al., 2001](#), p. 77).

As a result of these findings, a large number of theories evolved to explain non-selfish behavior or other-regarding preferences (for a survey, see [Fehr and Schmidt, 2003](#)). Basically two main approaches exist that try to explain certain phenomena in human behavior: the first approach assumes that people have pro-social preferences. They not only care about their own utility but take the utility of others into account. Extended versions of such simple altruistic models are fairness theories that incorporate inequality aversion by individuals ([Bolton and Ockenfels, 2000](#); [Fehr and Schmidt, 1999](#)). The other approach focuses on reciprocal relationships that appear when persons act in a more cooperative manner in response to the friendly behavior of others and act in a hostile way when treated in an unfriendly way by others. The reciprocity model has recently gained much attention. It has been claimed that “Practically all life in society includes and implies reciprocities, and reciprocity has been seen as the basic glue that makes people constitute groups or societies” ([Kolm, p. 115](#)). Recently, a large number of laboratory experiments have been devoted to the study of reciprocity in economics (see the surveys in, e.g., [Fehr and Gächter, 2000a](#); [Falk and Fischbacher, 2001](#)).

Moreover, for at least two decades, theories of pro-social behavior have been tested in laboratory experiments and have demonstrated that human beings are not only driven by self-interest, but deviate substantially from the standard economic predictions. The experimental evidence may teach us a lot about human behavior. However, it remains an open question how best these results can be applied outside the lab. This paper wants to fill this gap by testing behavioral theories in a naturally occurring situation, thus bringing back external validity to the test of pro-social behavior. This paper provides empirical evidence for the importance of pro-social behavior of individuals in an anonymous, n-person public good setting. We use a unique panel data set of 136,000 observations (roughly 33,000 persons) concerning the decisions of students at the University of Zurich on whether or not to contribute to two Social Funds administered by the University. These field observations are matched with an extensive survey of the same group of people to find out more about the conditions and motives for giving.

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