

## Separating Gratitude from Guilt in the Laboratory

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### ABSTRACT:

There has been much recent work showing how “guilt” as disappointment aversion can be a factor with both theoretical and experimental foundations. However, anecdotal evidence from empirical studies and introspection suggests that the desire for reciprocity may, under some conditions, be inversely related to the expectation for reciprocation; people may be crowded out of “gratitude”. From the experimental perspective, the problem is how gratitude works without this desire of reciprocity. This could be economically important motive for experts like doctors who may serve poor patients at below market prices, from whom they cannot expect reciprocation for good service.

The basic model related with gratitude is the kindness-motivated reciprocity developed by Rabin (1993). He assumes that an individual’s utility function  $V$  does not only depend on outcomes but also on how these outcomes came about, e.g. whether the underlying decision problem was determined by exogenous factors or whether the underlying decision problem was intentionally brought about by another individual. Typically, the kinder an individual perceives the action of another individual, the kinder the individual treats this other individual. The perceived kindness of an action is shaped by the actor’s intentions. There is a large literature in contract theory and behavioral economics based on this model to explain altruistic behavior in gift exchanging game and trust game. However, in experimental studies of trust games, ‘guilt aversion’ is also active and confounds the effect of kindness-motivated reciprocity. If unselfish behavior is due to guilt aversion in trust games, the greater the expectation of the trustor for reciprocation in the 1<sup>st</sup> round is, the greater the level of reciprocation of the trustee in the 2<sup>nd</sup> round is. But if unselfish behavior is due to gratitude, the greater the expectation of player 1 for reciprocation is, the less the player 2 is likely to give. While both guilt aversion and kindness-motivated reciprocity might be active at the same time, the possible gratitude motive of player 2 may be crowded out by the suspicion that player 1 is expecting reciprocation and trying to induce guilt. This crowding out could be present in the experiments carried out by Cox (2001, 2003, 2004), and other experiments involving trust games such as Buchan et. al (2002) and Dufwenberg and Gneezy (2000). Some other papers, such as Ben-Ner et. al (2004) and Stanca et. al (2007) controlled the ex ante expectation (they didn’t inform 1<sup>st</sup> round dictators of the possibility of their recipients becoming 2<sup>nd</sup> round dictators), but ex post expectation could have been active since in their treatment, 2<sup>nd</sup> round dictators knew that 1<sup>st</sup> round dictators would eventually find out. Hence, 2<sup>nd</sup> round dictators could have been acting out of guilt based upon ex post beliefs.

In our experiment, we rule out guilt based reciprocity by leaving the 1<sup>st</sup> round dictator completely unaware of the 2<sup>nd</sup> round. We do this by directly sending the amount from the 2<sup>nd</sup> dictator to the 1<sup>st</sup> dictator’s bank account without telling them anything. Thus we assume the 1<sup>st</sup> dictator do not have any ex ante or ex post expectation and the 2<sup>nd</sup> round dictator will know the 1<sup>st</sup> round dictator does not know and have no expectation, hence, feel no guilt. Furthermore, the 2<sup>nd</sup> round was double blind to avoid the shame of not giving. As with other dictator games, about 60% of the 1st round dictators gave non-zero amounts. However, all of the 2nd round dictators who received positive amounts reciprocated. Furthermore, the giving of the 2nd round dictators was of a distinct character. Whereas only 5% of the 1<sup>st</sup> round dictators gave so that they became poorer than the 2nd round dictators before they gave, 82% of the 2nd round dictators became poorer than 1st round dictators after giving. This ruled out inequity aversion as the motive for giving. To our knowledge, this is the first paper which shows that kindness distinct from guilt, shame, and inequity aversion could be a motive for giving. The results show the significantly positive return possibly caused by gratitude when guilt, shame and inequity aversion are controlled. Evidence is also raised showing the existence of crowding out by guilt.

### Reference:

- Avner Ben-Ner, et. Al, 2004. Reciprocity in a Two-part Dictator Game, *Journal of Economic Behavior & Organization*, Vol. 53 (2004) 333-352
- Nancy R. Buchan, Rachel T.A. Croson, and Robyn M. Dawes, 2002. Swift Neighbors and Persistent Strangers: A Cross-Cultural Investigation of Trust and Reciprocity in Social Exchange. *American Journal of Sociology*, 108(1): 168-206
- James C. Cox, 2001. On the Economics of Reciprocity, Mimeo, University of Arizona
- James C. Cox, 2003. Trust and Reciprocity: Implications of Game Triads and Social Contexts, Mimeo, University of

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James C. Cox, 2004. How to Identify Trust and Reciprocity, *Games and Economic Behavior*, 46: 260-281

Martin Dufwenberg and Uri Gneezy, 2000. Measuring Beliefs in an Experimental Lost Wallet Game, *Games and Economic Behavior*, 30: 163-182

Matthew Rabin, 1993. Incorporating Fairness into Game Theory and Economics, *the American Economic Review December 1993*: 1281-1302

Luca Stanca, Luigino Bruni, Luca Corazzini, 2007. Testing Theories of Reciprocity: Does Motivation Matter? *University of Milan, Department of Economics, Working Paper Series 109*