The Pleasure of Being Nasty

by KLAUS ABBINK* and ABDOLKARIM SADRIEH**

* *University of Amsterdam*
** *University of Magdeburg*

revised version, August 2009

Abstract

We introduce the joy-of-destruction game. Two players each receive an endowment and simultaneously decide on how much of the other player's endowment to destroy. In a treatment without fear of retaliation, money is destroyed in almost 40% of all decisions.

Keywords

Spite, nastiness, money-burning, anti-social behavior

JEL Codes

C72, C90, D82

Acknowledgements

We thank Jeroen Udo for his help in conducting the experiment, and Anick Bosmans and Rik Pieters for providing us with advertisement evaluation questionnaires. We are grateful to Benedikt Herrmann, Reinhard Selten and seminar participants in Maria Laach, Norwich, Nottingham, and Valencia for helpful comments.

Contacting the Authors

Klaus Abbink
CREED, Faculty of Economics and Business
University of Amsterdam
Roetersstraat 11
1018 WB Amsterdam
The Netherlands
+31 20 525-4229 (fax -5283)
www.uva.nl/creed
k.abbink@uva.nl

Abdolkarim Sadrieh
Faculty of Economics and Management
University of Magdeburg
Postbox 4120
39016 Magdeburg
Germany
+49 391 67-18585 (fax: -12120)
www.ww.uni-magdeburg/e-business
sadrieh@ovgu.de

1. Introduction

The defining figure of standard economic theory, the *homo oeconomicus*, has long been challenged by both experimental economics and social psychology. Not all people are, as we now know from many experimental studies, solely own-payoff maximizing egoists, but many are compassionate social beings, who care about fairness and the well-being of others. They reject unfair offers in ultimatum games (Güth et al. (1982)), share their endowment in dictator games (Forsythe et al. (1994), Hoffman et al. (1994)), reciprocate in gift exchanges (Fehr et al. (1993), Berg et al. (1995)), or punish free-riders in public goods games (Fehr and Gächter (2000)), to name just a few instances of pro-social behavior.[1] The experimental evidence so far overwhelmingly suggests that human beings are much more ethically inclined than economists have given them credit for.

So far, so nice. But, there is a danger of overstating the kindness of human nature. Because these deviations from the orthodoxy are interesting, behavioral economists focus on environments that are conducive to altruistic behavior. This may create a selection bias, a neglect of environments in which humans can indeed be selfish, greedy, uncooperative, or even plain nasty. There is no doubt that nastiness exists. People suffer random violence from complete strangers. Property is arbitrarily vandalized. Malicious computer viruses are circulated solely to do harm. One can argue that such anti-social behavior is an anomaly, committed by individuals from the fringes of society. But quite possibly a pleasure of being nasty is present in the mind of everybody. This question is the focus of this study.

We introduce the *joy-of-destruction game*. The basic setup of the game is simple. There are two players. Each player first earns an endowment, which is in expectation equal for both players. Both players can mutually and simultaneously destroy each other's endowments. Destruction is costless and entails no material benefit for the destroying party. Since no pecuniary, fairness, or reciprocity motives are present, destruction is most likely due to pure spite and nastiness. Note that other conventional motives to choose destruction are also removed. We, for instance, avoid the experimenter demand effect by embedding the destruction choices into a much more cumbersome task, with which the subjects earn their endowments.

We are also interested in the dynamics of play in this environment, which is why pairs of subjects play the game repeatedly. We wish to test two competing hypotheses. The opportunity to retaliate could trigger the escalation into an ongoing pointless vendetta. It could, however, also have a deterrent effect, such that subjects refrain from destroying money for fear of retaliation.

We use two variants of the game. In one treatment (*open*), the destruction is ex-post perfectly observable. In the other setting (*hidden*), the destructive action is veiled by an additional random destruction. The targeted person can only observe the total damage, but typically cannot identify which part was due to the destroyer and which part due to nature. Thus, it is possible to hurt someone else without being recognized.

[1] The space in this paper, indeed any paper, would not suffice to list all the relevant literature in this field. So we only mention the pioneering studies and extend our apologies to all other contributors.

We do not know any other experimental study that examines the pleasure of being nasty in its pure form, but our study does not completely stand in isolation. Despotic behavior has been observed in public good games with punishment. Though the norm is for cooperators to punish free-riders, there is also a good deal of antisocial punishment, i.e. selfish individuals punishing contributors (Gächter et al. (2005), Cinyabuguma, Page and Putterman (2007), Herrmann et al. (2008)). Like in our study, Zizzo and Oswald (2001) set up a game in which participants can reduce others' income without gain. In their experiment, subjects indeed burn money, but they do so to equalize payoffs. So the seemingly spiteful act stems from a social comparison motive, namely from the aversion to unfairness. In our game we have removed inequality aversion as a possible explanation for nasty behavior.

2. The experimental design

The experiment was conducted in two pen-and-paper sessions with 40 undergraduate students at Tilburg University. Each subject was allowed to one session only and no subject had participated in similar experiments. Subjects interacted anonymously and were paid confidentially.

To avoid boredom and, more importantly, experimenter demand effects, the joy-of-destruction game was nested into a much more time-consuming evaluation task that subjects performed individually. The task was to view and evaluate advertisements from popular Dutch magazines. The questionnaire used in the evaluation task was developed in the marketing department for a PhD project. Subjects received 80c for each completed evaluation questionnaire in the open treatment, €1.20 in the hidden treatment (to account for the random destruction). Note that because subjects had to work for their endowments, we also avoid the house-money effect (for an overview with mixed evidence see Clark (2002)). The number of evaluation questionnaires that were given to a subject varied randomly between 1 and 3. After having completed all evaluation tasks of a round, subjects were asked to indicate what part of the income of the other subject they wished to destroy. Destruction choices were restricted to multiples of 10c between 0 and 80.

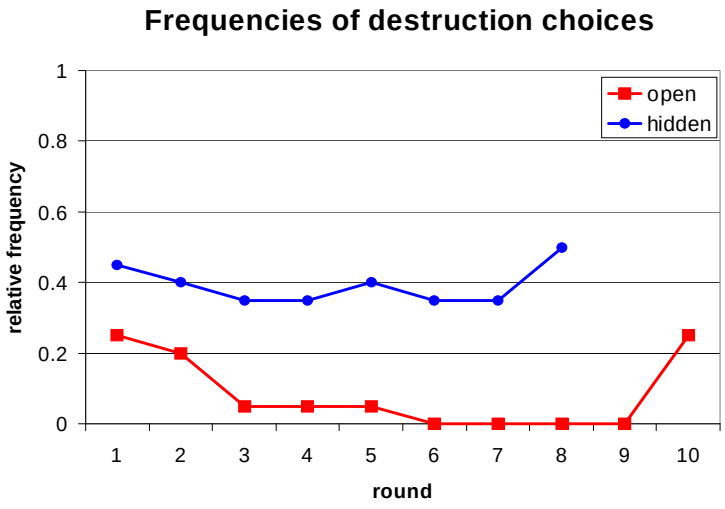

Figure 1

We aimed at playing 10 rounds of evaluation/destruction tasks. In the hidden treatment time constraints only allowed eight rounds. The matching of subjects was anonymous and random, but remained fixed in all rounds. Before the first and the sixth round, the subjects completed mood questionnaires for the marketing study.

The random destruction in the hidden treatment was between zero and €1.60, in steps of

€0.10, each value equally likely. Note that the total destruction was the sum of the destructions inflicted by Nature and the partner. Thus, hiding behind Nature was only partially possible. Very high total destruction would reveal to a subject that some of the destruction must have come from the partner.

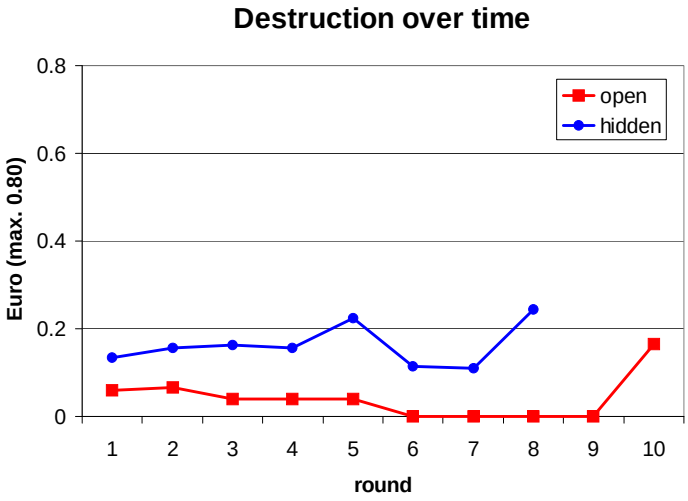

Figure 2

3. Results

Figure 1 shows the frequency of destruction decisions over the rounds of the experiment. Overall frequencies in the open treatment are low (on average 8.5% of all decisions). Some destruction can be observed in the early rounds, but destruction rates quickly fade away. In the hidden treatment, however, destruction is surprisingly common. On average, 39.4% of all decisions involve the destruction of at least some of the partner's endowment. There is no sign of a downward trend. The difference between the two treatments is significant both for all rounds and for the first round separately (Fisher's two-sample randomization test, $\alpha = 0.05$ one-sided).

Both treatments show an end-game effect, as destruction frequencies shoot up in the final round. This is reminiscent of the breakdown of cooperation in the final round of social dilemma games. This effect is most often interpreted as a selfish act to maximize own payoff. In our game, however, there is nothing to gain from burning the other player's money.

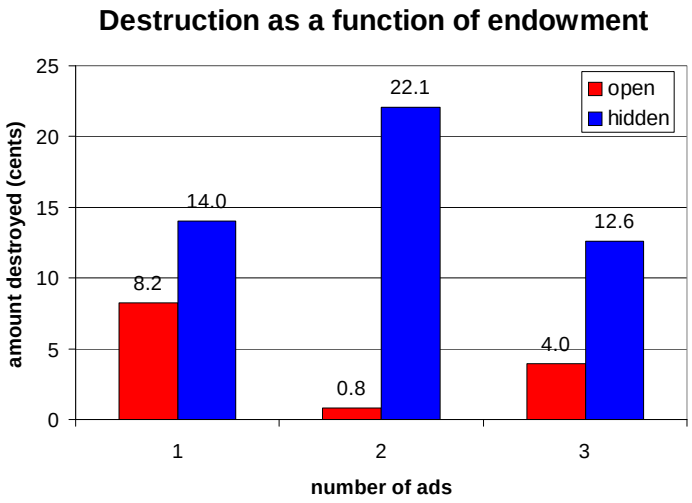

Figure 3

Figure 2 shows the evolution of destruction in euros. The general tendencies are the same. There is very little destruction in the open treatment, while in the hidden treatment substantial amounts are burned (in total 20.4% of the maximum allowed).

In each round, each individual's endowment was determined by the number of ads the subject had to evaluate. The question arises whether destructive acts vary with the endowment a participant receives. A subject receiving a low endowment can expect to be poorer than the

partner (with a two-third probability), so the subject may wish to destroy to establish (expected) equity (like in Zizzo and Oswald (2001)). Figure 3 shows that there is no noticeable connection. In the hidden treatment, destruction is actually highest when the own endowment is the same as the opponent's expected endowment. But, none of the observed differences are significant. This result, thus, refutes expected inequality aversion as an explanation for destruction behavior.

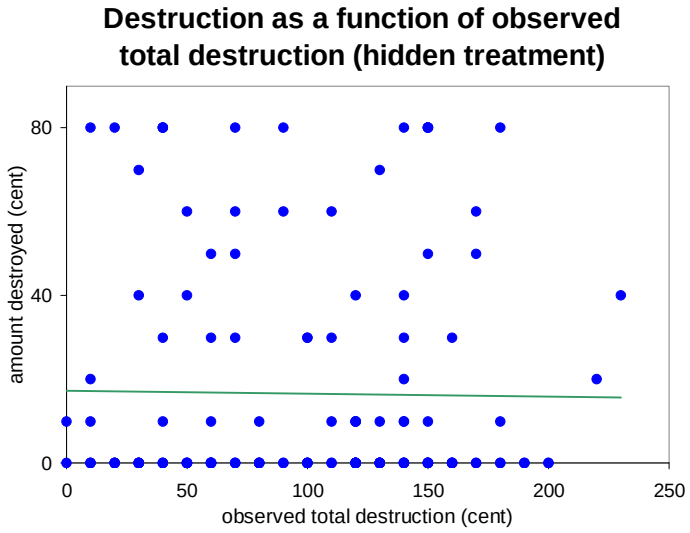

Figure 4

Finally, we check whether destruction choices depend on the total destruction a subject has observed in the previous round. Recall that in the hidden treatment high levels of total destruction indicate a higher probability (or even certainty) that some part of the destruction was induced by the other player. Figure 4, however, shows that subjects did not noticeably respond to the observed level of destruction. There is no correlation between the observed suffered destruction and the destruction inflicted on the partner.

4. Discussion

In the joy-of-destruction game that we introduce, players can burn each other's money, but we have removed all conventional reasons to do so. No material gain is achieved, no wrongdoing is punished, no inequality is reduced. Nevertheless, we observe a substantial incidence of nasty behavior in our hidden treatment, where spiteful actions could be covered by random destruction. When destruction is open, it rapidly goes away, but the treatment difference shows that this decline is due to fear of retaliation, not due to kindness.

We interpret the high destruction rates in the hidden treatment as indication of the pleasure of being nasty. Other explanations are of course possible. Individuals could be motivated by comparative payoffs, wishing to increase their relative standing compared to the opponent. However, proponents of fairness utility models (e.g. Fehr and Schmidt (1999), Bolton and Ockenfels (2000)) usually assume (and find evidence for) that people dislike unfavorable as well as favorable inequity. We also observe no effect of the own endowment, which renders this explanation incomplete.

Subjects destroying money might be driven by a motive of "pre-emptive retaliation." They may expect the partner to destroy money and may "respond" to this expectation by also destroying money. This implies that individuals may expect others to entertain a pleasure of being nasty, even if they do not have this inclination themselves.

Our results raise numerous questions than we clearly cannot answer within the scope of this paper. Some of the most pressing ones are: How can we reconcile our results with the abundance of phenomena that prove the "good" side of human nature? Do the same people, who cooperate in dilemma games, hurt others in our game? Or are there consistently "good" and "bad" individuals, such that the good people cooperate in other games and do not destroy in our game, while the bad people behave selfishly in other games and hurt others in our game? Or, are social preferences context dependent? To answer these questions, more work on the pleasure of being nasty is needed.

References

Berg, J., J. Dickhaut, and K. McCabe, 1995, Trust, Reciprocity and Social History, Games and Economic Behavior, 10, 122-142.

Bolton, G.E., and A. Ockenfels, 2000, ERC - A Theory of Equity, Reciprocity and Competition. American Economic Review, 90:1, 166-193.

Cinyabuguma, M., T. Page and L. Putterman, 2006, Can Second-Order Punishment Deter Perverse Punishment? Experimental Economics, 9: 265-279.

Clark, J., 2002, House Money Effects in Public Goods Experiments, Experimental Economics, 5, 223-231.

Fehr, E., and S. Gächter, 2000, Cooperation and Punishment in Public Goods Experiments, American Economic Review 90, 980-994

Fehr E., G. Kirchsteiger, and A. Riedl, 1993, Does Fairness Prevent Market Clearing? An Experimental Investigation, Quarterly Journal of Economics, 108, 437-459.

Fehr, E., and K.M. Schmidt, 1999, A Theory of Fairness, Competition, and Cooperation. Quarterly Journal of Economics, 114, 817-868.

Forsythe, R., J. Horowitz, N. Savin and M. Sefton, 1994, Fairness in simple bargaining experiments, Games and Economic Behavior, 6, 347–369.

Gächter, S., B. Herrmann, and C. Thöni, 2005, Cross-cultural differences in norm enforcement, Behavioral and Brain Sciences, 28, 822-823.

Güth, W., R. Schmittberger, and B. Schwarze, 1982, An Experimental Analysis of Ultimatum Bargaining, Journal of Economic Behavior and Organization, 3, 367-388.

Herrmann, B., C. Thöni, and S. Gächter, 2008, Antisocial Punishment Across Societies. Science 319, 1362-1367.

Hoffman, E., K. McCabe, K. Shachat, and V.L. Smith, 1994, Preferences, Property Rights, and Anonymity in Bargaining Games. Games and Economic Behavior, 7, 346-380.

Zizzo, D., and A.J. Oswald, 2001, Are People Willing to Pay to Reduce Others' Incomes? Annales d'Economie et de Statistique, 63-64, 39-62.