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Do Dictator Games Measure Altruism?

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Abstract

This note paper has been prepared for inclusion as a book chapter in a forthcoming *Handbook on the Economics of Philanthropy, Reciprocity and Social Enterprise* edited by Luigino Bruni and Stefano Zamagni and to be published by Edward Elgar.



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* Phone: +44-1603-593668; fax: +44-1603-456259. In writing this paper, I have benefited from discussions on dictator games with participants to presentations in Erfurt, Heidelberg, Jena, Munich and the XIV Summer School on Economics and Philosophy at the University of the Basque Country, San Sebastian. This paper also benefits from an ongoing collaboration with Piers Fleming, which has been funded by the Nuffield Foundation and by the University of East Anglia. The usual disclaimer applies.

1. Introduction

As communism once haunted Europe according to the *Communist Manifesto*, so does the dictator game haunt the hallways, if not of Europe, of the standard consensus in behavioral and experimental research as developed in the last twenty years or so. Grand claims on the significance of this game for altruism and for the relevance of a wide array of social factors in studying dictator games have been made and developed in what has been a successful cottage industry of academic research in economics; at least, successful in terms of its ability in getting published (e.g., for recent *Econometrica* and *European Economic Review* examples, see Andreoni and Berheim, 2009, and Servatka, 2009, respectively).

This note paper considers briefly whether dictator games are a good tool to measure altruism. The answer is negative: behavior in dictator games is seriously confounded by what I shall label experimenter demand effects (Zizzo, 2010). Section 2 briefly defines dictator games and reviews some of its purported enduring appeal. Section 3 criticizes dictator games as a measure of altruism and concludes by considering whether a role for dictator games can still be found that may be of relevance for the economics of philanthropy.

2. The Appeal of Dictator Games

Dictator games were originally thought of as an elegant way to identify the altruistic component of behavior in the most standard ultimatum games. In the standard ultimatum game (Güth et al., 1982; Camerer, 2003), a first mover receives an amount of money (say, x dollars) and needs to decide how much to offer to give to a second mover (say, y dollars), with him or her retaining the rest ($x - y$ dollars). The second mover then decides whether to accept the offer, in which case he or she gets y and the proposer gets $x - y$, or not, in which case neither player gets anything. Different motivations (e.g., not only altruism but also envy and fear of envy) can underlie behavior in ultimatum games, and, in an attempt to identify the role of altruistic preferences by decomposing a key aspect of it, the dictator game was born

(Forsythe et al., 1994). In the dictator game, the first mover (the ‘dictator’) decides again how much money to give the receiver (x) but this time the split he or she decides gets implemented automatically, without the second mover being able to decide whether to accept it or not. As such, any giving *should* only be attributable to altruism – or so is the usual claim. More recently, the dictator game has been used in combination with trust game settings to putatively identify the role of altruism in those games.

The dictator game has been immensely popular as a way to measure altruism and to study social factors affecting pro-social behavior (see, e.g., Engel, 2011 and Camerer, 2003). There are three reasons for this. First, it is a deceptively simple game, and economists like simple things because they give the promise of the greatest interpretability, even when, as will be shown in section 2, the promise is not fulfilled. Second, it provides seemingly very good value for money: the very reason the terminology ‘dictator game’ is a misnomer for it is not really a game but an individual choice problem also implies that it is possible to collect a lot of independent observations for comparatively little money. Third, seemingly intriguing results can be obtained comparatively easily, and academic journals like to publish statistically significant results. Fourth, once the literature got kick-started for all of these reasons, it has been a case in which everyone keeps producing dictator game experiments because everyone else has, and has produced papers to show for it. None of these are good reasons to keep investing limited time and resources on dictator game experiments if dictator games cannot deliver a good measurement of altruism or other such pro-social motivations. And, as discussed next, it turns out they do not.

2. Do Dictator Games Work?

In coming to the experimental laboratory, or answering questions to the experimenter in the field, a subject needs to make sense of the decision environment to identify what he or she is expected to do. Problems of experimental control arising from this can be classified under

the label of experimenter demand effects (Zizzo, 2010; EDE for short) and have been, at least in part, previously analyzed in the psychological literature (e.g., Orne, 1962, and Rosnow and Rosenthal, 1997). They come into two guises. *Purely cognitive* EDE derive from the cognitive dimension of identifying the task at hand and behaving accordingly, by employing cues about what constitutes behavior that is appropriate to the task. *In addition* to the cognitive dimension, *social* EDE reflect the perceived social pressure that the experimenter, as an authority, explicitly or implicitly puts on a subject through instructions and cues; in the light of this, the subject forms beliefs about the experimental objectives and his or her actions can be played out in the direction most congruent to such objectives.

Now imagine that you come to the lab and you are given a random bunch of money and asked to consider giving some to a random stranger. This is an unfamiliar environment (as Smith, 2010, p. 9 puts it in describing this situation, “the Gods must be crazy!”) with an inbuilt obvious cognitive demand to give some money and to follow whatever other cue can be read by the decision environment. This is precisely what happens. Significant amounts of money are given to strangers in a way that is rarely done in the real world (Schram, 2005; Bardsley, 2008), and dictator games are sensitive to cues – whatever they are – in a way that other more natural economic settings are not, such as changes in deservingness (e.g., Ruffle, 1998), the availability of a picture of the recipient (Burnham, 2003), other information provided on the recipients (Branas Garza, 2006) and awareness of observation (Haley and Fessler, 2005). Behavior changes dramatically as a result: e.g., only around 10% of the subjects gave money in treatments by Hoffman et al. (1994, 1996) and Koch and Normann (2008), but over 95% did so in a treatment by Aguiar et al. (2008) and Branas Garza (2006). By their unusual nature, dictator games are typically done only once, although within-treatment manipulations are sometimes made (as in Andreoni and Miller, 2002) which lead to

further questions as this may, e.g., induce more behavior which is more consistent or cue-sensitive across tasks (as discussed in Zizzo, 2010).

Direct evidence for the impact of EDE on dictator game behavior has come in experimental work by List (2007), Bardsley (2008) and Zizzo and Fleming (2011). For example, Zizzo and Fleming (2011) find that behavior in a dictator game is connected to a standard questionnaire measure of sensitivity to social pressure (Stöber, 2001). They also find that, when a dictator game and a symmetrical back to back money burning game in which the first mover can simply destroy money of the second mover are played, there is a *positive* rather than negative relationship between giving and destroying, which is not compatible with a preference based explanation of giving but is predicted by an experimenter demand explanation.

There has been a recent attempt to reconfigure the objective of dictator game experiments as one aimed to identify social norms (Guala and Mittone, 2010) rather than measuring altruism or social preferences. However, this objective would predict actions that work in the same direction as the EDE confound, and, as the identified social norms would normally be claimed to generalize beyond the dictator game environment, it is not a satisfactory solution for reinterpreting dictator game results.

Overall, one can forgive Oechssler (2010, p. 66) for recently imploring “please, not another dictator game!”. And yet there may be still some scope for *some* experiments employing dictator games. Obviously, if the focus of the experiment is to look at experimenter demand and associated vertical social pressure, and the sensitivity of subjects to it, the dictator game can be a suitable game. In the context of the economics of philanthropy, if the focus of the experiment is to look at how social pressure (e.g., by the means of phone calls to ask for charitable giving) practically affects giving, it may be possible to use the experimenter demand effect as a way to mirror in the lab what is otherwise possible in the

real world. This may be considered an example of what Zizzo (2010) labels the magnifying glass argument against EDE: an EDE would be a tool used in the same way in which a scientist may use a magnifying glass or a microscope; specifically, to better, if artificially, identify effects of comparable social pressure on inducing greater charitable giving which otherwise may not be observable. Fong and Luttmer (2011) and Reinstein and Reiner (2011) provide examples of dictator game experiments that may receive some justification in this way.

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