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Social desirability, approval and public good contribution

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ABSTRACT

Behaviour in public good experiments is usually attributed partly to rational self-interest and partly to social norms and preferences. This paper examines if sensitivity to social desirability affects public good contribution and in what way. A pre-experimental measure of social desirability (SDS17) was used to match partners in a two-person public good game. Half the participants received experimenter approval based upon their investment. Contrary to predictions, the highest public good investment was by low social desirability participants in the approval condition. Social desirability was not positively related to pro-social behaviour. We consider its relation to experimental and social conformity.

1. Introduction

People can be self-interested, and that is in fact a starting point for a traditional economist's view of human behaviour. It is also often true; many choices can be predicted by the greatest benefit to the chooser. Perhaps more interestingly, people do not always choose the option that is of the greatest benefit to them. Some of these apparently altruistic choices can be accounted for by social norms or social preferences. In a dictator game setting, one participant (the dictator) decides how much, if any, of a sum of money to give to another participant (the receiver); participants often (over 50% of the time), choose to give some of their money to another player, even when there is no possibility of repercussion or recognition (Camerer, 2003). This behaviour is sensitive to social distance – the more likely that a participant might be identified, the greater the generosity (Hoffman, McCabe, & Smith, 1996). It is also potentially sensitive to experimenter demand characteristics reflecting experimental or social norms affecting behaviour (Zizzo, 2010), and this has been shown to be a likely problem in dictator games (e.g., Bardsley, 2008; Zizzo & Fleming, 2010).

In social dilemmas such as public good contribution games, participants decide how much to contribute to a public good (say, x) that benefits everyone by some factor (say, by $0.7 \times x$). Self-interest would predict zero contribution, because other people's benefit is at a personal cost (here the cost would be $0.3 \times x$), but positive contributions are normally observed (e.g., Kollock, 1998). Contribution has been found to be sensitive to disapproval, even anonymous and confidential disapproval. In some experiments a punishment system is directly introduced which allows participants to spend points to reduce the earnings of other participants after having observed public good contribution in the round; or, alternatively, subjects can just express social disapproval as 'disapproval points' with no monetary consequences as such; this social disapproval still increases contributions (Masclet, Noussair, Tucker, & Villeval, 2003). It would seem that there may be a social or experimental norm to cooperate with others which supersedes a narrow view of self-interest (i.e. maximum profit within an economic game). It would also seem that the influence of this norm to cooperate with others is moderated by social distance and social disapproval.

Another feature of behaviour in economic experiments (and in the real world) is that people tend to be motivated by reciprocity (e.g., Charness & Rabin, 2002). A cooperative partner should be rewarded and an uncooperative partner punished. Reciprocal behaviour in repeated public good contribution games is typically observed as increased contribution in the previous round by a coparticipant which is rewarded by greater subsequent contribution whereas lower contribution by a coparticipant is rewarded by lower contribution (e.g., Perugini, Tan, & Zizzo, 2010).

Self-interest does not exclude social considerations. However, it would appear that an understanding of individual differences in pro-social cooperation would help explain decision-making in economic settings. We chose social desirability as a likely candidate to explain at least some of the observed socially cooperative behaviour. Social desirability is the desire to present oneself in a

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positive light; it is typically associated with over-reporting of positive characteristics such as helpfulness and height, and under-reporting of negative characteristics such as weight or alcohol consumption (e.g., Larson, 2000). It is believed that socially desirable responding (SDR) is the result of a personality trait because it is stable over time, and that it is based on the measurement of 'need for approval' (Crowne & Marlowe, 1964). Classic work by Crowne and Marlowe (ibid) found that participants who scored highly on a measure of SDR were more likely to rate boring experimental tasks as interesting, were more likely to alter their behaviour in response to implicit positive reinforcement, and were more likely to agree with other participants' (incorrect) responses on perceptual judgements. These results are all evidence of conformity to the demand characteristics of the experimental situation. Crowne and Marlowe (1964) also found some evidence of conformity to social norms – high SDR participants were more likely to give common responses in word association (although not for speeded responses), and were also more likely to adhere to implicit norms in a dart-throwing task compared to low SDR participants. This conformity to an implicit social norm suggests that SDR is also important in conformity to norms that exist outside of the experimental situation.

There has been considerable work on social desirability since Crowne and Marlowe's (1964) seminal work, although the Marlowe–Crowne social desirability scale (MCSDS) remains the most commonly used and cited measure (Crowne & Marlowe, 1960). The MCSDS implies a single factor model of SDR in which responses are modified because of a 'need for approval' which is consistent with correlations between the MCSDS and agreeableness and conscientiousness (e.g., Kurtz, Tarquini, & Iobst, 2008). The most common alternative is a two-factor model which suggests both a deliberative impression management factor (which correlates strongly with the MCSDS) and a personality trait of self-deception, which can itself be subdivided (Paulhus, 1991).

While the large majority of work on SDR has focussed upon self-report the early work of Crowne and Marlowe (1964), reviewed above, suggests a role for SDR in decision-making. However, their research was unincentivised and none of the behaviour displayed had any consequences outside of the experimental situation. There was no reward or cost to the behaviour; it carried no risk. That being said, SDR has been implicated in risk perceptions for socially unacceptable hazards using a Marlowe–Crowne-type scale (Fleming, Townsend, Lowe, & Ferguson, 2007). Risk perceptions may, in turn, be related to behaviour. This study examines whether risky behaviour with real consequences is influenced by SDR. The one-factor model of SDR will be used here because of its wide acceptance and to build upon previous work that suggests its relationship with risk perceptions and experimental behaviour (reviewed above).

Economic games offer well-defined paradigms for examining risky behaviour with real consequences. The public good game in particular seems to have an implicit norm of cooperation because cooperation in this game is good for the group's earnings (at the risk of an individual's own earnings). Crowne and Marlowe's (1964) work suggests that positive reinforcement is more effective than negative reinforcement on high SDR individuals and that reinforcement was most effective when it came from a person in authority. As a result, we used approval instead of disapproval (which has been used in the past as disapproval points, Masclet et al., 2003, above) and the source of approval was the experimenter, not the participants (again unlike previous work, ibid). This combines the behavioural economics approach with that of Crowne and Marlowe (1964). The mechanism by which approval/disapproval works in public good games is unclear but in this study we hope to determine if it is literally related to an individual's 'need for approval'.

We will examine self-report measures as well as behavioural measures to confirm that SDR does indeed correlate with beliefs about one's own and others' behaviour. The context of these self-report measures is intended to be a hypothetical proxy for the public good game. Tax is a public good that people can relate to – individuals pay in and everyone benefits from order, security, healthcare, etc. In addition to hypothetical behaviour (to pay tax or not) the risk and benefit of tax payment will also be related to SDR both to confirm that SDR can be associated with perceived risk (Fleming et al., 2007), and to assess what aspects of belief about public goods might underpin an SDR effect on behaviour.

Based upon the social characteristics of public good contribution settings and of social desirability three predictions can be made: firstly, higher SDR should correlate with positive appraisal of hypothetical public good contribution; secondly, high SDR should predict greater actual public good contribution, and, finally, SDR and approval should interact with greatest contribution for the high SDR group who are given approval reinforcement.

2. Experiment

2.1. Method

2.1.1. Participants

Two-hundred and sixteen undergraduates (102 men) aged between 18 and 57 ($M = 21.6$, $SD = 4.57$), were initially recruited as part of another study (not reported here). One-hundred and seventy-three were British and all but one had English as their first language; 26 were studying Economics. They all completed the SDS17 measure of social desirability (see below). Participants were paid based upon their performance in the other study which took place approximately one week later.

A subset of these initial participants was recruited to this experiment. A low SDS17 group of 20 (5 women, 6 economists) aged between 19 and 57 ($M = 22.9$, $SD = 8.29$) was recruited from the bottom quartile for SDS17 (SDS17: $M = 3.2$, $SD = 1.32$). A high SDS17 group of 28 (12 women, 4 economists) aged between 18 and 36 ($M = 21.3$, $SD = 4.48$) who came from the top quartile for SDS17 (SDS17: $M = 10.9$, $SD = 1.15$) were invited to the experiment. This selection strategy was pursued to maximise statistical power and because of concern about the comparative accuracy of the test on intermediate scores based upon the test–re-test reliability of the middle quartiles which produced lower correlations ($r < .5$) than the outer quartiles ($r > .5$). There was no difference in age ($t_{(46)} = .84$, $p > .05$) or gender ($\chi^2_{(1)} = 1.63$, $p > .05$) between SDR groups. Participants were paid for taking part proportionately to points earned within this study. Specifically, each experimental point earned was worth 0.85 pence at the end of the experiment.

2.1.2. Materials

2.1.2.1. Socially desirable responding. The social desirability scale-17 (SDS17; Stober, 2001) consists of 16 items summed to give a total score; it is an updated version of the MCSDS (Crowne & Marlowe, 1960) and therefore can be said to measure impression management (as it would be described in a two-factor model of SDR). It has been validated in the United States and Germany (Blake, Valdiserri, Neuendorf, & Nemeth, 2006). Items are responded to as true or false ($\alpha = .64$ from total sample). Test–re-test reliability was tested after approximately one week on all participants during the initial recruitment phase ($r(214) = .86$, $p < .001$).

2.1.2.2. Appraisal of public good – tax. Three single item scales were constructed to measure appraisals of public goods, and one 3-item scale was constructed for risk, see Table 1 below. Each item was responded to on a seven point scale (1: strongly disagree: 7: strongly