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Who volunteers in psychology experiments? An empirical review of prosocial motivation in volunteering

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ABSTRACT

The central purpose of the present research is to provide a review of social value orientation (i.e., prosocial, individualistic, and competitive orientation), a construct measured with methods rooted in game theory (i.e., decomposed games). Also, we examine its ability to predict volunteering in psychology experiments. Consistent with hypotheses, Study 1 revealed that prosocials are more likely to volunteer in psychological experiments than do individualists and competitors. Study 2 replicated these findings, and revealed also that social value orientation was strongly linked to the academic study they chose. In particular, among psychology students, prosocials (57%) was the largest group, followed by individualists (37%), and only a few competitors (6%); in contrast, among economics students, individualists appeared largest (47%), followed by prosocials (36%), and still a fairly sizeable percentage of competitors (17%). It is concluded that psychologists and economists tend to rely on samples (from their participant pools) that may systematically differ in terms of motivation and beliefs that are associated with differences in prosociality, selfishness, and competition.

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1. Introduction

Who are the people who participate in our experiments? Presumably, most psychologists and economists who conduct experiments in their laboratories are interested in that question. Obviously, for those departments that have well-functioning participant pools, the answer is clear, at least at the surface – typically, in many psychology departments, the participant pool constitutes undergraduate psychology students, and in many economics departments, the participant pool constitutes economics students. And in departments that do not have well-functioning participant pools, students are often persuaded to participate in experiments by a combination of informing them about the information gains for science and society, and giving money in exchange for participation. We would suggest that even if we know that our sample consists of psychology or economics students, we still do not necessarily know who they are in terms of relative stable orientations that they bring to the laboratory. For example, is our samples representative in terms of dispositions such as considerateness, fairness, or trust? This is important, because such topics touch upon

the basics of human nature, which many scientists across differing disciplines study in the laboratory.

In a very influential article, Sears (1986) drew attention to potential influences of sampling college sophomores when testing social psychology's view of human nature. In particular, he outlined that compared to older adults, college students tend to have less-crystallized attitudes, stronger cognitive skills, and more unstable peer relationships. These differences were supported by empirical evidence. He also suggested that students may be more self-centered and less prosocial than older adults, a claim that was later supported in research (Van Lange, Otten, De Bruin, & Joireman, 1997).

The present research addresses the question “who volunteers in our experiments” by examining the association between individual differences in social value orientation (i.e., prosocial, individualistic, and competitive orientation) and tendencies to volunteer to participate in psychology experiments. We also examine whether these differences in social value orientation are associated with tendencies to choose psychology or economics as the primary major for study at the university.

Theoretically, the concept of social value orientation extends the “rational self-interest” postulate by assuming that individuals systematically differ in their interpersonal preferences, with some seeking to enhance joint outcomes and equality in outcomes (prosocial orientation), and others seeking to enhance their own outcomes in absolute terms (individualistic orientation) or

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comparative terms (competitive orientation, Van Lange, 1999). As such, the “beyond self-interest” assumption underlying social value orientation extends and complements much modeling and theorizing in economics and other disciplines (e.g., Fehr & Schmidt, 1999; Henrich et al., 2005; Mansbridge, 1990). Methodologically, the concept of social value orientation is rooted in the experimental game approach, assessing individuals’ preferences by a series of allocation tasks, or more precisely, a series of decomposed games, which represent outcomes for self and outcomes for another (cf. Messick & McClintock, 1968; Pruitt, 1967). As such, the “history” of the social value orientation concept is consistent with what is now often called “economic games”, presumably because the games involve money or are rooted in classic formulations of game theory (e.g., Luce & Raiffa, 1957; Von Neumann & Morgenstern, 1944). We discuss both issues in turn, as they speak to basic similarities and differences between much theorizing in psychology and classic economics.

2. Beyond self-interest

Theoretically, the concept of social value orientation is embedded in interdependence theory (Kelley & Thibaut, 1978; Rusbult & Van Lange, 2003), which emphasizes the idea that individuals evaluate actions not only in terms of the quality of one’s own outcomes but also in terms of the quality of another person’s outcomes. Prosocial orientation is defined in terms of enhancing own and others’ outcomes (i.e., maximizing joint outcomes, MaxJoint) as well as equality in outcomes (i.e., minimizing absolute differences in outcomes for self and another person, MinDiff); individualistic orientation is defined in terms of enhancing outcomes for self, and being largely indifferent to outcomes for another person (MaxOwn), and competitive orientation is defined in terms of enhancing the difference between outcomes for self and other in favor of themselves (i.e., maximizing relative outcomes, MaxRel; Kelley & Thibaut, 1978).

The concept of social value orientation is rooted in classic research on cooperation and competition, which revealed (largely unexpected, as noted by McClintock (1972) a good deal of within-individual consistency in behavior over a series of interactions and across situations. These considerations, as well as the aim of disentangling (or decomposing) interpersonal goals underlying behavior in experimental games, have inspired researchers to design a measure that is closely linked to game behavior (Messick & McClintock, 1968; Pruitt, 1967). Rather than focusing on a 2 by 2 matrix game, such as the Prisoner’s Dilemma Game, the instrument represents “decompositions” of game situations, capturing consequences of one’s behavior for oneself and another person. A frequently-used instrument is the Triple-Dominance Measure of Social Values (Van Lange et al., 1997; see also earlier research by Kuhlman & Marshello (1975); Messick & McClintock (1968)). In this instrument, outcomes are presented in terms of points said to be valuable to self and the other, and the other person is described as someone they do not know and that they will never knowingly meet in the future (in an effort to exclude the role of considerations relevant to the future interactions).

An example of a decomposed game is the choice among three options:

- (1) *Option A*: 480 points for self and 80 points for other.
- (2) *Option B*: 540 points for self and 280 points for other; and
- (3) *Option C*: 480 points for self and 480 points for other.

In this example, Option A represents the competitive choice, because it yields the greatest outcomes for self relative to the other ($480 - 80 = 400$ points); Option B represents the individualistic

choice, because it yields the greatest absolute outcomes for self (540 points), and Option C represents the prosocial choice because it yields the greatest joint outcomes ($480 + 480 = 960$) as well as the smallest absolute difference between outcomes for self and other ($480 - 480 = 0$ points). Individuals are classified as either a prosocial, individualist, or competitor if they make at least six out of nine choices indicative of the same motive. Research using this instrument, reveals that most individuals are classified as prosocial (50–60%), followed by individualists (30–40%), while competitors is the smallest group (8–15%), although such percentages differ somewhat per sample (see Au & Kwong, 2004; Van Lange et al., 1997).

Consistent with earlier modeling and theorizing (McClintock, 1972; Messick & McClintock, 1968), research revealed that social value orientation exhibited considerable ability to predict actual behavior in a variety of different experiment games, with prosocials exhibiting greater cooperation than individualists and competitors (e.g., Balliet, Parks, & Joireman, 2009; McClintock & Liebrand, 1988). Moreover, social value orientations often exert their influence not only in terms of statistical main effects, but also in interaction with a number of variables, such as personality impressions of the partner, the behavioral strategy pursued by the interaction partner, and the features of the interdependence structure of the social dilemma (e.g., Kuhlman & Marshello, 1975; for a review, see Van Lange, De Cremer, Van Dijk, & Van Vugt, 2007b). Finally, within the realm of experimental games, social value orientation is associated with a number of cognitive processes, including the use of morality (good versus bad) versus competence (intelligent versus stupid, weak versus strong) in person judgment and impression formation (e.g., Liebrand, Jansen, Rijken, & Suhre, 1986), the priming of such constructs (e.g., Smeesters, Warlop, Van Avermaet, Corneille, & Yzerbyt, 2003), response latencies for making decisions in experimental games (Dehue, McClintock, & Liebrand, 1993), and evaluations of structural solutions to social dilemmas (e.g., Samuelson, 1993). We should note, however, that these personality differences reflect differences in the *probability* with which individuals adopt a prosocial, individualistic, or competitive orientation to new interaction partners. This conceptualization, referred to as slot-machine metaphor, explicitly acknowledges that there may also be quite powerful situational effects on social value orientation, including effects of priming, social norms, or demand characteristics. (for a discussion on the slot-machine metaphor, see Van Lange et al., 2007b; Van Lange & Joireman, 2008).

3. Beyond experimental games

Is there evidence in support of the predictive ability of social value orientation regarding behavior in situations other than experimental games or social dilemmas tasks administered in the laboratory? Research by Bem and Lord (1979) has revealed that prosocials, individualists, and competitors were described differently by their friends and roommates – for example, prosocials tended to be viewed as relatively more moralistic, fastidious, and concerned with philosophical problems. Moreover, there is research on judgments of commuting situations, revealing that prosocials tend to construe such situations in terms of collective welfare (environmental consequences; e.g., how much does the car versus train pollute the environment?) whereas individualists and competitors tend to construe such situations in terms of personal welfare (e.g., travel time e.g., Joireman, Van Lange, Kuhlman, Van Vugt, & Shelley, 1997; Van Vugt, Meertens, & Van Lange, 1995). Moreover, there is evidence that prosocials are more likely to donate money to noble causes, such as organizations aimed at helping the poor or the ill, than do individualists and competitors (Van Lange, Bekkers, Schuyt, & Van Vugt, 2007a).

There is one study that has directly examined the predictive ability of social value orientation regarding actual *prosocial behavior*. McClintock and Allison (1989) classified a large number of students in terms of their social value orientation, and mailed them a request to volunteer 0–10 h of their time to serve as a participant in research at the University of California Santa Barbara (i.e., students were told that such participation in experiments is important to maintaining the university's standard of excellence in research). Although social value orientation was not predictive of whether or not they returned their response forms, it did appear that prosocials donated significantly more hours than did individualists or competitors. Thus, the extant literature on the predictive ability of social value orientation regarding prosocial behavior is very small.

3.1. Study 1: participation in experiments

Study 1 was designed as a conceptual replication of the study by McClintock and Allison (1989), whereby the “public good” is less tangible and less concrete – contributing to the overall quality of scientific research at the VU University at Amsterdam by signing up as a volunteer for participating in experiments. Also, Study 1 assessed participants' actual contributing behavior by asking participants, if interested, to leave personal information (name and phone number) on a sign-up sheet so that the experimenter could contact and invite them to participate in research at the VU University at Amsterdam.

3.1.1. Method

3.1.1.1. Participants. Sixty-seven introductory psychology students at the VU University participated in Study 1 (17 men and 50 women; average age 21 years).

3.1.1.2. Procedure. At the end of a lecture we asked students to complete a brief questionnaire, which would be explained in greater detail in the next lecture. The questionnaire consisted of nine decomposed games derived from the Triple-Dominance Measure of Social Value, described in the Section 1 (see Van Lange et al., 1997 for more information). Participants were classified if they made six or more choices that were consistent with a prosocial, individualistic, or competitive preference. Accordingly, we identified 41 prosocials (66%), 15 individualists (24%), and six competitors (10%). Five participants made fewer than six consistent choices, and were not classified. Given that our hypothesis addresses differences between prosocials versus individualists and competitors, and the low number of competitors, we combined individualists and competitors into a group of proselves (for similar procedure, see Van Lange & Liebrand, 1991). Proselfs tend to enhance outcomes for self, either in an absolute sense (individualists) or relative to the outcomes for the other (competitors). While such differences may be relevant in some situations, past research on cooperation has revealed that individualists and competitors demonstrate a number of psychological and behavioral similarities (see Balliet et al., 2009; Van Lange et al., 2007b).

After measuring social value orientation, we assessed participants' willingness to serve as a participant in research. Similar to McClintock and Allison's (1989) study, instructions stated that “the quality of scientific research of psychology at the Free University depends to a large extent on the willingness of students to participate in these studies”. We asked whether they would leave their names, addresses, and phone numbers on a separate sheet if they were interested in participating in future studies. We emphasized that the data obtained in this study would be treated strictly anonymously, and that we would only use their names, addresses, and phone numbers as a means of contacting them in the future.

3.1.1.3. Results and discussion. There was a significant association between social value orientation and whether or not they left their names, addresses, and phone numbers on the questionnaire, $\chi^2(1, N = 62) = 6.95, p < 0.01$. Almost all prosocials (92.7%) left their name, address, and phone number on sign-up sheets, whereas among individualists and competitors only about two-thirds (66.7%) left this information on the questionnaire. Thus, as predicted, prosocials were more likely than the group of individualists and competitors to participate in research on a voluntary basis.

3.2. Study 2: participation by psychology and economics students

Study 2 seeks to replicate and extend Study 1 by examining participation in experiments among psychology students and economics students. As such, Study 2 pursued two goals. First, we wanted to examine the link between participation in experiments in a sample broader than psychology students. Also, we wanted to yield a larger sample size to be able to explore potential differences between individualists and competitors.

Second, and more importantly, we wanted to examine the potential link between psychology versus economics students and social value orientation. This question was inspired by the idea that social value orientation may be an important predictor of substantial life decisions – the choice of study and possibly career. Moreover, it is relevant to the basic idea that personality differences are often reflected in selecting situations that in a variety of ways may be consistent with the broader goals (or approach and avoidance tendencies) that one wishes to pursue (for a review, see Snyder & Cantor, 1998). For example, just as shy people may be less likely to “select” some social situations (and subsequently perhaps not learn to overcome some aspects of their shyness; e.g., Caspi, Elder, & Bem, 1988), so may prosocials be more likely than individualists and competitors to choose psychology rather than economics because psychology permits (and is believed to permit) greater opportunities for helping and related forms of prosocial behavior. For example, a large number of psychologists work in settings where they help others through providing counselling, intervention or therapy. In contrast, economics permits (and is believed to permit) greater opportunities for pursuing goals that, on average, seem more individualistic (e.g., increasing sales, making money) or rather competitive (e.g., outperforming other companies in the “market”). Thus, a second goal is to test the hypothesis that prosocials are more prevalent and individualists and competitors less prevalent among first-year psychology students than among first-year economics students.

3.2.1. Method

3.2.1.1. Participants. A total of 158 introductory psychology students and 150 introductory economics students at the VU University participated in Study 2.

3.2.1.2. Procedure. Prior to a lecture we asked students to complete a brief questionnaire, which would be explained in greater detail in the next lecture. Using the same series of nine decomposed games, as well as the same criteria for classification as in Study 1, we identified 140 prosocials (47%), 125 individualists (42%), and 33 competitors (11%). Twenty-three participants made fewer than six consistent choices.

Next, after a brief filler task, participants were asked whether they would be interested in participating in experiments. Similar to Study 1, the instructions noted that the scientific reputation of the VU University is strongly affected by the quality of research in the social and behavioral sciences, which depends on individuals' willingness to participate in research conducted at the VU University at Amsterdam. Unlike Studies 1 and 2 noted that they would receive 7 Euros per hour of participation (around 7.5 US dol-

lars in American currency), which had become standard compensation for research at the VU University. If they were interested they could leave their name, addresses, and phone numbers on a separate sheet. In a lecture a week later, students were debriefed and informed about some results of the study. We should acknowledge that leaving contact information is not entirely equivalent to volunteering (or prosocial behavior), in that it does not represent any actual demonstration of that behavior. At the same time, we regard this measure as a relatively concrete, behavioral indicator of the intention to volunteer.

3.2.1.3. Results. We observed a significant association between social value orientation and participation (i.e., whether they left their identification on the sheet), $\chi^2(2, N = 296) = 9.20, p < 0.01$. It appeared that the percentage of participation was greater among prosocials (41%) and individualists (37%) than among competitors (12.5%). Pairwise comparisons revealed only significant differences between prosocials and competitors, $\chi^2(1, N = 171) = 9.21, p < 0.01$, and between individualists and competitors, $\chi^2(1, N = 157) = 6.93, p < 0.01$; prosocials and individualists did not significantly differ, $\chi^2(1, N = 264) = 0.49, ns$. Thus, the effect of social value orientation is primarily due to differences between competitors versus prosocials and individualists – at least when the compensation of 7 Euros per hour was emphasized.

Next, we observed a significant association between social value orientation and academic study (economics versus psychology students), $\chi^2(2, N = 298) = 17.62, p < 0.001$. As can be seen in Fig. 1, among psychology students, we observed a commonly found distribution (see Van Lange et al., 1997), with the majority being classified as prosocial (57%), followed by individualists (37%), and only a few competitors (6%). Among economics students, there were fewer prosocials (36%), and more individualists (47%) and competitors (17%). Comparisons of pairs of social value orientations revealed that the distributions of prosocials versus individualists, $\chi^2(1, N = 265) = 7.83, p < 0.01$, prosocials versus competitors, $\chi^2(1, N = 173) = 14.95, p < 0.01$, and individualists versus competitors, $\chi^2(1, N = 158) = 4.23, p < 0.05$, were significantly different for psychology students versus economics students. Thus, unlike psychology students, in economics students we observed even more individualists than prosocials. Also, note that samples that are representative of the adult population (in The Netherlands) we observe a distribution in which prosocials (71.2%) constitute the largest group, followed by individualists (21.3%), and competitors the smallest group (7.5%); this is even true if we limit the representative sample to people aged between 15 and 30 which is more similar in age to the sample used in Study 2 (55.9%, 30.7%, and 13.3%, see Van Lange et al., 1997). To our knowledge, the reversed prevalence of prosocials versus individualists has never been observed before in more than three decades of research.

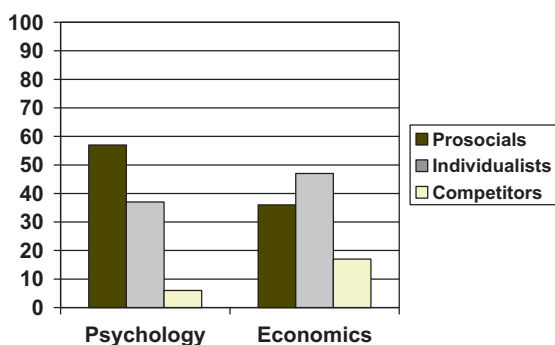


Fig. 1. Percentages of prosocials, individualists, and competitors among psychology students and economics students.

But importantly, this finding underscores the ecological validity of social value orientation in demonstrating its power to impact important life decisions.

Next, we examined whether the contribution of social value orientation in predicting participation is significant above and beyond psychology versus economics. We conducted a 3 (social value orientation) by 2 (academic study: economics versus psychology) by 2 (participation: yes versus no) hierarchical analysis because at least two variables (i.e., social value orientation and participation) were skewed in their distribution (cf. Knoke & Burke, 1980). This analysis revealed a significant interaction of social value orientation and participation, $Partial \chi^2(1, N = 296) = 8.66, p < 0.01$, whereas the interaction of academic study and participation was no longer significant, $Partial \chi^2(1, N = 296) = 1.77, ns$. Not surprisingly (given the strength of the effect observed earlier), the interaction between social value orientation and academic study remained significant, $Partial \chi^2(1, N = 296) = 15.75, p < 0.001$. These analyses support the central – and independent – role of social value orientation in predicting participation in experiments.

Finally, we explored the role of gender. Unfortunately, the instructions used among the economics students failed to include a last page asking participants about gender and age. For 41 participants (35 of which were classifiable in terms of social value orientation) we were able to infer gender from their names that they wrote on the sheets (hence, only some of those who volunteered to participate). Using this subset of 193 participants, it should be no surprise that there were more women than men among psychology students ($ns = 120$ and 38 , respectively), and slightly more men than women among economics students ($ns = 20$ and 15 , $\chi^2(1, N = 193) = 14.93, p < 0.001$), but there was no significant association of gender with social value orientation, $\chi^2(1, N = 193) = 0.67, ns$. Also, a hierarchical analysis with gender, academic study, and social value orientation revealed a significant interaction of social value orientation and academic study, $Partial \chi^2(2, 193) = 8.10, p < 0.02$, a significant interaction of gender and academic study, $Partial \chi^2(1, 193) = 14.33, p < 0.01$, but a nonsignificant interaction of social value orientation and gender, $Partial \chi^2(1, 193) = 0.56, ns$. Thus, this analysis (albeit not ideal due to selection) suggests that the link between social value orientation and academic study is independent of gender.

4. General discussion

Who volunteers in psychology experiments? The present studies provide relatively consistent evidence in support of the general hypothesis that people with prosocial orientations are more likely than people with individualistic or competitive orientations to participate in psychology experiments. This was observed in a study (with a small sample of psychology students) using a relatively unobtrusive measure of volunteering (one that was not presented as part of the experiment, Study 1), as well as in a fairly sizeable sample that constituted both psychology and economics students (Study 2). Moreover, we found some evidence that psychology students are more likely to volunteer in experiments than are economics students. And finally, we found that among psychology students, people with prosocial orientation are clearly most prevalent, whereas among economics students, people with individualistic orientation are most prevalent. Below, we briefly discuss the meaning and implications of these novel findings.

Theoretically, we wish to note that the “beyond self-interest” assumption, so powerfully represented in the social value orientation conceptualization, is now demonstrated to be relevant to volunteering in experiments. Prosocial orientation seems to support the decision to volunteer, whereas individualistic and competitive orientation do not support (or perhaps inhibit) the decision to vol-

unteer in experiments. These findings were initially observed in a small sample of psychology students, and subsequently in a descriptively large sample; moreover, in Study 2, volunteering was examined under realistic circumstances in which they would receive a standard financial incentive. Thus, it seems that under various circumstances, differences between prosocial versus individualistic (and competitive) orientation matter. But what does that mean for our understanding of the motivations that might underlie volunteering in experiments?

In addressing this question, it is interesting to link the present findings to recent research on the association between social value orientation and donations (Van Lange et al., 2007a). This research revealed that that social value orientation was strongly associated with truly “noble” donations to, for example, third world organizations, while it exhibited no significant association with other “less noble” donation goals (e.g., donation to sports and recreational activities). It is possible that differences in social value orientation may be especially pronounced for public goods from which they themselves do not in any tangible way benefit. The argument would be that such donations represent the sharpest conflict between enhancement of another’s outcomes and equality in outcomes versus enhancement of own outcomes and relative advantage over others.

In that sense, it was interesting to see that when a financial reward for participation was introduced (7 Euros), Study 2 revealed pronounced differences between competitors versus individualists and prosocials. It is possible that providing incentives to contributors to public goods increases contributions in individualists by essentially reducing the conflict between self and collective interests (Olson, 1965; for empirical evidence, see Martichuski & Bell, 1991; McCusker & Carnevale, 1995; Wit & Wilke, 1990). Competitors, however, may not respond to relatively small rewards for donations to public goods, because such do not increase their outcomes relative to others. Perhaps rewards must be much more substantial and selective to increase contributions by competitors (e.g. giving elite social recognition to selected contributors, Van Lange & Joireman, 2008). Thus, providing incentives can eliminate the motivational conflict inherent in social dilemmas, effectively making such donations to public goods “less noble”, and therefore social value orientation less relevant in predicting donations.

From this perspective, it is surprising that differences in social value orientation have received virtually no empirical attention in research on very “noble” forms of prosocial behavior, which are unlikely to be accounted for by mechanisms underlying long-term self-interest that have received considerable attention in classic and recent work on game theory (e.g., reciprocity and reputation, Nowak & Sigmund, 1998). As such, future work on social value orientation may contribute to our understanding of prosocial and altruistic personalities, broader motivations underlying helping, as well as the origins of individual differences that predict various forms of prosocial behavior (Eisenberg et al., 2002; Penner & Finkelstein, 1998). For example, it is interesting that differences in social value orientation, which often are assumed to be importantly rooted in social interaction experiences (e.g., cultural differences, family size differences), may also be quite important to understanding our dealings with others with whom we share no history of interaction and anticipate no future of interaction.

We want to briefly comment on the finding that prosocials are most prevalent among psychology students (and representative samples as well, see Van Lange et al., 1997), whereas among economics students individualists are most prevalent. There is some past research showing that economics students tend to become more “noncooperative” (as indicated by choices in the Prisoner’s dilemma) during their studies, presumably because of the implicit assumptions, norms, and beliefs conveyed during lectures (Frank, Gilovich, & Regan, 1993). However, it is possible that compared

to psychology students, economics students may be more individualistic before they choose to study economics. The notion that people “select” situations on the basis of personality is of great theoretical importance to social and personality psychology, and may help us better understand the causality underlying various interpersonal behaviors (e.g., Snyder & Cantor, 1998). For example, just as aggression-prone individuals may be more likely to attend to aggression in the media and subsequently be more likely to aggress, so may economists and psychologists choose “their” worlds in which individualistic versus prosocial orientation is relatively more prevalent – and perhaps more functional (for further discussion, see Kelley et al., 2003). An important implication is that some discrepancy in findings observed in research in psychology and (experimental) economics may be partially accounted for by the relative frequencies of prosocial, individualistic, and competitive orientations of the students who serve as participants in these experiments.

We may speculate that the use of incentives to attract participants for our studies may help make our samples less biased, in that monetary incentive seems to attract individualists (but not necessarily competitors, see Study 2). Also, the risk of biased sampling due to volunteering is also substantially reduced, if not eliminated, if researchers have access to participant pools in which students are required to participate in an experiment or complete an alternative assignment – a quite commonly used procedure at universities. In the final analysis, these issues are empirical issues, and constitute important topics for research for the study of altruism, cooperation, and prosocial behavior.

5. Concluding remarks

We wish to outline the powerful implications that this research may have for the field’s focus on experimentation in the laboratory, and the practice of recruiting participants. Often, participant pools in psychology experiments consist of people who have chosen psychology as the major, who may bring with them a particular set of orientations to the laboratory that are generally relevant to a prosocial orientation, which may also include orientations such as fairness, agreeableness, and feelings of responsibility (for recent reviews, see Balliet et al., 2009; Bogaert, Boone, & Declerck, 2008; Van Lange et al., 2007b). It is difficult to deny that some findings may be accounted for by some selection, especially for phenomena that speak to, or are relevant to, prosocial orientation – or human nature. An overrepresentation of psychology students (or participation via self-recruitment) may imply an overrepresentation of prosocial orientation, which may underlie much research in psychology – and may account for relatively high levels of cooperation that is observed in these experiments, and the effectiveness of some procedures to enhance cooperation. The same holds for the other side of the coin. A systematic overrepresentation of individualists (and competitors) may account for some findings observed in experimental economics, at least if most participants include economics students – this may account for the lower levels of cooperation that is observed in these experiments, and perhaps for the relative prominence of “self-interest” as an ultimate explanation for human cooperation. More generally, individual differences in social value orientation have been shown to help explain so many interpersonal and group phenomena, from the level of biology to the level of society, that a potential sampling effect in social value orientation can have quite a pronounced effect on a wide variety of experimental findings observed in the laboratory. Moreover, given that research by psychologists and economists tends to rely on samples from their own participant pools – typically consisting of psychology and economics students, respectively – it is important to consider different findings in terms

of basic psychological differences between the samples that various scientists use.

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