Are Groups More Pro-Self Than Individuals? Individual-Group Comparisons on Social Value Orientation and Ethical Decision Making

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Recommended Citation
http://ecommons.luc.edu/luc_theses/2511
ARE GROUPS MORE PRO-SELF THAN INDIVIDUALS? INDIVIDUAL-GROUP COMPARISONS ON SOCIAL VALUE ORIENTATION AND ETHICAL DECISION MAKING

A THESIS SUBMITTED TO
THE FACULTY OF THE GRADUATE SCHOOL
IN CANDIDACY FOR THE DEGREE OF
MASTER OF ARTS

PROGRAM IN PSYCHOLOGY

BY
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CHICAGO, IL
AUGUST 2014
ACKNOWLEDGMENTS

I would like to thank all of the people who made this thesis possible. The biggest thank you should go to my advisor Dr. R. Scott Tindale in the Psychology Department at Loyola University Chicago. He kindly offered me help from the beginning of my time here. He supported me in my academic endeavors, as well as inspired me in my life. Also, I would like to thank Dr. Tracy De Hart, who helped me in class, and helped with my thesis as well.

I would also like to thank the research assistant in our lab Kasia Plessy, Corie Sanderson, Molly Carmody, and Malcolm Atkinson, who dedicated their times to conduct experiments.

Finally, my beloved husband, and lovely one years old baby boy are the two people for whom I am most thankful. I would like to thank my husband for teaching me about life and psychology, and to thank my son for teaching me about the importance of time.
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ABSTRACT

Research has shown that groups tend to be less cooperative in prisoner’s dilemma games compared to individuals. One hypothesis to explain this effect stems from groups’ natural tendencies to protect themselves from harm and enhance their relative standing. However, an alternative hypothesis is that groups are more rational in game situations. The current study attempted to distinguish between these two hypotheses by testing whether groups score higher than individuals on measures of competitiveness and pro-self (group) behavior, and lower than individuals on measures of prosocial behavior. The study also attempted to assess whether the pro-self tendencies of groups lead them to behave less ethically than individuals. I tested these hypotheses by using decomposed games and ethical dilemma problems. The results showed that groups were less prosocial than individuals and less likely than individuals to make the ethical choice in one of the two ethical dilemmas. Implications and future research directions are discussed.
CHAPTER ONE

INTRODUCTION

An enduring issue in social psychology is how individuals’ behavior changes when carried out in a group context. Allport (1924) referred to this as the central question in social psychology. Much research has shown that group membership plays a dynamic role in shaping individual behavior (Abrams & Hogg, 1988). Recent work in this area has focused on the dynamics of relationships between cooperation and competitive during inter-individuals and inter-groups’ interactions. Based on decades of studies, it has been shown that interactions between groups are more competitive than comparable interactions between individuals (Wildschut, et al. 2003).

Recently, several ethical scandals appeared in the business field, and the organizations’ unethical behaviors have drawn society’s attention as well as researchers’. Organizational decisions are often made by groups, so it may be worthwhile to understand how groups may differ from single individuals in terms of ethical decision making. The proposed research will compare individuals and groups both in terms of their orientation toward social exchanges (i.e., “social value orientation”, McClintock, 1978) and how they resolve ethical dilemmas.
Social Value Orientation

Social Value orientation is defined as stable preferences for systematically different patterns of outcomes for individuals (MacCrimmon & Messick, 1976; McClintock, 1978). There are various categories to identify one’s social value orientation (Van Langekuhlman, 1994, Liebrand & Run 1983). In the current research, we will use three categories of social value orientations, prosocials, individuals and competitors. Here, prosocials tend to maximize outcomes for both themselves and others, as well as to minimize outcome difference between themselves and others. Individuals tend to maximize their own outcomes, and they have little or no regard for others’ outcomes. Competitors try to maximize the difference between their own and others’ outcomes, thus insuring that they “win”, but minimize other’s outcome. These different patterns of social orientation are shaped by social interaction experiences (Van Lange, Otten Wilma, De Brun, & Jorireman, 1997).

Different social orientation types will influence people’s behavior in a variety of social situations. Much of the research on social value orientation has focused on social dilemmas (Dawes, 1980). Social dilemmas are situations that pit individual outcomes against collective outcomes, such that individuals get their best outcomes by defecting from the collective, but if everyone defects, everyone is worse off. In addition, the best overall collective outcome occurs when everyone cooperates with the collective. Research has demonstrated that people who are prosocials tend toward being cooperative during the dilemma tasks. However, individualists and competitors tend to defect in such tasks thus lowering the collective payoff (Kuhlman & Marshello, 1975; Liebrand & Van
More recent research (De Dreu & Carnevale, 2003) has shown that negotiators with pro-social orientations are better at finding “win-win” solutions in negotiated settlements. Individualist (i.e., pro-selfs) and competitors tended to miss chances for mutually beneficial tradeoffs and not realize the presence of compatible issues. It appears that focusing only on winning and/or self-relevant outcomes can lead to suboptimal outcomes.

**Discontinuity effect**

One of the most consistent findings in the group decision making literature is that groups exacerbate tendencies prevalent among the individuals from which the group members were drawn (Hinsz, Tindale, & Vollrath, 1997). Probably the most well known phenomenon consistent with this finding is “group polarization” (Kameda, Tindale, & Davis, 2003; Myers & Lamm, 1976). In a situation where groups are taking a position along some continuum, groups will choose a position more extreme (closer to the poll or endpoint) than the average of the individual pre-group positions. The pole they will move toward is the one for which most of the individuals were originally leaning (Myers & Lamm, 1976). However, there are exceptions to this general finding where groups tend to behave in ways inconsistent with or opposite the general trend at the individual level. These have been referred to as “discontinuity” effects. According to Brown’s (1954) “the quality of mob behavior has always required explanation because of its apparent discontinuity with the private characters of the individuals involved.”

Probably the best know discontinuity effect has been referred to as the “inter-individual – inter-group discontinuity effect” (Schopler, et. al. 2001). Schopler et al com-
pared individuals and three-person groups in terms of how they play a prisoner’s dilemma game when the two parties are allowed to communicate. Individuals tended to agree to cooperate and then did cooperate most of the time when actually making their choices. However, groups agreed to cooperate but then tended to defect. Rather than exacerbating the individual tendency, groups tended to do the opposite of what they most likely would have done as individuals: thus the “discontinuity”. This general effect has now been replicated dozens of times under a variety of different circumstances and mixed motive game environments (Wildschut, Pinter, Vevea, Insko & Schopler, 2003). Morgan and Tindale (2002) found that the effect had at least two components. First, individuals were slightly more likely to choose to defect if they thought they would be playing against a group. However, the majority of group members initial preferences were still for cooperation before group discussion. During group discussion, the members who favored defection were more persuasive and typically convinced the other group members to vote to defect. Thus, groups often defected even when most of their members initially favored cooperation. It appears that norms for group protection and enhancement are quite strong even in a laboratory group (Tindale, Talbot, & Martinez, 2013). Such norms probably arise from the same feelings of group identity posited by social identity theory (Abrams & Hogg, 1988).

**Unethical Behavior in Groups**

There is now a growing body of evidence that groups are more likely to behave unethically than are individuals under similar circumstances. Stawiski, Tindale & Dykema-Engblade (2009) demonstrated that, in a negotiation task, groups were more
likely to lie to negotiation partners than were individuals. When deception can be used strategically used, groups will show more deceptive choices. For instance, Cohen, Gunia, Kim-Jun and Murnighan (2009) found that when deception helped to maximize outcomes, participants playing as a group sent more misleading messages (thus deceit) to their opponents to achieve maximum economic gains than when participants played as individuals.

Moreover, different members in the groups serve different roles, such as, members, leader, and the like. They are all willing to act competitively for achieving the group goal. As a group member, core members are more willing to help the group (Tyler & Blader, 2000). Meanwhile, in order to accomplish the organizational goals, leaders can potentially encourage corruption and unethical acts within their organizations (Brown & Mitchell, 2010). Also, peripheral member are more motivated than core members to show loyalty to the group (Jetten, Branscombe, Spears, &McKimmie, 2003). Van Kleef ‘s (2007) work in intergroup negotiation is also informative. Their study showed that: when peripheral members were selected as representatives in an intergroup negotiation, and when they were accountable, they adopted more competitive and less cooperative strategies compared with the core group members (Van Kleef, Steinel, van Knippenberg, Hogg, & Svensson, 2007).

**Ethical decision-making in organizations**

The contemporary research in ethical decision-making of individuals is related to situational variables. Trevino’s (1986) person-situation interactionist model discussed the fact that ethical or unethical decision making should depend on factors within the indi-
vidual and factors within the situation. As we discussed above, relying on individual decision-making as the sole reason for unethical behavior in organizations is not viable. Situational variables in the social context can heavily influenced individual’s ethical decision-making (Trevino, 1986).

One of the main context factors that have been studied is ethical climate. Ethical climate has been defined as “the prevailing perceptions of typical organizational practices and procedures that have ethical content” or “those aspects of work climate that determine what constitutes ethical behavior at work” (Victor & Cullen, 1988, p 101). When group people interact with each other, the ethical climate will influence their decision making. Previous researches have demonstrated that ethical climate dimensions can positively influence managers’ ethical decision-making intentions (Flannery & May, 2000). In contrast, ethical climate dimensions are negatively related with people’s willingness to lie (Ross & Robertson, 2000). Moreover, Aquino (1998) found that ethical climate would make people behave in a more honest way in negotiation. An ethical climate can also effectively reduce individual’s lying behavior that would serve their own interests (Ross & Robertson, 2000).

**In-group love and out-group hate**

When the group acts more competitively than the individual to out-groups, limited resources could be a possible reason from an evolutionary perspective. Thus, when resources are limited, intergroup interactions will be more competitive and aggressive. The emotional reaction will turn to out-group hate. De Dreu et al (2011) demonstrated that oxytocin drives a “tend and defend” response in that it promoted in-group trust and coop-
eration, and defensive, but not offensive, aggression toward competing out-groups. Also, an empirical study conducted by Insko et al. (1992) demonstrated that groups would rather establish their superiority to the other group than to maximize their absolute in-group profit. Moreover, these kinds of intergroup biases can occur as a result of elevation of the in-group, or derogation of the out-group, or both (Levin & Sidanius, 1999). However, Halevy, Weisel, & Bornstein (2011) found that group members strongly preferred in-group love than out-group hate, which is more cooperative within their in-groups and less competitive during intergroup interactions.

In sum, the literature from group competition and ethical behavior suggested that:
1. Intergroup interaction is more competitive than interindividual interaction. 2. People in the group situations tend to more unethical. 3. Group members are cooperative within group, but competitive and hostile towards out-group. This would seem to imply that groups are prosocials when dealing with ingroup issues, but maybe more proself (at the group level) or competitive when dealing with outgroup issues. However, this has never been directly assessed. The research presented here will attempt to directly test this hypothesis using a slightly modified version of the social value orientation measure previously discussed (Van Lange, 1999). Groups will be asked to respond to the various outcome matrices and make choices but in the context of an intergroup setting. In other words, groups and group members will be asked to choose outcome distributions for themselves as a group and for the other group. This will allow for the categorization of groups as prosocials, proselfs (pro-group) or competitors. Both individuals and groups will also be asked to respond to two ethical decision scenarios. I predict that groups will
score less prosocial than individuals and will respond less ethically to the scenarios. In addition, I will assess whether the responses to the social value orientation scale are related to the ethical decision scenario responses.
CHAPTER TWO

INDIVIDUAL- GROUP COMPARISONS ON SOCIAL VALUE ORIENTATION AND ETHICAL DECISION MAKING

Method

Participants

Two hundred and six participants were recruited from introductory psychology classes in Loyola University Chicago. All participants received course credit for their participation. Demographically, 70% of the participants were female, 60% were white, and they ranged in age from 18 to 20 years old. Overall, 71 participants were assigned to the individual condition, 135 participants were assigned to the three persons group condition, while 3 individuals were excluded because they didn’t finish all the tasks. There were 12 individuals whose responses did not fit in any of the SVO categories. There were also 12 groups and 15 group members whose responses did not fit in any of the SVO categories.

Materials and Procedures

We used a series of decomposed games to test people’s social value orientation (Van Lange, et al., 1997). Participants were asked to choose among three outcome distributions for each of nine decomposed games. The three choices involved equal outcomes for self and other (or my group and other group), maximum outcomes for self (group), or
maximum difference between self (group) and other (other group). Individuals and groups were classified as prosocial, proself, or competitive if they made six of nine choices following one of the response types. Thus, they were defined as prosocial if they chose equal outcomes six time, proself if they chose the maximum outcomes for self six times, or competitive if they chose maximum difference six times. Individuals and groups that did not consistently choose one of the option types could not be scored. This measure of social value orientation has been demonstrated to have good internal consistency and test-retest reliability (Van Lange, et al., 1997). The appendix contains the actual decomposed games used. After participants finished the games, they were tested on two ethical dilemmas. One scenario involved a person (or a group) at a cocktail party where an acquaintance from a pharmaceutical firm drunkenly brags the FDA is about to approve his company’s game-changing drug. The second scenario was about a contractor (or a group of contractors) have finished a long negotiation with a city about a new shopping mall and a hotel complex for the tax break because of the high cost materials. However, they found a cheap alternative material afterward. The full descriptions about the dilemmas can be found in the appendix.

The participants in the group condition made decisions for their group in the decomposed games and ethical dilemmas first as individuals. Then the groups discussed the games and the ethical scenarios and reached a group consensus for each one. In the individual condition, each participant responded to all the games and ethical dilemma individually.
Results

We conducted Chi-square tests with the types of decision maker (individuals, groups, & group members) as the independent variables, on the social value orientation (prosocials vs. individualists vs. competitors) and the ethical decision (ethical vs. unethical) as the dependent variables. Here, the group means the responses which trios made together for their group, and the group members means the responses which trios made by themselves for their group. First, the analysis revealed that the social value orientation significantly differ between individuals and groups ($\chi^2(2)=9.105, p<.05$). There were significantly more individuals (42.9%) that are prosocials than groups (14.7%), (Z=NAN, p<.01) in their social value orientations. There were significantly more groups (50.0%) that were competitive than individuals (25%), (Z=-3.65, p<.01). The results also showed that the social value orientation significantly differed between individuals and group members ($\chi^2(2)=11.452, p<.01$). According to post-hoc tests, individuals tended to be more prosocial (42.9%) than group members (23.3%), (Z=NAN, p<.01), and the group members (50.8%) tended to be more competitive than individuals (25%). However, there was no significant difference between groups and group members ($\chi^2(2)=1.853, p=.396$).

(See Table 1.)

Table 1. Social Value Orientation in different decision maker

<table>
<thead>
<tr>
<th></th>
<th>Prosocial</th>
<th>Individualistic</th>
<th>Competitive</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individuals</td>
<td>24 (42.9%)</td>
<td>18 (32.1%)</td>
<td>14 (25.0%)</td>
<td>56</td>
</tr>
<tr>
<td>Groups</td>
<td>5 (15.2%)</td>
<td>12 (36.4%)</td>
<td>16 (48.5%)</td>
<td>33</td>
</tr>
<tr>
<td>Group members</td>
<td>28 (23.3%)</td>
<td>31 (25.8%)</td>
<td>61 (50.8%)</td>
<td>120</td>
</tr>
<tr>
<td>Total</td>
<td>57 (27.3%)</td>
<td>61 (29.2%)</td>
<td>91 (43.5%)</td>
<td>209</td>
</tr>
</tbody>
</table>

The results also showed that individuals and groups went different ways in their
decision makings in the first ethical dilemma; significantly more groups (55.9%) made the unethical judgment than did individuals (21.4%), ($\chi^2(1)=11.122, p< .01$). This situation also happened with group members, with more group members (51.7%) making the unethical judgment compared to individuals (21.4%), ($\chi^2(1)=14.327, p< .01$). Moreover, slightly more groups (54.5%) made the unethical decision than did group members (51.7%), although this difference was not significant ($\chi^2(1)= .086, p=.769$).

Regarding the second ethical dilemma, there were no differences between individuals, groups and group members: more than 70% of participants chose ethical decisions regardless of conditions. Numerically, however, there were slightly more groups (82.4%) that acted ethically than individuals (73.2%), ($\chi^2(1)= .442, p=.233$).

However, we didn’t find significant effect between social value orientation and ethical decision making. For individuals, there was no significant difference between participants’ social value orientation and the first ethical decision making, $\chi^2(2)=1.992$, $p=.369$, as well as in the second ethical dilemma, $\chi^2(2)=1.012$, $p=.603$. For groups, there was similarly no significant effect between groups’ social value orientation and the first decision making, $\chi^2(2)=.036$, $p=.982$, as well as no significant effect in the second ethical dilemma, $\chi^2(2)=1.069$, $p=.586$. We had initially predicted that SVO would mediate the relationship between decision maker (individual vs. group) and their choices on the ethical dilemmas, but since there was no effect of SVO on the ethical dilemma responses, SVO could not have mediated the effect.

The results also revealed that the groups’ social value orientation was influenced by the social context (i.e., distribution of member preferences). For each item in the SVO
measure the social context heavily influenced the group’s social value orientation. There was very little evidence of minority influence and majority processes were modal in all nine cases (see Figure 1).

Figure 1. The conformity effect in social value orientation

Moreover, in both ethical dilemmas, we can see a similar pattern of results. When group members interacted with each other, their final decisions reached were significantly influenced by the majority in the groups. The groups also conform to the majority when they made decision in the ethical dilemmas, regardless of whether the decision was ethical or unethical. (See figure 2.)
Tables 2, 3 and 4 show the group member preference distributions and the final group decisions for the SVO and ethical dilemma decisions. The data are fairly consistent with majority decision process in that majorities typically defined the group’s final decision. However, for the SVO decisions, there is evidence that two person majorities favoring the competitive choice were somewhat more influential than two person majorities favoring the other alternatives. A two-person majority favoring the competitive choice defined the group’s final choice 63% of the time, while two-person majorities favoring the prosel choice won out only 54% of the time, \((Z=1.11, p<.05)\). Two-person majorities favoring the prosocial response defined the group choice only 52% of the time, \((Z=1.38, p<.05)\) (see Table 2). Thus, the group decision process showed a slight bias toward the competitive choice. No apparent asymmetries in the group decision processes for the ethical dilemma problems were found, although the samples sizes were quite small for many of the member distributions (see Tables 3 and 4).
### Table 2. Participants distribution in social value orientation

<table>
<thead>
<tr>
<th>SVO of group members</th>
<th>SVO of groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Prosocial</td>
</tr>
<tr>
<td>0/0/3</td>
<td>2</td>
</tr>
<tr>
<td>0/1/2</td>
<td>3</td>
</tr>
<tr>
<td>0/2/1</td>
<td>1</td>
</tr>
<tr>
<td>0/3/0</td>
<td>3</td>
</tr>
<tr>
<td>1/0/2</td>
<td>6</td>
</tr>
<tr>
<td>1/2/0</td>
<td>9</td>
</tr>
<tr>
<td>1/1/1</td>
<td>31</td>
</tr>
<tr>
<td>2/1/0</td>
<td>10</td>
</tr>
<tr>
<td>2/0/1</td>
<td>19</td>
</tr>
<tr>
<td>3/0/0</td>
<td>10</td>
</tr>
</tbody>
</table>

Note: The first column shows the participants’ SVO type distribution in group members, which was how the participants distribute in social value orientation when they made decision for their group individually. For example 0/0/3 means that there was zero member in prosocial category, zero member in individualistic category, and three members in the competitor category. The number in the table showed the actual frequency of groups’ decision making. Therefore, the first row represents the situation where a group had no prosocial or individualistic, but three competitors group members. Of the 47 groups that started out with such a member distribution, two groups chose mainly prosocial outcomes and 45 groups chose mainly the competition outcomes.
Table 3. Participants distribution in ethical dilemma 1

<table>
<thead>
<tr>
<th>Ethical Decision making of Group members Ethical/Unethical</th>
<th>Ethical Decision making of groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ethical</td>
</tr>
<tr>
<td>0/3</td>
<td>2</td>
</tr>
<tr>
<td>1/2</td>
<td>2</td>
</tr>
<tr>
<td>2/1</td>
<td>14</td>
</tr>
<tr>
<td>3/0</td>
<td>6</td>
</tr>
</tbody>
</table>

Note: The first column shows how group members distributed themselves when they made decision in the ethical dilemma. For example, 0/3 means there was no member who chose the ethical response, while there were three members who chose the unethical responses. The numbers in this table mean the frequency of the groups’ decision making. Therefore, the first row showed when all the members chose unethical response in the ethical dilemma, there were 2 groups that chose the ethical response, and 6 groups that chose the unethical response.

Table 4. Participants distribution in ethical dilemma 2

<table>
<thead>
<tr>
<th>Ethical Decision making of Group members Ethical/Unethical</th>
<th>Ethical Decision making of groups</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Ethical</td>
</tr>
<tr>
<td>0/3</td>
<td>0</td>
</tr>
<tr>
<td>1/2</td>
<td>3</td>
</tr>
<tr>
<td>2/1</td>
<td>14</td>
</tr>
<tr>
<td>3/0</td>
<td>20</td>
</tr>
</tbody>
</table>
Discussion

The present study aimed to compare individuals and groups in terms of their propensity to act in unethical ways. The study directly compared individual and group choices on two ethical dilemma tasks. In addition, the study attempted to assess whether changes in social value orientation when acting as a member of a group could explain the tendency for groups to be less ethical than individuals. The findings concerning social value orientation were consistent with our hypothesis that individual participants will act more pro-socially than group participants. Individuals making judgments for themselves tended to make prosocial choices more often than any other category. However, individuals making choices for their group tended to choose either the proself or the competitive payoff. When groups made collective choices, the modal response was competitive and the least likely choice was prosocial. These results are consistent with work comparing individuals and groups in actual prisoner’s dilemma games where groups are far less likely to cooperate compared to individuals (Wildschut et al, 2003; Morgan & Tindale, 2002). These results show that groups and group members’ orientation to the games are more competitive and less prosocial than are the orientations of most individuals. The fact that groups tended more toward the competitive orientation, as opposed to simply being more proself, indicates that groups not only care less about other groups’ outcomes, but they also want to insure that their group does much better than the other group. In the current context, groups showed both more in-group favoritism and more out-group harm.

The SVO findings are consistent with participants’ responses to the ethical dilemmas, at least the first one. Groups and group members were much more likely to
choose to use insider information when making an investment than were individuals. Such findings are consistent with past research that has shown groups more likely to lie in negotiations (Stawiski et al., 2009). However, when groups and group members were asked whether they would remain quiet about finding cheaper sources for materials after a negotiation, they were less likely than individual to do so. Nevertheless, the group, the group members, and the individuals are significantly more ethical in this scenario. Although it is not exactly clear why the two ethical dilemmas led to different results, preliminary analyses of the group discussions seem to indicate that both group members and individuals thought keeping quiet was somehow illegal (which it is not). Interestingly, insider trading is illegal, but it appears most participants did not realize this. Obviously, future research will be necessary to further examine how individuals and groups respond to different types of ethical dilemmas and how the dimensions underlying the various dilemmas potentially affect individuals and groups differently.

Two other aspects of the results are notable. First, although groups were both more competitively oriented and less ethical (at least on one dilemma) as predicted, the shift in social value orientation did not mediate the results for the ethical dilemma. It was assumed that the change in SVO when moving from the individual to the group level would produce the unethical tendencies in the groups. The lack of evidence of mediation implies that variables other than SVO must be involved to explain the individual – group differences found here. Second, unlike past research looking at individual – group differences in game playing and lying (Stawiski et al., 2009; Morgan & Tindale, 2002), the differences found here seem mainly a function of changes in the behavior of the group
members. Past research has shown that minority factions in groups that favor the more competitive or less ethical response are particularly persuasive during group discussions and this leads groups to choose the less ethical responses more often than expected. No such minority influence was seen in the current results. There was some evidence that competitive majorities on the SVO questions were somewhat more influential than other types of majorities, but overall minority influence in the ethical dilemmas was rather rare. In addition, none of the tasks produced differences between the group responses and the initial responses of their members. Thus, the major change in perspective seemed to occur when individuals shifted from playing or deciding for just themselves, to playing or deciding for their group.

The current findings support the notions that groups are naturally more competitive and, at least in some cases, less ethical than individuals. However, further research will be necessary to isolate the specific psychological and social processes that underlie the responses tendencies discovered here. Future research should also focus on why group members responded differently than individuals for the social value orientation questions. Is it simply that they were making decisions for their group, or would individual preferences change just because they are now in a group but making decisions for themselves? A greater focus on the content of the group discussions would also be worthwhile for future research endeavors. Another potential way to extend the present study would be to investigate people’s actual ethical behavior instead of examining ethical judgments. For instance, research could test whether people as a group are more likely to deceive their opponents or cheat to increase their gains, relative to the similar individ-
uals working alone. Given the importance of fair and ethical behavior in organizations, gaining a better understanding of how group membership influence such behavior should continue to be a focus of research.
APPENDIX A

AN INSTRUMENT TO MEASURE SOCIAL VALUE ORIENTATION FOR INDIVIDUALS
In this game, we want you to imagine that you play with another person, who has been randomly paired with you. We simplify another person as “Other”, who you do not know for now, as well as will not know in future. In this task, both you and the “Other” will make choices by circling either the letter A, B, or C. Your choices will gain points for both yourself and “Other”. Meanwhile, the other’s choice will produce points for he/she and for you. Every point has value, the more points you get, the better results you receive, and the same for the “Other”.

Here's an example of how this game works:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>You get</td>
<td>500</td>
<td>500</td>
<td>550</td>
</tr>
<tr>
<td>Other gets</td>
<td>100</td>
<td>500</td>
<td>300</td>
</tr>
</tbody>
</table>

In this example, if you chose A you would receive 500 points and the “Other” would receive 100 points; if you chose B, you would receive 500 points and the “Other” 500; and if you chose C, you would receive 550 points and the “Other” 300. So, you see that your choice influences both the number of points you receive and the number of points the “Other” receives.

Before you start the game, please remember that there are no right or wrong answers. You can choose the option that you prefer most, for whatever reason. Also,
remember that the points have value: The more value you accumulate in all, the better for you. Likewise, from the “Other’s” point of view, the more points he/she accumulate, the better for he/she.

For each of the nine choice situations, circle A, B, or C, depending on which column you prefer most:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>(1)</td>
<td>You get</td>
<td>480</td>
<td>540</td>
</tr>
<tr>
<td></td>
<td>Other gets</td>
<td>80</td>
<td>280</td>
</tr>
<tr>
<td>(2)</td>
<td>You get</td>
<td>560</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Other gets</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td>(3)</td>
<td>You get</td>
<td>520</td>
<td>520</td>
</tr>
<tr>
<td></td>
<td>Other gets</td>
<td>520</td>
<td>120</td>
</tr>
<tr>
<td>(4)</td>
<td>You get</td>
<td>500</td>
<td>560</td>
</tr>
<tr>
<td></td>
<td>Other gets</td>
<td>100</td>
<td>300</td>
</tr>
<tr>
<td>(5)</td>
<td>You get</td>
<td>560</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>Other gets</td>
<td>300</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>You get</td>
<td>Other gets</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---------</td>
<td>------------</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>500</td>
<td>500</td>
<td>570</td>
</tr>
<tr>
<td></td>
<td>500</td>
<td>100</td>
<td>300</td>
</tr>
<tr>
<td>7</td>
<td>510</td>
<td>560</td>
<td>510</td>
</tr>
<tr>
<td></td>
<td>510</td>
<td>300</td>
<td>110</td>
</tr>
<tr>
<td>8</td>
<td>550</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td></td>
<td>300</td>
<td>100</td>
<td>500</td>
</tr>
<tr>
<td>9</td>
<td>480</td>
<td>490</td>
<td>540</td>
</tr>
<tr>
<td></td>
<td>100</td>
<td>490</td>
<td>300</td>
</tr>
</tbody>
</table>

Note. Participants are classified when they make 6 or more consistent choices. Prosocial choices are 1c, 2b, 3a, 4c, 5b, 6a, 7a, 8c, 9b; individualistic choices are 1b, 2a, 3c, 4b, 5a, 6c, 7b, 8a, 9c; and competitive choices are 1a, 2c, 3b, 4a, 5c, 6b, 7c, 8b, 9a.
In this task, we ask you to imagine that you are a person at a cocktail party. After reading the scenario, you will make choice by circling “Yes” or “No”. Before you start, please keep in mind that there are no right or wrong answers. You can choose the option that you prefer most, for whatever reason.

You are at a cocktail party where an acquaintance from a pharmaceutical firm drunkenly brags the FDA is about to approve his company’s game-changing drug. The next day you buy shares of the company. Would you do this?

Yes, I will buy shares of the company.

No, I won’t buy shares of the company.
APPENDIX C

ETHICAL DILEMMA SCENARIO 2 FOR INDIVIDUALS
In this task, we ask you to imagine that you are a contractor of contractors. After reading the scenario, you will make choice by circling “Yes” or “No”. Before you start, please keep in mind that there are no right or wrong answers. You can choose the option that you prefer most, for whatever reason.

You are a contractor and you have finished a long negotiation with a city about a new shopping mall and hotel complex. During the negotiation, you convinced the city to provide you with major tax breaks because the materials you would need for building were very expensive and you needed the tax breaks in order to make a profit. Since you have signed the agreement, you have found a new source for building materials that is considerably cheaper than the source you quoted during the negotiations. Should you go back to the city to renegotiate the level of tax breaks or simply keep quite about the cheaper costs and keep the additional profits?

Yes, we will go back to the city to renegotiate the level of tax breaks.

No, we will keep quiet about the cheaper costs and keep the additional profits.
APPENDIX D

AN INSTRUMENT TO MEASURE SOCIAL VALUE ORIENTATION FOR GROUPS
In this game, we want you to imagine that you play with another group, who has been randomly paired with your group. We simplify another group as “Other group”, who you do not know for now, as well as will not know in future. In this task, both your group and the “Other group” will make choices by circling either the letter A, B, or C. Your choices will gain points for both your group and “Other group”. Meanwhile, the other’s choice will produce points for them and for you. Every point has value, the more points you get, the better results your group receives, and the same for the “Other group”.

Here's an example of how this game works:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td>You get</td>
<td>500</td>
<td>500</td>
<td>550</td>
</tr>
<tr>
<td>Other gets</td>
<td>100</td>
<td>500</td>
<td>300</td>
</tr>
</tbody>
</table>

In this example, if you chose A your group would receive 500 points and the “Other group” would receive 100 points; if you chose B, your group would receive 500 points and the “Other group” 500; and if you chose C, your group would receive 550 points and the “Other group” 300. So, you see that your choice influences both the number of points your group receive and the number of points the “Other group” receives.

Before you start the game, please remember that there are no right or wrong answers. You can choose the option that you prefer most, for whatever reason. Also,
remember that the points have value: The more value you accumulate in all, the better for your group. Likewise, from the “Other group’s” point of view, the more points they accumulate, the better for them.

For each of the nine choice situations, circle A, B, or C, depending on which column you prefer most:

<table>
<thead>
<tr>
<th></th>
<th>A</th>
<th>B</th>
<th>C</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>(1)</strong> Your group gets</td>
<td>480</td>
<td>540</td>
<td>480</td>
</tr>
<tr>
<td>Other group gets</td>
<td>80</td>
<td>280</td>
<td>480</td>
</tr>
<tr>
<td><strong>(2)</strong> Your group gets</td>
<td>560</td>
<td>500</td>
<td>500</td>
</tr>
<tr>
<td>Other group gets</td>
<td>300</td>
<td>500</td>
<td>100</td>
</tr>
<tr>
<td><strong>(3)</strong> Your group gets</td>
<td>520</td>
<td>520</td>
<td>580</td>
</tr>
<tr>
<td>Other group gets</td>
<td>520</td>
<td>120</td>
<td>320</td>
</tr>
<tr>
<td><strong>(4)</strong> Your group gets</td>
<td>500</td>
<td>560</td>
<td>490</td>
</tr>
<tr>
<td>Other group gets</td>
<td>100</td>
<td>300</td>
<td>490</td>
</tr>
<tr>
<td><strong>(5)</strong> Your group gets</td>
<td>560</td>
<td>500</td>
<td>490</td>
</tr>
<tr>
<td>Other group gets</td>
<td>300</td>
<td>500</td>
<td>90</td>
</tr>
</tbody>
</table>
(6) Your group gets  500  500  570  
Other group gets  500  100  300  

(7) Your group gets  510  560  510  
Other group gets  510  300  110  

(8) Your group gets  550  500  500  
Other group gets  300  100  500  

(9) Your group gets  480  490  540  
Other group gets  100  490  300  

Note. Participants are classified when they make 6 or more consistent choices. Prosocial choices are 1c, 2b, 3a, 4c, 5b, 6a, 7a, 8c, 9b; individualistic choices are 1b, 2a, 3c, 4b, 5a, 6c, 7b, 8a, 9c; and competitive choices are 1a, 2c, 3b, 4a, 5c, 6b, 7c, 8b, 9a.
APPENDIX E

ETHICAL DILEMMA SCENARIO 1 FOR GROUPS
In this task, we ask you to imagine that you are a group member at a cocktail party. After reading the scenario, you will make choice by circling “Yes” or “No”. Before you start, please keep in mind that there are no right or wrong answers. You can choose the option that your group prefers most, for whatever reason.

Your group is at a cocktail party where an acquaintance from a pharmaceutical firm drunkenly brags the FDA is about to approve his company’s game-changing drug. The next day your group buys shares of the company. Would your group do this?

Yes, I will buy shares of the company.

No, I won’t buy shares of the company.
APPENDIX F

ETHICAL DILEMMA SCENARIO 2 FOR GROUPS
In this task, we ask you to imagine that you are a group of contractors. After reading the scenario, you will make choice by circling “Yes” or “No”. Before you start, please keep in mind that there are no right or wrong answers. You can choose the option that your group prefers most, for whatever reason.

You are a group of contractors and you have finished a long negotiation with a city about a new shopping mall and hotel complex. During the negotiation, your group convinced the city to provide you with major tax break because the materials you would need for building were very expensive and you needed the tax breaks in order to make a profit. Since your group has signed the agreement, you have found a new source for building materials that is considerably cheaper than the source your quoted during the negotiations. Should your group go back to the city to renegotiate the level of tax breaks or simply keep quite about the cheaper costs and keep the additional profits?

Yes, we will go back to the city to renegotiate the level of tax breaks.

No, we will keep quiet about the cheaper costs and keep the additional profits.
REFERENCE


VITA

Zhenyan Shi was born and raised in Hangzhou, China. She attended the Zhejiang Gongshang University, where she earned a Bachelor of Arts in Financial Management in 2007. She also attended the Zhejiang Sci-Tech University, where she received a Master of Science in Engineering Psychology in 2010.

While at Loyola, Zhenyan Shi working in Dr. R. Scott Tindale’s lab for studying group and individual decision-making, ethical and unethical decision-making.