

SYMPATHY AND SOCIAL ORDER*

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Running Head: Sympathy and Social Order

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ABSTRACT

Social order is possible only if individuals forgo the narrow pursuit of self-interest for the greater good. For over a century, social scientists have argued that sympathy mitigates self-interest and recent empirical work supports this claim. Much less is known about why actors experience sympathy in the first place, particularly in fleeting interactions with strangers, where cooperation is especially uncertain. We argue that perceived interdependence increases sympathy towards strangers. Results from our first study, a vignette experiment, support this claim and suggests a situational solution to social dilemmas. Meanwhile, previous work points to two strong individual-level predictors of cooperation: generalized trust and social values. In Study Two we address the intersection of situational and individual-level explanations to ask: does situational sympathy mediate these individual-level predictors of cooperation? Results from the second study, a laboratory experiment, support our hypotheses that sympathy mediates the generalized trust–cooperation link and the relationship between social values and cooperation. The paper concludes with a discussion of limitations of the present work and directions for future research.

INTRODUCTION

Social order is possible only if individuals put aside self-interest and pursue group goals. But pursuing self-interest is tempting for many because selfish behavior often leads to material rewards. This is problematic because if many pursue self-interest, the social consequences can be dire. For example, recycling one's garbage (the unselfish choice) is often time consuming, making it a less attractive alternative than not recycling (the selfish choice). The problem is, if no one recycles, everyone has to live in a polluted environment. Another example is voting in voluntary elections. Self-interest dictates that one not vote, but if many follow their self-interest, democracy fails, and all are worse off. Thus, widespread selfish behavior can lead to collective disaster.

Fortunately, people often make unselfish, or cooperative choices (see Kollock 1998 for a review). The question is why? To address this issue, researchers study *social dilemmas* because these situations capture the essence of cooperation problems: individuals can do what is best for self, or what is best for all (Macy 1998). Collectively oriented behavior (cooperation) generates social order, whereas self-interested behavior ("defection") precipitates a breakdown in order. Social dilemmas are often created artificially in laboratory experiments because such settings allow researchers to pit individual interests against group interests while controlling for many other factors that can influence cooperative behavior.

Explanations for why people act cooperatively in social dilemmas generally take one of two forms. The first is traced to Thomas Hobbes ([1651]1968), who argued that the pursuit of unbridled self-interest leads to chaos and disorder. Thus, a powerful sovereign with the authority to punish selfishness is necessary to induce individuals to act cooperatively. More recently, proponents of this approach have argued that order is only possible through monitoring and sanctioning mechanisms (Hechter 1988), where people face stiff consequences for selfishness. The second approach is grounded in the belief that not everyone seeks self gain, and that some choose cooperation over

selfishness. Durkheim (1925), for instance, attributed collectively oriented behavior to moral restraint. More recently, sociologists like Marini (1992:37) have linked self-restraint to internalized values and norms, arguing that these motives can “direct the behavior of individuals irrespective of external influences.” According to this view, many have prosocial motivations.

Consistent with the second or “motivational” approach, many scholars argue that the emotion sympathy provides the impetus for cooperative behavior. Sympathy refers to an emotional response arising when a person takes another’s perspective and feels compassion or concern for the other (Eisenberg 2000). At least since David Hume ([1740]1972), and Adam Smith ([1759]1976), social scientists have argued that sympathy was necessary for acts of benevolence and morality. More recently, Robert Frank (1988, 1993) has suggested that sympathy, unlike self-interest, may lead people to abstain from taking advantage of another’s circumstances. Importantly, Frank argues that it is possible to spot sympathizers via such mechanisms as emotional displays and reputations. These people are thus commonly sought out as exchange partners due to their tendencies to cooperate.

Empirical work supports the link between sympathy and cooperation in social dilemmas. In two experiments, Daniel Batson and colleagues (Batson and Moran 1999; Batson and Ahmad 2001) found that when participants felt sympathy for their partner (compared to when they did not feel much sympathy), they were more likely to cooperate. They also found that, even when participants knew their partner had acted selfishly, those who felt sympathy were considerably more likely to cooperate anyway (again, compared to those who did not feel much sympathy).

As is evidenced in the work just reviewed, there is a strong link between sympathy and cooperation. But much less is known about why people ever sympathize with one another in the first place. While previous work suggests that sympathy most often occurs between individuals in close relationships (i.e. those who interact often), this view does not explain how sympathy may arise among strangers, which involve interactions where cooperation (and therefore social order) is

especially threatened (Macy and Skvoretz 1998). Specifically, if two individuals have never met before, why would they feel sympathy for one another? More broadly, if strangers are unlikely to feel sympathy for each other, how is cooperation among strangers possible?

One purpose of the current research is to offer an explanation for when strangers are likely to sympathize (and thus cooperate) with one another. We argue that sympathy among strangers is possible when their outcomes are interdependent (i.e. the choices of each affect the outcomes of each), compared to when outcomes are independent (i.e. choices do not affect others' outcomes). To test this argument, we present a new vignette experiment. Results confirm our claim that interdependence increases feelings of sympathy compared to independence.

The second purpose of this research is to explore the relationships between two well known predictors of cooperation, and sympathy. Previous work finds that trust (i.e. belief in another's benign intentions), and social value orientations (i.e. preferences for how valued resources are distributed between oneself and others) are strong predictors of cooperation. We argue that these individual characteristics have their effects on cooperation through sympathy. Study Two is a new experiment designed to determine the mediating role of sympathy between trust/social values and cooperation in interdependent situations. Before turning to our experiments, we first outline our arguments.

THE ORIGINS OF SYMPATHY

We suggest that situational features lead to feelings of sympathy between strangers. Our main argument is that sympathy is likely to be greater in situations of interdependence compared to situations where individuals' outcomes are independent. Why should this be the case? The answer is that obtaining a valued outcome in an interdependent situation generally depends on the combination of one's own and others' choices. Thus, it is important that a person estimate how others are likely to

act before making her own decision. Said differently, individuals only realize the strategy they should pursue after taking into account the various possible outcomes that result from their own and the other's choices. To do so requires that the person attempt to anticipate the other's behavior. Importantly, we argue that this anticipation requires perspective taking. As classical theorists suggest, perspective taking serves as the means through which we feel what others feel (Smith [1790]1976), evaluate others' behaviors (Hume[1740]1972), and anticipate others' actions (Mead 1934). Thus, people cannot accurately assess interdependent situations without taking the other's perspective.

Meanwhile, according to sympathy researchers, taking another's perspective is a key precursor to feeling sympathy (Batson 1991; Eisenberg 2000). Rather than simply focusing attention on another, perspective taking "involves imagining how that person is affected by his or her situation" (Batson 1991:83). And, as Batson and Shaw (1991:112) state, "it is proposed that this unique emotional response to perceived need is a result of the perceiver adopting the perspective of the person in need."

Social dilemmas are interdependent situations. And because social dilemmas, by definition, pose tensions between individual and collective interests, we assert that they are especially useful for generating feelings of sympathy between interactants. That is, at least some individuals in such situations may recognize that self-interested behavior is harmful to the greater good, and the prospect of potentially harming others may lead them to feel compassion (i.e. sympathy) for others. This suggests that, for some, feelings of sympathy may be one natural by-product of social dilemmas. Specifically, as mentioned above, perspective taking occurs because individuals attempt to anticipate how others will behave. Once individuals have taken the perspective of others, the structure of social dilemmas may then produce feelings of sympathy. Accordingly, we argue that interdependent

situations (specifically social dilemmas), in contrast to independent situations, produce higher levels of sympathy among interactants.

Our arguments lead to the following hypothesis:

Hypothesis 1: Individuals will experience higher levels of sympathy when they perceive that their outcomes are interdependent compared to when they perceive their outcomes are independent.

STUDY ONE

Participants

Participants were recruited from introductory classrooms at a large university. Upon entering the classrooms, research assistants gave oral invitations to students to participate in the study. Students were ensured that participation was completely voluntary and anonymous. Those who agreed then completed the vignette and corresponding questionnaire during the class period. In total, 61 (40 female) students participated.

Vignettes

Participants read one of two versions of a vignette. One version corresponded to the interdependent condition, and a second version corresponded to the independent condition. The instructions informed participants that we were interested in how people form first impressions based on minimal information. Both conditions contained a photograph of an individual (“Ben”), with whom the participant was to imagine interacting.

To make vignettes relevant to student participants, they were asked to imagine that they worked as a fundraiser for new university initiatives. Both conditions of the vignette started as follows:

Imagine that both you and Ben are students at the [University]. You each have part-time positions with the [University] Foundation - a fundraising organization. Together, your primary task is to raise money for new facilities and initiatives on campus (such as the athletics department and the alternative fuels initiative). To do this, you and Ben call prospective donors to the university, mainly university alumni.

In the interdependent condition, the vignette stated that the participant's pay was contingent upon how much money both he/she and Ben raised. The same was true of Ben, whose pay would be determined by the amount of money both he and the participant raised. Thus, the vignette for the interdependent condition continued:

Because raising money for the University is your primary task, the pay you and Ben receive is determined by the amount of money *both* of you raise. Thus, the more you put into your work, the more money both you and Ben earn. Similarly, the more Ben puts into his work, the more money both you and Ben earn. Assume that the harder each of you works, the more money you will both raise, and the more money you both will earn.

To create independence of outcomes (for the independent condition), the vignette stated that the participant's pay would be determined by how much support he or she raised, regardless of Ben's performance. Participants were also told that Ben's pay would be determined by his performance, regardless of the participant's actions. The independent condition thus replaced the latter half of the interdependent condition text with the following:

Because raising money for the University is your primary task, the pay you receive is determined by the amount of money *you* raise. Similarly, the pay Ben receives is determined by the amount of money he raises. Thus, Ben's performance at raising money for the University does not affect your earnings, nor does your performance affect Ben's earnings. Assume that the harder you work, the more money you will raise. The harder Ben works, the more money Ben will raise.

Sympathy Measure

After reading the vignette, participants answered a number of items about their perceptions of Ben. Following previous research, our sympathy measure consisted of emotion adjectives (Batson and Moran 1999; Batson and Ahmad 2001). Specifically, using seven-point scales (1 = Not at all; 7 = Extremely) participants were asked the extent to which they felt "compassionate," and "supportive" of Ben given the situation described in the vignette. We averaged these two items to form a single sympathy index.

RESULTS AND DISCUSSION

To test Hypothesis 1, we compared the average level of sympathy reported by individuals in the interdependent condition with the average reported levels of sympathy from the independent condition. Two statistical tests confirm our hypothesis. First, average levels of reported sympathy are significantly higher in the interdependent (4.65 on the 7-point scale) versus independent condition (3.88 on the 7-point scale). Second, analysis reveals that for two randomly selected sympathy scores from the two conditions, the probability that the point from the interdependent condition is larger than the one from the independent condition is .77. Because the sympathy values are significantly different across conditions, and higher in the interdependent versus the independent condition, Hypothesis 1 is supported.

Results from Study One support the argument that perceived interdependence generates a boost in sympathy. Given that our vignette design eliminated the possibility of prior interaction, previous research would lead us to expect no difference in sympathy between the two conditions (Batson and Shaw 1991; Frank 2004). Yet, consistent with our argument, one's interdependence with - versus independence from - Ben affected the amount of sympathy participants reported.

SITUATIONAL AND INDIVIDUAL EXPLANATIONS OF COOPERATION

The results from Study One suggest a situational solution to social dilemmas: increases in sympathy can stem from the situation itself (i.e., interdependence of outcomes). According to sympathy researchers, the result of increased sympathy is increased cooperative behavior (Batson and Ahmad 2001; Batson and Moran 1999). Thus, sympathy arising from interdependent situations can provide the motivation to cooperate.

While the results of Study One suggest a situational solution to social dilemmas, much previous research points to two individual characteristics that produce cooperation: generalized trust, and

social value orientations. In Study Two we address the relationship between these two explanations for cooperation by focusing on how these characteristics and situation-specific sympathy interact to impact cooperation in interdependent settings. Study Two thus addresses the question: does sympathy mediate the relationship between trust and cooperation or social values and cooperation in interdependent situations? Before outlining our experiment, however, we first discuss trust and social values, and how they impact sympathy.

Generalized Trust

Generalized trust is the belief that most others have benign or good intentions (Rousseau 1998). According to the trust literature, high trusters (those who believe that others can be trusted) are more likely to cooperate in social dilemmas than low trusters (those who are suspicious of others' motives). High levels of generalized trust promote cooperation because it reduces the perception of risk found in interdependent situations (Yamagishi and Yamagishi 1994). That is, if a person believes that another will not take advantage of her unselfishness, she is much more likely to make cooperative choices.

We argue that sympathy mediates the relationship between generalized trust and cooperation. Put another way, generalized trust works through sympathy to influence cooperation. This means that high trusters cooperate because they feel sympathy for others. Conversely, because they feel relatively little sympathy, low trusters are less likely to cooperate. Consistent with this argument, recent insights from the trust literature suggest that high trusters are indeed more likely than low trusters to feel sympathy for others.

Recent studies have shown that high trusters are more skilled at determining whether others are trustworthy interaction partners compared to low trusters. This occurs because high trusters attend more closely to subtle cues about others' behaviors and intentions (Yamagishi 2001). This information is then used to predict others' actions (Yamagishi et al. 1999).

Why are high trusters more skilled at determining others' trustworthiness compared to low trusters? We argue that it is due to their greater perspective taking abilities. As Yamagishi et al. (1999:155) state, high trusters are able to read others' intentions because they are "skilled at understanding their own and other people's internal states and use that understanding in social relations." This type of understanding is only possible if high trusters are able to see the situation from the other's point of view. As discussed earlier, perspective taking is a fundamental precursor to feelings of sympathy (Batson and Shaw 1991). Because they more frequently put themselves in others' positions, we predict that high trusters are more likely to experience feelings of sympathy than are low trusters. This leads to the following:

Hypothesis 2: Sympathy mediates the relationship between trust and cooperation in social dilemmas (see Figure 1).

[Insert Figure 1 About Here]

Social Values

Like trust, social value orientations have strong effects on behavior in social dilemmas. Social value orientations refer to stable preferences for how outcomes are distributed between oneself and others in social situations (Liebrand 1986; McClintock and Liebrand 1988). "Prosocials" prefer to maximize the outcomes that they and others receive; "individualists" are concerned only with their own outcomes irrespective of others' outcomes; and "competitors" seek to maximize their relative outcomes over others (i.e. they want more than others). Many studies show that prosocials are more cooperative than individualists or competitors.

We suggest that social values have their affect on cooperation through sympathy. Prosocials cooperate because they sympathize with others. Individualists and competitors are less likely to feel sympathy, and as a result, are less likely to cooperate. Studies focusing on social values and cooperation lend evidence to this argument.

Prosocials are, by definition, most concerned with maximizing joint outcomes (Simpson 2004). For instance, previous work shows that, compared to individualists, prosocials take longer to make decisions in social dilemmas because they calculate the combination of their own and other's payoffs (Liebrand and McClintock 1988). Put another way, prosocials consider other's outcomes in making their decision. We suggest that this act of considering other's outcomes, *and* desiring to maximize joint payoffs, leads prosocials to take the other's perspective. The act of taking the other's perspective, as explained earlier, increases the likelihood that the perspective taker will experience sympathy for the other. On the other hand, individualists are concerned only with their own outcomes (i.e., they do not consider other's interests), so they will be less likely to take the other's perspective, and less likely to feel sympathy for the other. Competitors consider other's outcomes when making decisions in social dilemmas, but their desire is to maximize their own relative payoff. Thus, it is unlikely that their consideration of the other will lead to perspective taking. These arguments lead to the following hypothesis:

Hypothesis 3: Sympathy mediates the relationship between social values and cooperation in social dilemmas (see Figure 1).

STUDY TWO

Participants and Design

Participants were recruited from introductory classrooms at a large university using the opportunity to earn money as an incentive. A total of 88 participants (47 females) completed the experiment. Upon entering the laboratory, each participant was escorted to a private room where he/she completed measures of social value orientations and trust. Thereafter, participants were given instructions for the prisoner's dilemma. After reading instructions for the prisoner's dilemma, but prior to making their decisions about how much to contribute, we asked participants to indicate their

level of sympathy for their partner in that particular situation. Participants then made their decision in the prisoner's dilemma, were thoroughly debriefed and then paid.

Measuring Trust and Social Values

We measured trust with items from the General Social Survey. These measures ask whether one thinks that others can be trusted, whether people try to be helpful, and if people try to take advantage of others if they have the chance. The sum of these three measures was used to generate a single trust variable. On average, participants ranked their level of generalized trust as 1.58 on 3-point measure.

Social values were measured with responses to nine decision scenarios; each scenario contained three options about how to divide resources between the participant and a hypothetical other (see McClintock and Liebrand 1988). For all of the scenarios, each decision corresponded to one of the three social values. Prosocial choices maximized joint gain for the participant and the other; individualist choices maximized outcomes to self without regard to other; and competitive choices maximized the difference between the payoffs to the participant and other.

Following previous work, we classify participants as a particular social value type if they make at least six out of nine choices consistent with that value type (Van Lange 1999). Out of the 88 participants, 74 could be classified; of those 23 (31 percent) were prosocials, 35 (47 percent) were individualists, and 16 (21 percent) were competitors. As in previous research (De Cremer and Van Vugt 1999), we combined individualists and competitors to form a "proself" group ($n = 51$).

Prisoner's Dilemma

After completing the trust and social values measures, participants were given instructions for the prisoner's dilemma. The instructions informed participants that they, and the person with whom they were paired (really a simulated other), each had a personal fund consisting of 10 points worth \$0.30 each. Participants could make one of two choices: keep their entire personal fund (i.e., to

defect) or contribute the entire amount to a group fund (i.e., to cooperate). The total amount contributed to the group fund was multiplied by 1.5 by the experimenter, and then split equally between interactants. Participants were also told that they and the person with whom they were ostensibly paired would make their decisions anonymously and simultaneously.

This situation poses a standard prisoner's dilemma, with four possible outcomes. If both cooperate (the "reward" payoff), each receives 15 points (20 points in the group fund multiplied by 1.5 by the experimenter and then split between the participants). This increases each participant's earnings from \$3.00 to \$4.50. If both defect (the "punishment" payoff), each earns \$3.00. If one cooperates and the other defects, the cooperator earns 7.5 points (\$2.25) (the "sucker's" payoff), and the defector earns 17.5 points (\$5.25) (the "temptation" payoff).

Measuring Sympathy

After reading the instructions for the prisoner's dilemma, but before making their decision about whether to cooperate or defect, participants were asked to report their feelings toward their partner. We measured sympathy using the same measure as Study One. Using seven-point scales (1 = strongly disagree; 7 = strongly agree), participants were asked to report how "compassionate," and "supportive" they felt toward their partner given the interdependent situation they faced. We averaged these two items to create a single measure.

RESULTS

To test Hypotheses 2 and 3 we used mediation analysis. In order for mediation to occur, we must first find that trust and social values produce sympathy, and that sympathy increases cooperation. Second, we must show that, when sympathy is included in the analysis, the relationship between trust (or social values) and cooperation is reduced. In other words, mediation occurs when the mediator (sympathy) pulls explanatory power away from the other independent variables (trust or

social values), revealing that sympathy is the most proximate cause of cooperation. We first focus on the relationship between trust, sympathy and cooperation.

Trust, Sympathy, and Cooperation

Consistent with the first criteria for mediation, we found that trust significantly predicts variation in sympathy. For every unit increase in generalized trust, there is an increase of about 3 percentage points on the sympathy index. We also found that sympathy predicts cooperative behavior. Results suggest that with each one-point increase in reported sympathy, the odds of cooperation increase by about 140 percent. The relationship between trust and cooperation is also significant. For every unit increase in trust, the odds of cooperation increase about 65 percent.

To test for mediation, we included sympathy in the model, and found that the strength of the relationship between trust and cooperation is reduced. This provides evidence for partial mediation. When controlling for trust, the relationship between sympathy and cooperation remains highly significant. Results show that for every unit increase in sympathy, the odds of cooperating in the prisoner's dilemma increases by 132 percent.

Given the relatively subtle results reported above, we also performed a second test for mediation called the Sobel test (see Sobel 1982). Results from this test indicate that sympathy significantly mediates the trust-cooperation relationship. Taken together, our results thus supported Hypothesis 2, and we conclude that sympathy mediates the relationship between trust and cooperation.

Social Values, Sympathy, and Cooperation

We also found support for the meditational role of sympathy between social values and cooperation. Consistent with the first criteria for successful mediation, analysis reveals a marginally significant relationship between social values and sympathy. We found that prosocials score about 7 percentage points higher than proselves on the sympathy index. Also, consistent with previous work,

we found a significant relationship between social values and cooperation, where the odds for prosocials cooperating are roughly four times that of proselves.

For the final step, we focused on the relationship between social values and cooperation controlling for sympathy. Consistent with the criteria for mediation, we found that the relationship between social values and cooperation is reduced when controlling for sympathy – the odds of prosocials cooperating are about 3.7 times greater than proselves. This suggests that sympathy partially mediates the social values-cooperation link. The relationship between sympathy and cooperation, when controlling for social values, remains highly significant.

To more formally test Hypothesis 3, we again conducted a Sobel test. The Sobel test revealed a marginally significant value, suggesting that sympathy mediates the relationship between social values and cooperation (although this effect is relatively weak). Based on our analyses, Hypothesis 3 is partially supported; we conclude that sympathy mediates the relationship between social values and cooperation.

DISCUSSION

Our results are largely supportive of Hypotheses 2 and 3, but must be interpreted cautiously. While sympathy significantly (partially) mediates the relationship between trust/social values and cooperation, the substantive effect is subtle. That is, when controlling for sympathy, the effect of trust and social values on cooperation was only slightly reduced (and both trust and social values still significantly predict cooperation). Further, analyses isolating the two emotion adjectives making up the sympathy measure reveal that “compassion” strongly mediates the relationship between trust and cooperation, but only weakly mediates social values and cooperation. On the other hand, “support” strongly mediates social values and cooperation, but is a less effective mediator of trust and cooperation. From the results reported above, we can be fairly confident that sympathy is an

important factor in interdependent situations (i.e., sympathy serves as a partial mediator). However, the precise way in which trust and social values work through sympathy to generate cooperation remains an important question for future research.

Limitations and Future Research

One limitation of the current work is that as with Study One, in Study Two the average level of reported sympathy was around the midpoint of the sympathy measure (4.41). Does this relatively small increase in sympathy generate substantively meaningful increases in cooperation? To answer this question we compared the probability of cooperation when sympathy was held at the mean value (4.41) versus when it was at neutral (4.0) (for a full description of this analytic approach see Long and Freese 2006:169-177). When the sympathy value is neutral (4.0), the probability of cooperation is .57, and when sympathy is at its mean level (4.41), the probability of cooperation is .66. Thus, this small increase in sympathy (.41) generates a 9 percentage point increase in the probability of cooperation. This increase is even larger when we consider the difference between the interdependent and independent conditions in Study One. The difference in reported sympathy between the two conditions produces about a 17 percentage point increase in the probability of cooperation for those in the interdependent condition.

What these analyses reveal is that the sympathy felt by those in interdependent situations has substantial effects on their behavior. This suggests that even small boosts in sympathy generated by perceived interdependence may provide the impetus for people to overcome their initial temptation to free ride on others (i.e., to cooperate).

A second limitation is that the sympathy measure we use for Studies One and Two is somewhat crude. The measure we use is indicative of a lack of precise measures for situation specific sympathy, as well as the difficulty measuring emotions, in general (Larsen and Prizmic-Larsen

2006). Due to these difficulties, researchers should focus on constructing a more precise and powerful measure of sympathy for use in future research.

Aside from introducing a more precise sympathy measure, future work might also address the issue of how to generate greater levels of sympathy – given its importance for cooperation. Following Batson and Shaw (1991) and Frank (1988, 2004), we propose that sympathy should increase with greater frequency of interaction. To address this, future research should vary the amount of exposure participants have with one another in interdependent settings.

A second important question for future research is whether sympathy mediates other predictors of cooperation. Research has shown that group identity (Dawes, Van De Kragt, and Orbell 1988; Brewer and Kramer 1986) and culture (Yamagishi and Yamagishi 1994; Yamagishi, Cook, and Watabe 1998) have important effects on cooperation. Specifically, people are much more likely to cooperate with those they identify as ingroup members compared to those who are outgroup members (Brewer and Kramer 1986). Also, cross-cultural research has revealed that, compared to those from collectivist cultures, those from individualist cultures are more likely to cooperate in social dilemmas with strangers (Yamagishi 1988). Future research should address whether sympathy mediates the relationship between group identity/culture and cooperation. Such knowledge would shed further light on the role of sympathy in interdependent settings.

CONCLUSION

The research presented here is embedded in an extensive tradition. Sociologists have long been concerned with understanding social order, and for over a century social scientists have pointed to the importance of sympathy in explaining the origins of order. These classic scholars emphasized the importance of sympathy for acts of benevolence and generosity. Recent research has empirically substantiated these arguments, linking sympathy to increases in cooperation and other-regarding

behavior. While by no means definitive, the research reported above advances our understanding of sympathy by providing evidence for the claim that it is at least partly rooted in social structure (Study One), and that it may have positive effects on social order because it mediates individual characteristics and cooperation (Study Two).

Taken as a whole, the research presented here is an important first step toward a more complete understanding of the role of sympathy in interdependent settings. Further work is needed to understand more fully the effects of differing social structures on sympathy, as well as to flesh out the specific reasons why sympathy mediates individual preferences and cooperation. Such work will likely yield insights into the importance of sympathy for benevolent acts and the promotion of the collective good.

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Figure 1. Theoretical Model.

