

Having Less, Giving More: The Influence of Social Class on Prosocial Behavior

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Lower social class (or socioeconomic status) is associated with fewer resources, greater exposure to threat, and a reduced sense of personal control. Given these life circumstances, one might expect lower class individuals to engage in less prosocial behavior, prioritizing self-interest over the welfare of others. The authors hypothesized, by contrast, that lower class individuals orient to the welfare of others as a means to adapt to their more hostile environments and that this orientation gives rise to greater prosocial behavior. Across 4 studies, lower class individuals proved to be more generous (Study 1), charitable (Study 2), trusting (Study 3), and helpful (Study 4) compared with their upper class counterparts. Mediator and moderator data showed that lower class individuals acted in a more prosocial fashion because of a greater commitment to egalitarian values and feelings of compassion. Implications for social class, prosocial behavior, and economic inequality are discussed.

Keywords: social class, socioeconomic status, prosocial behavior, generosity, compassion

The degree to which those who enjoy abundant resources should act altruistically toward others is a contentious issue within moral frameworks and political philosophies. On the one hand, the principle of *noblesse oblige* emerged to guarantee that those in the upper echelons of society act benevolently toward others who have less. On the other hand, the political philosopher Ayn Rand (1960)

rose to prominence with claims like, “it is the morality of altruism that men have to reject,” arguing that the freedoms and talents of those who rise in social hierarchies are constrained by altruistic inclinations. More generally, debates about wealth redistribution polarize in the political arena, as was the case during the 2008 U.S. Presidential election (e.g., Nagourney, 2008).

In the present research, we examine how social class influences prosocial behavior. Relative to their upper class counterparts, lower class individuals have fewer economic resources (Drentea, 2000; Oakes & Rossi, 2003); fewer educational opportunities (Snibbe & Markus, 2005); less access to social institutions such as elite schools, universities, and social clubs (Oakes & Rossi, 2003); and subordinate rank in society relative to others (Adler, Epel, Castellazo, & Ickovics, 2000). Moreover, people with lower class backgrounds often face increased stress in their close relationships (Gallo, Bogart, Vranceanu, & Matthews, 2005) and violence in their homes (Staggs, Long, Mason, Krishnan, & Riger, 2007). In the face of these life circumstances, lower class individuals might be expected to be more focused on their own welfare, prioritizing their own needs over the needs of others.

An emerging body of research points to an alternative hypothesis: Despite experiencing life stressors on a more chronic basis, lower class individuals appear to be more engaged with the needs of others. Relative to their upper class counterparts, lower class individuals are more dependent on others to achieve their desired life outcomes, more cognizant of others in their social environment, and more likely to display other-oriented nonverbal behav-

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iors (Kraus & Keltner, 2009; Kraus, Piff, & Keltner, 2009). These findings suggest that lower class individuals will act in a more prosocial fashion and do so because of an increased orientation to the needs of others, the central hypothesis guiding the four studies presented here.

Social Class, Contextualism, and Attending to Others

Social class is a multifaceted construct that is rooted in both objective features of material wealth and access to resources (income, education; Oakes & Rossi, 2003) as well as in conceptions of socioeconomic status (SES) rank vis-à-vis others in society (subjective SES; Adler et al., 2000). These facets of social class all reflect real, material conditions that shape the lives and identities of upper and lower class individuals. Moreover, social class identity influences an individual's life circumstances and patterns of construal in ways that are similar to other social identity constructs (e.g., ethnicity, nation of origin). For example, social class identity is a source of social stigma among lower class individuals (Croizet & Clare, 1998) and is a means by which individuals are categorized during social interactions (Blascovich, Mendes, Hunter, Lickel, & Kowai-Bell, 2001). Guided by this framework, recent psychological research has emerged to document the unique and powerful ways in which one's social class background gives rise to class-specific patterns of traits, cognition, and behavior (Kraus et al., 2009; Snibbe & Markus, 2005; Stephens, Markus, & Townsend, 2007).

Occupying lower positions on hierarchies related to resources and prestige, lower class individuals tend to experience a reduced sense of control over their own life outcomes (Johnson & Krueger, 2005, 2006; Lachman & Weaver, 1998). As a result, they orient to situational forces within the social context. For example, survey research finds that when asked to explain why "there are rich (poor) people in the U.S.," lower income participants are more likely to invoke contextual factors, such as educational opportunity, prejudice, and the economic structure of society, than individual traits and effort (Kluegel & Smith, 1986). In more recent work, lower class individuals were found to explain a wide variety of personal, social, and political events in contextual rather than dispositional terms and to factor background individuals' emotions into their attributions of a focal individual's emotions (Kraus et al., 2009). Lower class individuals orient to the social environment, and upper class individuals to internal characteristics of the individual, in explaining social events.

Lower class individuals' attention to the social context also extends to their willingness to be socially connected with others. Whereas upper class individuals are characterized by economic independence, elevated personal control, and freedoms of personal choice (Snibbe & Markus, 2005; Stephens et al., 2007), lower class individuals experience less personal control and depend on others to achieve desired outcomes (Argyle, 1994; Domhoff, 1998). As a result, lower class individuals are motivated to behave in ways that increase social engagement and connection with others. For example, whereas upper class individuals demonstrate greater impoliteness in interactions with strangers (e.g., in such behaviors as self-grooming, fidgeting with objects, or doodling on their questionnaire, all of which reflect less attention directed to the interaction partner), lower class individuals' nonverbal style involves more socially engaged eye contact, head nods, eyebrow raises, and

laughs (Kraus & Keltner, 2009). Moreover, in naturalistic observational studies, lower class children played in closer proximity to other children, relative to their upper class counterparts (Scherer, 1974), and were more likely to smile (Stipek & Ryan, 1997).

These two lines of research—on contextual explanation and interpersonal engagement—converge on the claim that, relative to their upper class counterparts, lower class individuals are more attuned to the social context and invested in their interactions with others. In the present research, we test one overarching hypothesis that derives from this conceptual analysis: Lower class individuals are more concerned with the needs of others relative to upper class individuals, and, guided by this concern, will act in a more prosocial fashion to improve others' welfare.

Social Class, Compassion, and Prosocial Behavior

Although there is no direct evidence linking lower social class to increased prosocial behavior, several lines of research lend support to this hypothesis. For example, rank-based processes influence compassion, an affective experience that prompts prosocial behavior (Batson & Moran, 1999; Eisenberg, 2002; Goetz, Keltner, & Simon-Thomas, 2010; Oveis, Horberg, & Keltner, 2010). In one study, individuals with low trait ratings of social power—a construct reflecting a person's capacity to influence the outcomes of others—reported greater investment in a relationship with a stranger and reported higher levels of compassion in response to that stranger's disclosure of suffering (van Kleef et al., 2008). Although social power and social class are conceptually distinct (Keltner, Gruenfeld, & Anderson, 2003), this finding suggests that lower class individuals may experience greater compassion in response to the needs of others and act in a more prosocial fashion.

Research on cooperation across cultures also lends credence to our hypothesis that lower class individuals will demonstrate greater prosociality than individuals from upper class backgrounds. In their study of sharing behavior across 15 cultures, Henrich et al. (2001) found that when given a certain good (e.g., money) by the experimenter, individuals on average gave 39% of that good to an anonymous stranger. Moreover, cultural variation in generosity derived from differences in interdependence: Individuals from more dependent cultures, where resources are scarce and large-scale cooperation is common, gave more than did individuals from more independent cultures. For example, the Machiguenga of Peru—characterized by economic independence and rare collaboration with one another—allocated far less (26% of the goods) than did the highly cooperative Lamerala of Indonesia (58%), who are more dependent on others for survival. A culture of dependence increases people's generosity (see also Oyserman & Lee, 2008; Roberts, 2005; Utz, 2004; Wong & Hong, 2005). To the extent that lower class individuals have fewer resources and are more economically dependent on others, they should prove to be more prosocial than their upper class counterparts.

National survey research on giving provides the most direct support for our hypothesis. High-income people spend a larger portion of their income on costly consumer goods (e.g., automobiles) and disproportionately less on assisting others in need (Frank, 1999). In nationwide surveys of charitable contributions in America, lower income individuals give proportionally more of their incomes to charity than do their higher income counterparts

(Greve, 2009; James & Sharpe, 2007; Johnston, 2005). For instance, a study conducted by Independent Sector (2002) found that households earning under \$25,000 contributed 4.2% of their income to charity, whereas households making \$100,000 or more contributed only 2.7%. Several explanations of this trend have been offered, such as class-based differences in religious affiliation, which we in part address in the present investigation (e.g., Andreoni, 2001). It is important to note that this correlational evidence suggests that lower class individuals are more charitable and generous than their upper class counterparts.

Our conceptual analysis of social class, contextual orientation, and attention to others, and the findings we have just reviewed, set the stage for the hypothesis we test in the current investigation. Following others, we reason that increased dependence on others orients individuals to others' needs, which in turn gives rise to increased prosociality (for similar lines of reasoning, see Batson & Moran, 1999; Batson & Shaw, 1991; Clark, Mills, & Powell, 1986; Goetz et al., 2010; van Kleef et al., 2008). Lower class individuals, we predict, given their dependence on others, should demonstrate greater prosociality because of an increased concern for others' welfare. That is, whereas upper class individuals can use their material wealth and access to buffer themselves against life's disruptions, lower class individuals are more reliant on the strength of their social bonds and, as a consequence, are more prosocial.

Social Class, the Costs of Prosociality, and Control: An Alternative Hypothesis

The hypothesis that those with less will tend to give more is inherently paradoxical. Conceptual analyses of how cost–benefit analyses and the sense of control figure in prosocial behaviors reveal why and point to a competing hypothesis to our own. More specifically, prosocial behavior is costly, directing resources away from the self toward others. As the costs of prosocial behavior rise, the likelihood and magnitude of prosocial behavior diminishes (Dovidio, Piliavin, Schroeder, & Penner, 2006; Sober & Wilson, 1998). This analysis suggests that the costs of any altruistic act should be greater for lower class individuals and constrain the likelihood of prosocial action.

Moreover, the sense of control also predicts increased compassion and prosocial behavior (Batson & Shaw, 1991; Goetz et al., 2010; Hoffman, 1981). An elevated sense of control allows individuals to regulate the distress associated with perceiving need in others and engage in effective prosocial behavior. Lower class individuals have been found to experience a reduced sense of control (Gallo, Smith, & Cox, 2006; Kraus et al., 2009) and self-efficacy (Barbareschi, Sanderman, Kempen, & Ranchor, 2008). By implication, one might expect this reduced sense of control and efficacy to attenuate prosocial behavior among lower class individuals. Given these findings, it is not surprising that under certain circumstances—such as when recalling negative life events or when experiencing direct social threats—lower class individuals have shown elevated dysphoric affect (e.g., Link, Lennon, & Dohrenwend, 1993) and elevated physiological fight or flight reactions (e.g., Adler & Ostrove, 1999; E. Chen & Matthews, 2001; Gallo & Matthews, 2003).

These lines of reasoning and evidence suggest that lower class individuals may in fact act in a *less* prosocial fashion than their upper class counterparts. Endowed with fewer resources, and

prone to experience a reduced sense of control and increased negative affect, lower class individuals might be expected to prioritize their own self-interest over the interests of others and demonstrate less prosocial behavior relative to their upper class counterparts. Although this alternative hypothesis is reasonable, the research concerning social class and sensitivity to others, and work on the influence of interdependence on prosociality, strongly favor our prediction: Despite their reduced resources and more threatening environments, lower class individuals are more sensitive to others' needs and are more prosocial than upper class individuals.

The Present Research

To test the competing hypotheses outlined here, in four studies, we examined whether lower class individuals act in a more prosocial fashion than their upper class counterparts. Across studies, we predicted that lower class individuals would demonstrate greater prosocial behavior and that this prosocial tendency would be explained by lower class individuals' heightened concern for the welfare of others, as indexed by egalitarian values and feelings of compassion. We tested our hypothesis with measures of social class reflecting the two core aspects of the construct: objective indicators of material resources (e.g., income; Oakes & Rossi, 2003) and subjective perceptions of one's social class rank in society (e.g., Adler et al., 2000). In both correlational and experimental designs, using university, community, and nationwide samples that represented a range of social class backgrounds, and while controlling for plausible alternative explanations (e.g., religiosity, ethnicity), we explored the effects of social class on generosity (Study 1), charitable donations (Study 2), trust (Study 3), and helping behavior (Study 4).

Study 1: Social Class Predicts Generosity in an Economic Game

In Study 1, we tested the hypothesis that lower class individuals would act in a more prosocial fashion in a laboratory setting, relative to their upper class counterparts. Participants played the "dictator game," a single-trial economic game that yields a behavioral measure of generosity (Forsythe, Horowitz, Savin, & Sefton, 1994; Fowler & Kam, 2007). Social class was measured in terms of participants' subjective perceptions of their socioeconomic rank relative to others in their community (e.g., Adler et al., 2000; Kraus et al., 2009). In testing our hypothesis, we controlled for cultural and demographic variables—including religiosity and ethnicity—that are often associated with social class and could, in turn, explain our results (Ostrove, Adler, Kuppermann, & Washington, 2000). For instance, religious affiliations among lower class individuals may give rise to a greater commitment to charitable causes and generosity (see James & Sharpe, 2007). By accounting for participants' age, ethnicity, and religiosity, we ascertained the unique contribution of social class to prosocial behavior.

Method

Participants. We recruited 124 participants from the Research Participation Program for undergraduate students and the

Research Subject Volunteer Program at the University of California, Berkeley. Participants received either partial course credit in exchange for participation or were compensated \$10/hour. Nine participants were excluded because of substantial missing data, leaving a total of 115 participants in the final analysis (73 female, 38 male, 4 declined to state). Participants ranged in age from 18–59 years ($M = 22.57$, $SD = 7.95$), and their mean degree of religiosity (1 = *not at all religious*, 7 = *extremely religious*) was 3.03 ($SD = 2.00$). Of the participants who reported their ethnicity, 53 were Asian American, 28 were European American, and the remaining 15 participants were African American, Latino/a, or other ethnicity (19 unreported).

Procedure. Prior to taking part in the experiment, participants received an e-mail with a link to an online questionnaire containing a number of demographic measures, including subjective SES, age, gender, ethnicity, and religiosity, which they completed on average 1 week prior to visiting the lab. This reduces the likelihood that completing these measures of interest biased participants in their behavior in the dictator task. Upon arrival to the lab, participants were seated in front of a computer in a private section of the laboratory room, where they completed some unrelated tasks before taking part in the dictator game.

Dictator game. In this game, participants were informed that they had been paired with an anonymous partner seated in a different room (Forsythe et al., 1994; Fowler & Kam, 2007). Participants were given 10 points and told that their task was to decide how many of these points they wanted to keep for themselves and how many (if any) they wanted to transfer to their partner. Participants were further told that their partner would have no strategic input into the game's outcome, that their responses in the game would remain anonymous, and that their cash payout at the end of the study would depend on how many points they had remaining. In the dictator game, higher allocations reflect higher levels of altruism in that they represent participants' willingness to sacrifice their own material interests in favor of the well-being of their partner. Participants in this study gave, on average, 41% of their total allocation ($M = 4.14$, $SD = 1.91$), which is comparable to rates of generosity observed in other such studies (e.g., Fowler & Kam, 2007). After completing the task, participants were debriefed, thanked, and paid \$10 (regardless of their final point tallies) before being excused from the study.

Subjective SES. Participants completed an online version of the MacArthur Scale of subjective SES (e.g., Adler et al., 2000; Kraus et al., 2009). In this measure, participants were presented with a drawing of a ladder with 10 rungs representing people with different levels of education, income, and occupation status. Participants were instructed to place a large *X* on the rung where they feel they stand relative to others in their community. Thus, this ladder assessed personal placement within the hierarchy of a participant's own community. Each rung of the ladder was given a number between 1 and 10, with higher numbers reflecting higher placement on the ladder ($M = 5.82$, $SD = 1.47$). Previous research shows that measures of subjective SES predict patterns in health (e.g., Adler et al., 2000) and explanations of social events (Kraus et al., 2009) consistent with measures of social class that index the construct by assessing wealth and educational attainment.

Results

Women ($M = 4.33$) and men ($M = 3.79$) gave similar levels to their partner in the dictator game, $t(109) = 1.41$, $p > .15$. Therefore, we collapsed across gender (gender was also unrelated to all dependent variables of interest in the subsequent three studies, and in those studies, we took a similar approach, collapsing results across gender).

We first tested the hypothesis that lower class participants would exhibit more prosocial resource allocation relative to upper class participants. We did so by regressing our dependent measure of generosity—points allocated to the partner in the dictator game—onto participants' ratings of their SES on the ladder. As predicted, lower class participants allocated a larger portion of their points to their partner than did upper class participants ($\beta = -.23$, $t = -2.52$, $p = .01$).

Further analyses revealed that none of the other demographic variables—age, religiosity, and ethnicity (non-European Americans were given a score of 0 and European Americans were given a score of 1)—was significantly associated with either SES or responses in the dictator game ($ps > .20$). When we regressed participants' generosity in the dictator game onto their subjective SES rankings, controlling for age, religiosity, and ethnicity, the relationship between subjective SES and behavior in the dictator game remained significant ($\beta = -.22$, $t = -2.10$, $p < .05$). Lower class individuals gave more in the dictator game, even when accounting for religiosity, a construct theorized to account for lower class individuals' greater tendency for generosity (Andreoni, 2001; James & Sharpe, 2007; Penner, Dovidio, Piliavin, & Schroeder, 2005).

Discussion

Study 1 provides preliminary evidence that lower class people (measured by subjective perceptions of socioeconomic rank; e.g., Adler et al., 2000) behave in a more prosocial fashion than their upper class counterparts. In a behavioral measure of altruism (the dictator game) administered days after participants reported on their social class, lower class participants were more generous to strangers than were upper class participants. These laboratory results bolster findings from national survey research showing that lower income individuals donate proportionally more of their earnings to charity than do upper income individuals (e.g., Independent Sector, 2002). Furthermore, the relationship between social class and generosity in the dictator game could not be attributed to age or ethnicity. Nor could the elevated generosity of lower class individuals be attributed to their religiosity, which has been found to encourage altruistic values and behavior (see James & Sharpe, 2007). In the following studies, we explored the causal relationship between social class and prosocial behavior and tested the potential mechanisms accounting for this effect.

Study 2: Manipulation of Relative Social Class Predicts Support for Charitable Donations

In Study 1, lower class individuals engaged in more prosocial behavior than did upper class individuals in a classic economic task that assesses generosity. In Study 2, we extended these findings by manipulating participants' perceptions of their relative socioeconomic rank. The complexity of studying social class is

that as a broad cultural variable, it is intertwined with other processes—historical factors, collective identity, neighborhood effects—that are difficult to control for in purely correlational approaches (e.g., Snibbe & Markus, 2005). Evidence from studies that manipulate aspects of social class, therefore, is essential to help establish causal relations between social class—as defined in terms of rank and resources—and prosociality and to eliminate potential demographic factors (e.g., neighborhood of origin, immigration history) and selection effects that might account for the observed relationship between social class and prosocial behavior. Guided by these concerns and our conceptual analysis, in Study 2, we expected that inducing participants to momentarily experience a higher or lower sense of relative social class rank would activate corresponding cognitions and motivations that arise from having a *relatively* low or high socioeconomic position in society. Socioeconomic position is a component of social class (Adler et al., 2000; Kraus et al., 2009), and our manipulation of perceptions of relative socioeconomic standing is conceptually similar to manipulations of cultural identity constructs (e.g., individualism–collectivism) used in previous research (e.g., Oyserman & Lee, 2008). We predicted that individuals induced to experience lower relative socioeconomic standing would exhibit increased prosocial behavior. We also simultaneously sought to account for effects of objective social class and included an assessment of annual income that we expected would independently predict greater prosocial behavior, thus replicating the results of Study 1 using a resource-based measure of social class.

Participants. A total of 88 undergraduate participants (66 female, 22 male) were recruited through psychology courses on a major public university campus to partake in a survey consisting of several unrelated questionnaires. Of these participants, four were excluded because they failed to follow instructions, and an additional three were excluded for correctly identifying the hypothesis of the study. This left a final sample of 81 participants. Of these participants (three did not report their ethnicity), 43 were Asian American; 13 were European American; and the remaining 22 were African American, Latino/a, and other ethnicities. As evidence of the diversity of participant income in the current sample, 45.1% of participants reported annual incomes that fell below the median income in 2000 (\$53,200; Denavas-Walt, Proctor, & Lee, 2006).

Procedure. After accessing the survey via a computer terminal, participants engaged in our manipulation of relative social class. The manipulation was followed by several filler measures and our primary dependent variable: a question assessing participants' judgments about how much of people's annual salary should go to charity. Participants then responded to a series of demographic questions, including our measure of family income. After completing these measures, participants responded to suspicion probes about the hypothesis of the study and were thanked, debriefed, and excused.

Manipulation of relative social class. Participants took part in a manipulation of their relative social class, adapted from measures of subjective perceptions of socioeconomic rank (Adler et al., 2000; Kraus et al., 2009) and manipulations of relative deprivation (e.g., Callan, Ellard, Shead, & Hodgins, 2008). In this manipulation, participants were presented with an image of a ladder with 10 rungs. Participants were instructed to "Think of the ladder above as representing where people stand in the United

States." Participants were then randomly assigned to experience either low or high relative social class based on the following instructions:

Now, please compare yourself to the people at the very bottom (top) of the ladder. These are people who are the worst (best) off—those who have the least (most) money, least (most) education, and the least (most) respected jobs. In particular, we'd like you to think about how you are different from these people in terms of your own income, educational history, and job status. Where would you place yourself on this ladder relative to these people at the very bottom (top)?

Participants then placed themselves on the ladder relative to people at the very top or bottom (10 = *top rung*, 1 = *bottom rung*).

After participants placed themselves on the ladder, they were instructed to imagine themselves in a "getting acquainted interaction with one of the people you just thought about from the ladder above." In particular, participants were instructed to "think about how the differences between you might impact what you would talk about, how the interaction is likely to go, and what you and the other person might say to each other." Participants were asked to write no more than five sentences. A writing task like this is frequently used in research to activate rank-related states (e.g., Anderson & Galinsky, 2006; Kraus et al., 2009) and was included here to strengthen the effects of the social class manipulation.

Charitable donations. To assess attitudes toward charitable donations, we asked participants to complete a survey assessing their views on "how you think people should spend their annual salary?" Following similar approaches taken in national survey research (e.g., Frank, 1999), participants were instructed to indicate the percentage of their income people should spend annually on a number of expenses, including food, luxury items, recreation, clothing, gifts, bills, education, travel, and charitable donations. Participants' allocations of annual salary to each of these categories were required to equal 100% of total annual salary expenditures. Participant ratings of the mean percent of annual income that people should spend on charitable donations was our main dependent measure ($M = 3.78$, $SD = 3.37$). It is interesting that this mean is comparable to observed rates of giving in national surveys of adults (e.g., $M = 3.10$, Independent Sector, 2002).

Objective social class. We measured objective social class using participants' estimates of their annual family income. Participants rated their family income on the basis of eight categories: (1) <\$15,000, (2) \$15,001–\$25,000, (3) \$25,001–\$35,000, (4) \$35,001–\$50,000, (5) \$50,001–\$75,000, (6) \$75,001–\$100,000, (7) \$100,001–\$150,000, or (8) >\$150,000. Participants reported a median annual family income between \$35,001 and \$50,000.

Results

Manipulation of relative social class. To validate our manipulation of relative social class rank, we compared the ladder rankings of participants in the lower class rank and upper class rank conditions using an independent-samples *t* test. As expected, upper class rank participants ($M = 6.56$), who compared themselves with people at the bottom of the ladder, placed themselves significantly above lower class rank participants ($M = 5.71$), who compared themselves with people at the top of the ladder, $t(77) = 2.37$, $p < .05$, $d = 0.54$. These results confirmed that our manipulation of subjective perceptions of social class shifted participants' sense of their relative class rank.

Relative social class and charitable donations. Next, we tested the hypothesis that participants experimentally induced to experience lower class rank would endorse greater charitable donations, relative to upper class rank participants. An independent-samples *t* test confirmed this hypothesis: Those participants induced to experience a lower sense of social class rank reported that a greater percentage of people's annual salary should be spent on charitable donations ($M = 4.65$) compared with those participants induced to experience upper class rank ($M = 2.95$), $t(76) = -2.29$, $p < .05$, $d = 0.53$.

Family income and charitable donations. As an additional test of our hypothesis, we computed a partial correlation between participants' family income (a well-used objective indicator of social class; Oakes & Rossi, 2003) and our dependent measure of charitable donations. In this analysis, we controlled for ethnicity (coded as 0 for non-European American and 1 for European American), which was unrelated to charitable donations, $r(79) = .06$, *ns*. We predicted a significant negative correlation, indicating that lower class participants would be more likely to endorse spending a greater proportion of annual salary on charitable donations, relative to upper class participants. This prediction was supported: Lower family income was significantly associated with beliefs that people in general should donate a larger portion of their salary to charity, $r(72) = -.23$, $p < .05$.

The independent effects of measured and manipulated social class on charitable donations. Finally, we determined if measured social class (income) and manipulated relative social class would have independent effects on endorsements of charitable donations. We used a linear regression framework for this analysis, regressing charitable donations ratings on ethnicity, income, relative social class, and the interaction between relative social class and income. This analysis is displayed in Figure 1. As the figure clearly shows, two independent main effects emerged for participant income, $\beta = -.24$, $t(68) = -2.13$, $p < .05$, and relative social class, $\beta = -.27$, $t(69) = -2.38$, $p < .05$. Both lower objective and lower relative social class were associated with increased estimates of the portion of their salary people should allocate toward charitable donations. The interaction between income and relative social class was not significant, and ethnicity was not related to charitable donations ($t_s < 1.00$, *ns*).

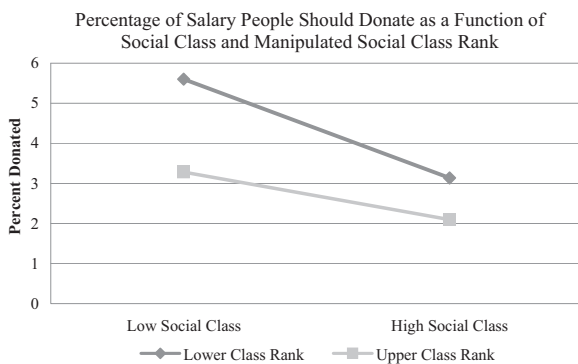


Figure 1. The independent relationships between social class and manipulated social class rank in predicting the percentage of people's annual salary participants believed should be spent on charitable donations, controlling for ethnicity (Study 2).

Discussion

Study 2 yielded a conceptual replication of Study 1, which found that lower class individuals give more generously than their upper class counterparts and extended those findings in important ways. Study 2 found that the heightened generosity among lower class individuals is reflected in their greater support for charity. The experimental evidence in Study 2 demonstrated a causal association between lower class rank and increased prosociality. Specifically, inducing participants to momentarily perceive themselves as *relatively* lower than others in socioeconomic standing caused them to endorse more generous donations to charity. By documenting the independent effects of measured social class (income) and relative social class on charitable giving, Study 2 argues for two potential sources of influence on prosocial behavior among lower class people: the relative lack of economic resources (e.g., lower income) as well as subjective perceptions of one's subordinate rank vis-à-vis others.

Study 3: Egalitarian Values Mediate the Relationship Between Social Class and Prosocial Trust Behavior

In Study 3, we sought to document a mediating process that would account for why lower class individuals engage in more prosocial behavior. Guided by our analysis of social class and attention to the social context, we expected that lower class individuals would be more likely to endorse social values—egalitarianism—that prioritize the well-being of others alongside self-interest and that these values would mediate the relationship between social class and prosocial behavior. This prediction follows from earlier work documenting that lower class individuals show more empathic and other-oriented behavior in interactions with strangers (Kraus & Keltner, 2009).

In Study 3, a nationwide sample of adults completed an individual difference measure of social values related to egalitarianism (Van Lange, 1999). They then completed a measure of prosocial trust behavior. We examined trust because it underlies an individual's willingness to accept vulnerability in order to cooperate with others and, as such, is essential to many types of prosocial behavior (Penner et al., 2005; Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007). We assessed trust using the "trust game," a frequently used measure of prosocial behavior that indexes a person's propensity to trust and be generous to others at a potential cost to the self (e.g., Kosfeld, Heinrichs, Zak, Fischbacher, & Fehr, 2005; Singer et al., 2008). Thus, Study 3 extends our previous research by examining a potential mediator for the association between lower class status and greater prosocial behavior, by investigating a new form of prosocial behavior involving trust, and by replicating our previous laboratory results with a national sample of adults.

Method

Participants. A total of 177 participants were recruited through a national online e-mail list maintained by a private West Coast university and participated in exchange for a chance to win monetary rewards to an online retailer. Of these participants, 22 were excluded because they failed to fill out substantial portions of the survey, did not follow instructions, or logged onto the survey

questionnaire but never answered questions on the survey. After omitting these participants, our final sample included 107 women and 48 men with an average age of 37 years. One hundred three participants were European American, whereas the remaining 52 participants were African American, Asian American, Latino/a, or other ethnicities. As for the socioeconomic distribution of the sample, 52.6% of participants reported annual incomes less than \$35,000, and 36% reported high school as their highest level of educational attainment.

Procedure. Participants were provided with a link to the online study. After giving consent, participants were instructed that they would be playing an economic game with another unknown person also completing the survey at the same time. Participants were told that they would be competing with everyone who took part in the survey with the goal of earning the most points and winning the game. Participants were first asked to complete a number of demographic measures assessing different trait aspects of themselves. Among these measures were assessments of social class, age, ethnicity, gender, and our proposed mediator: social values orientation.

Trust game. After filling out these measures, participants took part in the trust game. Participants read a cover story in which they were told that they had 30 points to play a game with a randomly selected partner who was also completing the survey. Participants were instructed that they could choose to give a portion of their points to their partner. However many points they allocated to their partner would then be tripled, and their partner would have the opportunity to give back as many points as they would like to the participant (e.g., Berg, Dickhaut, & McCabe, 1995). In actuality, participants were not paired with a partner and thus only completed the allocation portion of the trust game. In this game, being trusting means that one must be willing to allocate points to their partner despite the risk of their partner defecting, thus benefiting others at a potential cost to the self. The amount participants decided to give to their partner was our measure of prosocial trust behavior; in the present study, participants on average gave 43% of their 30 points ($M = 12.91$, $SD = 4.48$). After completing this task, participants were debriefed regarding the hypotheses of the study, informed that they had not actually been paired with a partner, thanked, and excused from the survey.

Measures.

Social class. To assess social class, we asked participants to rate their highest level of education completed and their annual household income. Education was assessed using four categories: (1) did not finish high school, (2) high school graduate or some college, (3) college graduate, or (4) postgraduate degree. Annual income was assessed using eight categories: (1) <\$15,000, (2) \$15,001–\$25,000, (3) \$25,001–\$35,000, (4) \$35,001–\$50,000, (5) \$50,001–\$75,000, (6) \$75,001–\$100,000, (7) \$100,001–\$150,000, or (8) >\$150,000. Participants had a median annual household income of between \$25,001 and \$35,000 and median educational attainment of college graduation. To compute an overall measure of social class, we standardized and averaged participant educational attainment and annual income.

Social values orientation. For our proposed mediator, participants filled out the social values orientation scale, a well-validated individual difference measure that assesses the significance people place on their own and others' welfare (Balliet, Parks, & Joireman, 2009; Van Lange, 1999). In this measure, participants are told they

are playing a game with a person known as the "other." Participants are then presented with nine scenarios where they decide to allocate points to themselves or the other, with more points being beneficial for them. For each scenario, participants choose among three options: a competitive option, in which participants give the fewest points to the other while keeping a moderate amount of points for themselves; an individualistic option, in which participants give a moderate amount of points to their partner while giving the highest amount of points to themselves; and a cooperative or egalitarian option, in which participants give an equally moderate amount to themselves and their partner. For instance, in one scenario, individuals chose between Option A (480 points for self and 80 points for other), Option B (540 points for self and 280 points for other), and Option C (480 points for self and 480 points for other). Option A is a competitive choice because it provides a greater advantage over the other's outcomes than the other options. Option B is an individualistic choice because one's own outcomes are larger than those in Options A and C. Option C is a cooperative or egalitarian choice because it is guided by a concern for equality and provides a larger joint outcome than the other options. The total number of trials that participants chose the egalitarian or cooperative option was indexed as our measure of social values orientation, with higher scores indicating greater egalitarian social values ($M = 5.46$, $SD = 3.98$).

Results

We predicted that, relative to upper class individuals, lower class individuals would engage in more prosocial trust behavior and that this tendency would be mediated by lower class individuals' concern for others' welfare, assessed in terms of their cooperative and egalitarian social values orientation. As a first step in testing this formulation, we sought to determine if social class was indeed associated with greater prosocial behavior in the trust game. We computed partial correlations between social class, trust game allocations of points, and social values orientation, while accounting for the age and ethnicity (coded as 0 for non-European American and 1 for European American) of participants. These partial correlations are displayed in Table 1. As the table clearly shows, lower class participants allocated more of their points to their partner in the trust game relative to upper class participants. Lower class individuals also showed a greater tendency toward egalitarian social values relative to their upper class counterparts. Finally, people who reported more egalitarian social values tended to

Table 1
Zero-Order Correlations (Above the Diagonal) and Partial Correlations (Below the Diagonal) Between Social Class, Social Values Orientation, and Prosocial Behavior, Controlling for Participant Age and Ethnicity, in Study 3

| Variable | Social class | Social values | Prosocial behavior |
|--------------------|--------------|---------------|--------------------|
| Social class | — | -.23* | -.18* |
| Social values | -.24* | — | .43* |
| Prosocial behavior | -.18* | .41* | — |

Note. Higher scores on the social values variable indicate more egalitarian social values.

* $p < .05$.

engage in more prosocial behavior in the trust game. These associations were independent of the ethnicity and age of participants.

For our next step, we tested our theoretical formulation that lower class individuals engage in more prosocial behavior because of their heightened concern with equality and the welfare of others. To test this hypothesis, we conducted a mediational analysis (Baron & Kenny, 1986) using a linear regression framework. In the first model of this analysis, we predicted prosocial trust behavior with participants' social class, and in the second model, we added social values orientation as a predictor. The results of this analysis are displayed in Figure 2. As can be seen in the figure, in Model 1, social class was significantly associated with prosocial behavior, such that lower class individuals allocated more points to their partner in the trust game, $t(149) = -2.19, p < .05$. However, when adding to the model the significant association between social class and social values orientation, $t(153) = -2.86, p < .05$, and the association between social values orientation and prosocial behavior, $t(148) = 5.41, p < .05$, the originally significant relationship between social class and prosocial behavior became non-significant, $t(148) = -1.05, p = .30$. Moreover, the indirect effect of social class on prosocial behavior through social values orientation was significant (Sobel $z = 2.50, p < .05$). Overall, the results argue that lower class people tend to be more giving and trusting relative to upper class people, and this association is due to lower class people's egalitarian orientation and concern for the welfare of others.

Discussion

Study 3 confirmed our hypothesis about the relationship between social class and prosocial behavior. Lower class participants in the current study allocated more points to their partner in the trust game relative to upper class participants, and this tendency was explained by their social values oriented toward egalitarianism and the well-being of others. The current findings also held independent of participant age and ethnicity, once again indicating that social class exerts a unique influence on prosocial behavior.

It is important to note that our finding that lower class individuals are more trusting contrasts with survey research finding that individuals who are economically disadvantaged in terms of income and education—that is, people from lower class backgrounds—report reduced trust in others (e.g., Alesina & Ferrara, 2002). Although seemingly inconsistent with our results, this prior

work relies on attitudinal survey questions that ask individuals, for instance, if “most people can be trusted,” and there is reason to question whether responses to such surveys accurately predict behavior (see Glaeser, Laibson, Scheinkman, & Soutter, 2000; Simpson, McGrimmon, & Irwin, 2007). Our results suggest that although lower class individuals may *report* less trust in others in general, in interpersonal situations involving actual behavior directed at specific individuals, lower class individuals are more concerned with others' welfare and will exhibit more trust and prosociality than their upper class counterparts.

Study 4: Compassion Moderates the Relationship Between Social Class and Prosocial Helping Behavior

The previous three studies establish that lower class people are more generous and prosocial in their resource allocations than are their upper class counterparts, and this pattern is explained by lower class individuals' greater egalitarianism and concern for the welfare of others. In our final study, we sought to further examine the mechanisms of class-based differences in prosocial behavior. We investigated whether compassion—an emotion guided by sensitivity to others' welfare and that prompts prosocial action (Batson & Shaw, 1991; Goetz et al., 2010; Oveis et al., 2010)—explains differential levels of prosocial helping behavior among upper and lower class people. We tested this hypothesis in an experimental study in which we manipulated participants' experience of compassion and subsequently gave them an opportunity to help another person in distress. Research argues that certain cultural factors, such as group membership, can influence prosociality (see Penner et al., 2005); however, the specific role of social class in shaping compassion and prosocial tendencies has not been examined. We predicted that lower class participants would help others more than their upper class participants and that this relationship would be moderated by induced feelings of compassion. Specifically, we expected that lower class participants, who already display tendencies toward prosociality, would exhibit high helping in both the compassion and neutral conditions. We expected that upper class participants, who by default lack tendencies toward prosociality, would exhibit high helping in the compassion condition but not in the neutral condition.

Method

Participants. A total of 102 participants were recruited from a paid research-participation system that includes students and adults from the general public in a large Canadian city. Of these, three participants correctly identified that the other participant was a confederate, one did not believe the cover story, two did not speak English as a native language and as a result did not understand the meaning of some of the instructions, two did not take the study seriously, and three had previously seen the film used in the control condition. Omitting these 11 people left a final sample of 91 participants. Participants were 58 women and 33 men between the ages of 18 and 40 years ($M = 21.64, SD = 3.05$). One participant was Black, eight were Caucasian, 42 were Chinese, four were Filipino, nine were Indian, 10 were Korean, five were Southeast Asian, and 13 reported belonging in the “other” category (eight unreported). The sum of these categories exceeds 91 because some participants endorsed more than one ethnic category.

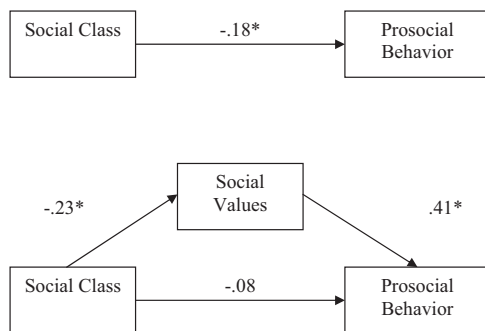


Figure 2. The relationship between social class and prosocial trust behavior, mediated by social values orientation (Study 3). * $p < .05$.

Of the participants reporting income in our sample, 30.8% reported incomes “while growing up” of below \$50,000.

Procedure. The procedures were based on those used by S. Chen, Lee-Chai, and Bargh (2001). All participants were randomly assigned to a compassion-induction or neutral-prime condition. Upon arrival to the laboratory, the experimenter told participants that he was waiting for the other participant (a confederate blind to condition) who would be their partner during the session. The experimenter told participants that they would complete a joint task with the partner followed by a series of individual tasks for several researchers in the department.

While the experimenter waited for the second participant to arrive, participants were instructed to perform an individual task. The first of these was ostensibly a memory task in which participants were asked to watch a short video clip closely and to remember its content for a memory test later on. The clip consisted of either the compassion manipulation or control. Participants in the compassion condition watched a 46-s clip about child poverty. This approach corresponds to an approach developed by Oveis et al. (2010), in which viewing images depicting helplessness and vulnerability elicited compassion. We used a video rather than images, because it was judged to be more vivid in our pilot testing. Participants in the control condition watched a clip of the same duration (46 s) from the movie *All the President's Men* (Pakula, 1976) of two men quietly talking in a courtroom. This clip has been used in past research to elicit a neutral emotional state (Hewig et al., 1995). In a pilot test of 20 individuals prior to the study, we verified that ratings of compassion were significantly higher after seeing the compassion video ($M = 5.28$, $SD = 1.05$) than the neutral video ($M = 4.06$, $SD = 1.13$), $t(18) = 2.51$, $p < .05$, $d = 1.18$.

After viewing the clip, participants completed a questionnaire that included the manipulation check for compassion. At this time, the partner—a female confederate of the experiment—rushed into the lab, apologized for being late, and asked whether she could still participate. The confederate displayed nonverbal signs of distress, including a widening of the eyes, brow movements up and in, and an obscuring of vision by covering the eyes partially with the hand (Eisenberg et al., 1989; Gross & Levenson, 1993). A sample of 19 individuals collected prior to the study viewed a video of the confederate acting either in this distressed fashion or engaging in the same actions while displaying neutral nonverbal signals. Using a measure of distress in which participants indicated the degree to which the confederate seemed “distressed,” “anxious,” and “downhearted” on a 7-point Likert scale (1 = *not at all*, 7 = *extremely*), we verified that the confederate was rated as significantly more distressed in the distressed video ($M = 4.52$, $SD = 0.93$) than in the neutral video ($M = 2.80$, $SD = 1.31$), $t(17) = 3.27$, $p < .01$, $d = 1.59$.

The experimenter introduced participants to their partner and seated the partner in a room next door. The experimenter then implemented the behavioral measure of helping (identical to that described by S. Chen et al., 2001). Participants were instructed to choose which of nine tasks they and their partner would complete, ostensibly to save time because the partner was late. Participants were given the experimenter's copy of the tasks and instructed to choose four of these tasks to complete themselves, with the other five falling to their partner to complete. The printed sheet listed a table of fictitious tasks varying

in length from 1 to 5 min (arranged so that the longest tasks were at the top of the page). The names of the tasks and lab numbers were deliberately created to sound ambiguous. To bolster experimental realism, the experimenter had written on the task list (e.g., marked one of the tasks as “cancelled,” crossed off incorrect information on other tasks). The total number of minutes needed to complete the tasks that participants chose for themselves served as the measure of helping, with more minutes corresponding to more helping. After indicating their choice of tasks, participants were probed for suspicion and debriefed using the funnel-debriefing format (Aronson & Carlsmith, 1968).

Measures.

Compassion manipulation check. To measure compassion, we adapted the five-item compassion subscale from the Dispositional Positive Emotions Scale, an instrument that assesses several discrete positive emotions (Shiota, Keltner, & John, 2006). We modified the question stems to reflect transient rather than trait levels of compassion, and we instructed participants to think about how they were feeling at the present time. Two sample items are “At this moment, I feel it is important to take care of people who are vulnerable,” and “At this moment, I would notice somebody who needs help.” Participants rated their agreement with each item on a 7-point scale (1 = *strongly disagree*, 7 = *strongly agree*). The mean was 5.12 ($SD = 0.93$, $\alpha = .85$).

Social class. Participant income was used in the analysis to index participants' social class. Two items assessed income. The first item asked participants to rate their annual income during childhood, whereas the second item asked participants to rate their current annual income. Participants rated their income using the following categories: (1) <\$10,999, (2) \$11,000–\$20,999, (3) \$21,000–\$30,999, (4) \$31,000–\$40,999, (5) \$41,000–\$50,999, (6) \$51,000–\$60,999, and (7) >\$61,000. Because past and current income were significantly correlated, $r(89) = .65$, $p < .01$, we created a composite measure of income by taking the mean of these two indicators ($M = 5.86$, $SD = 2.06$).

Helping. The measure of helping consisted of the duration (in minutes) of the tasks chosen by the participants to complete themselves, with higher scores reflecting more helping. The possible (and actual) range was 7 to 18 min. The mean was 11.41 min ($SD = 2.97$).

Results

As expected, participants induced to feel more compassion reported more compassionate feelings ($M = 5.40$) than participants in the neutral-prime condition ($M = 4.86$), $t(89) = -2.92$, $p < .01$, $d = 0.62$. Our central prediction was that compassion would moderate the association between social class and prosocial behavior. To test this hypothesis, we used a linear regression framework, regressing the helping behavior of participants on participant social class (income), the compassion manipulation, and the interaction between social class and the compassion manipulation. We also sought to determine the effect of social class on prosocial behavior, independent of ethnicity (non-European American was coded as 0, and European American was coded as 1), and added this variable to the regression equation. Consistent with our predictions, lower class participants helped more relative to upper class participants, $\beta = -.43$, $t(86) = -3.07$, $p < .01$. The analysis

also yielded a significant effect for the compassion manipulation, revealing that participants induced to feel compassion helped their partner more (by taking on more time-consuming tasks) than neutral-primed participants, $\beta = .27$, $t(86) = 2.65$, $p < .05$. Ethnicity was unrelated to helping ($p > .20$). These effects were qualified by the predicted significant interaction between social class and the compassion manipulation, $\beta = .31$, $t(86) = 2.21$, $p < .05$. As seen in Figure 3, in the neutral-prime condition, lower class participants showed a clear tendency to help their partner more relative to upper class participants, $t(86) = -2.86$, $p < .05$. However, in the compassion-induction condition, upper class participants exhibited high levels of helping behavior similar to their lower class counterparts, $t(86) = .15$, *ns*. Taken together, the results of this analysis indicate that compassion moderates the tendency for lower class individuals to express more prosocial behavior than upper class individuals.

Discussion

The findings from Study 4 conceptually replicated the results from the previous studies, showing that lower class people are more prosocial toward others than their upper class counterparts. We found that lower class individuals were more likely than upper class individuals to help their distressed partners by taking on a more onerous portion of the experimental tasks. We also found evidence that feelings of compassion, rooted in a concern for others' welfare, underlie class-based differences in prosocial behavior. When experimentally induced to feel compassion, upper class participants behaved just as prosocially toward their partners as did lower class participants. These findings are consistent with prior work showing that feelings of compassion and empathy attune people to the needs of others and prompt behaviors to improve others' welfare (Batson & Moran, 1999; Batson & Shaw, 1991; Oveis et al., 2010). That the compassion manipulation eliminated class differences in prosocial behavior suggests that upper and lower class individuals do not necessarily differ in their capacity for prosocial behavior. Rather, lower class individuals may be higher in baseline levels of compassion than their upper class counterparts, and it may be this differential that—unless moderated—drives class-based differences in prosociality.

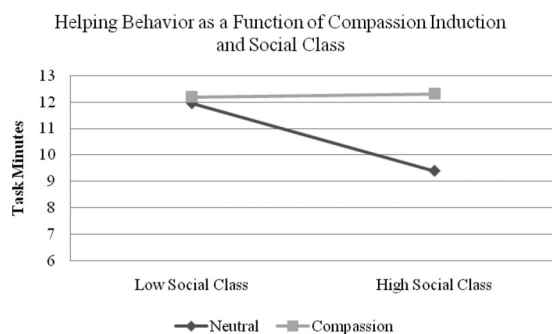


Figure 3. The relationship between social class and helping behavior (indexed by the length of time participants committed to completing survey measures during the experiment), moderated by the compassion induction (Study 4).

General Discussion

Do people with less give more, and those with more give less? This question has been central to longstanding discussions about the responsibilities of those in the upper echelons of society, and considerations of the place of altruism in the lives of individuals with abundant economic wealth. Recent empirical literatures and theoretical arguments yield competing predictions. One expectation is that individuals from lower class backgrounds, dependent upon others, should be disposed to be more prosocial. An alternative prediction is that lower class individuals experience greater costs in any prosocial gesture and less control to enact the behavior and should therefore be inclined to give less.

The evidence generated by the four studies presented here strongly suggest that social class shapes people's prosocial tendencies and in ways that are in keeping with the hypothesis that having less leads to giving more. Relative to upper class people, lower class people exhibited more generosity, more support for charity, more trust behavior toward a stranger, and more helping behavior toward a person in distress. Despite their reduced resources and subordinate rank, lower class individuals are more willing than their upper class counterparts to increase another's welfare, even when doing so is costly to the self.

The effects of social class on prosocial behavior held when we assessed social class using objective features of material wealth (e.g., income, education), subjective perceptions of rank, and manipulations of relative rank within a social hierarchy. This latter finding is noteworthy, for it is among the first manipulations of social class rank. This result informs understanding of social class as a rank-based variable—signifying where one stands vis-à-vis others in the social hierarchy—and offers an important methodological approach for the experimental study of socioeconomic status and social class.

In the current investigation, we also hypothesized that class-related differences in prosociality would be due to differences in the sensitivity to the needs of others. Consistent with this expectation, Study 3 found that upper class individuals reported social values that prioritized their own needs, whereas lower class individuals expressed more concern for the welfare of others, and this difference in social values mediated class-based differences in prosocial trust behavior. In Study 4, only when upper class individuals were experimentally induced to feel compassion—thus orienting them to the needs of others—did they exhibit levels of prosociality that rivaled their lower class counterparts. These findings argue that social class shapes not only people's values and behavior but also their emotional responses that relate to sensitivity to the welfare of others, and they align with research examining relationships between trait social power and compassion (Keltner, van Kleef, Chen, & Kraus, 2008; van Kleef et al., 2008).

Future Directions and Implications

The findings from the present investigation dovetail with previous studies finding that relative to upper class individuals, lower class individuals are more contextual and other-oriented (i.e., more sensitive to others in the social environment; Kraus et al., 2009) and more socially engaged in their relationships (Kraus & Keltner, 2009). These findings could be extended in several ways. Future research could examine, for example, differences in self-concepts

among upper and lower class individuals (e.g., Aron, Aron, Tudor, & Nelson, 1991). We speculate that, relative to upper class individuals, lower class individuals construe themselves more in terms of their relationships to others, and this self–other overlap may account for their heightened sensitivity to other people’s welfare. Another potential area of inquiry is class-based differences in approaches to communal and exchange relationships (Clark et al., 1986). For instance, whereas upper class individuals’ prosociality may hinge on expectations of reciprocity and exchange, communal orientations among lower class individuals may predispose them toward prosocial behavior even when they do not expect others to be immediately prosocial in return.

Although the samples in the current investigation were relatively diverse with respect to education and income, it will be important for future research to extend the current results to new communities and samples, for example those living in extreme poverty or those who enjoy extreme wealth. More stringent tests of our hypothesis are warranted in both extremely wealthy and extremely poor populations to determine if the association between lower class status and heightened prosociality persists in settings where the economic conditions are particularly robust.

According to our conceptualization, acts of generosity and benevolence among lower class people are a means to build relationships and strengthen social bonds. Recent research bolsters this claim. Work by Klapwijk & Van Lange (2009) demonstrates just how powerful a social force generosity is. This research argues that even in situations involving a noncooperative or self-interested partner, behaving generously can elicit subsequent cooperation, enhance trust, and promote positive feelings. This work points to the deep strategic motivations underlying class-based differences in prosocial behavior documented here: that a prosocial orientation generates a web of prosocial connections vital to the lower class individual’s adaptation to a more threatening environment.

Other empirical evidence, however, suggests a different motivation for why lower class people are more prosocial. Research on competitive altruism suggests that in public settings, individuals sometimes behave altruistically to improve their standing and reputation within a group (Hardy & van Vugt, 2006; Willer, 2009). These findings raise an interesting question: Are lower class individuals behaving prosocially to improve their standing in a social hierarchy? This would be a straightforward explanation of the results observed in the present studies and worthy of examination. We suspect that this was not an operative process in our studies for two primary reasons. First, many of the prosocial behaviors in the current investigation occurred in anonymous settings, when participants had little reason to believe their behaviors would be observed by others. Second, unlike a person’s social standing (i.e., prestige and respect), a person’s social class identity is not likely to be influenced by momentary displays of prosociality. Nevertheless, future research should address whether the motive to rise in social status, independent of more egalitarian and other-oriented motives, in part accounts for why lower class individuals behave in a more prosocial fashion. Manipulations that render the prosocial act anonymous versus public could be useful for this conceptual aim, as would more direct measurement of the motive to gain status through prosocial action.

In the present research, lower class individuals demonstrated a general pattern of greater prosociality across a variety of measures, including generosity, trust, and helping behavior. At the same

time, there are other types of prosocial behavior—ones not tested in the current investigation—that may point to compelling boundary conditions of the current results. For instance, survey research suggests that upper class individuals engage in more prosocial behavior toward the environment (Granzin & Olsen, 1991) and volunteer more (see Independent Sector, 2002; Penner et al., 2005), relative to lower class individuals. Although the precise nature of these patterns is unclear, we argue that prosociality among lower class individuals is inherently relational: It is rooted in a concern for others’ welfare and a desire to enhance social relationships. As a result, it is possible that in situations absent interdependence and immediate relational concerns—as may be the case with pro-environmental behavior and certain types of volunteerism—upper class individuals will actually be more prosocial than their lower class counterparts.

Additional work should explore other facets of prosocial behavior. For instance, a prisoner’s dilemma situation, where the partner’s cooperative tendencies are systematically varied, could reveal interesting class-based differences in reactions to defection (e.g., Batson & Ahmad, 2001). Varying the socioeconomic status of the recipient of a prosocial act may also find interesting class-based differences in prosociality. For instance, lower class individuals may be more generous toward a lower class target but relatively less generous toward an upper class target, whereas upper class individuals may be equally prosocial to both. Future research should also employ economic games with real monetary consequences. Whereas participants in the current research were compensated independent of their behavior in the games, this limitation should be addressed in future investigations by paying participants based on their responses.

Moving beyond economic behavior, it will be interesting to ascertain whether class-related differences in prosociality are evident in differences in underlying autonomic physiology (e.g., van Kleef et al., 2008). For example, Eisenberg et al. (1989) have found that heart rate deceleration in response to the suffering of others consistently predicts increased altruism. In light of the present investigation’s findings, it would be interesting to observe whether lower class individuals, prone to show elevated cardiovascular arousal (Adler et al., 2000), actually show increased heart rate deceleration in response to the needs of others. Along these lines, it is also important to consider how activation of the physiological fight or flight system—such as through the presence of social threats—enhances or diminishes the prosocial tendencies of lower class individuals. Given research showing heightened physiological reactions to social threat among lower class individuals (e.g., E. Chen & Matthews, 2001), it is possible that in the presence of threat, lower class individuals will show reductions in prosociality.

Several implications of the current research warrant further examination. Our results argue that individuals with less tend to give more, a finding consistent with a ubiquitous pattern in national survey research: Lower income individuals are more giving and charitable than their upper income counterparts (Andreoni, 2001; Greve, 2009; Independent Sector, 2002; Johnston, 2005). Whereas others have explained this trend in terms of demographic variables that covary with social class, including religious commitments among lower class individuals (see James & Sharpe, 2007), our findings underscore a psychological basis for class-based differences in prosociality: It is the unique concerns for

others and social values related to egalitarianism of lower class people that guide their prosocial tendencies toward others.

Our research also yields important insights into the social psychology of inequality. Economic disparities in the United States are as marked as ever (Heathcote, Storesletten, & Violante, 2008; Phillips, 2002); wealth has increasingly come to be concentrated in the hands of a select few. Research finds that households in the top 1% of the wealth distribution own 30% of the total wealth in the United States and are more than 800 times wealthier than individuals in the bottom 40% of the wealth distribution (Díaz-Giménez, Quadrini, & Rios-Rull, 1997). Our data suggest that an ironic and self-perpetuating dynamic may in part explain this trend. Whereas lower class individuals may give more of their resources away, upper class individuals may tend to preserve and hold onto their wealth. This differential pattern of giving versus saving among upper and lower class people could serve to exacerbate economic inequality in society.

Conclusion

Psychological science has turned to the study of social class to reveal that this important dimension to identity is more than a structural variable that determines the material conditions of people's lives (Adler et al., 2000; Kraus & Keltner, 2009; Kraus et al., 2009; Snibbe & Markus, 2005). Social class exerts unique and pervasive psychological effects, shaping in fundamental ways how people construe the social environment and behave prosocially toward others. By behaving generously and helping those in need, lower class individuals may promote trust and cooperation from others, thus ensuring that in times of hardship, their needs will, too, be met. Future research should build on the current work to better understand class-based differences in prosocial behavior and elucidate the unique orientations and worldviews of upper and lower class individuals.

References

- Adler, N. E., Epel, E. S., Castellazzo, G., & Ickovics, J. R. (2000). Relationship of subjective and objective social status with psychological and physiological functioning: Preliminary data in healthy White women. *Health Psychology, 19*, 586–592. doi:10.1037/0278-6133.19.6.586
- Adler, N. E., & Ostrove, J. M. (1999). SES and health: What we know and what we don't. In N. E. Adler, M. Marmot, B. McEwan, & J. Stewart (Eds.), *Socioeconomic status and health in industrialized nations: Social, psychological, and biological pathways* (pp. 3–15). New York, NY: New York Academy of Sciences.
- Alesina, A., & La Ferrara, E. (2002). Who trusts others? *Journal of Public Economics, 85*, 207–234. doi:10.1016/S0047-2727(01)00084-6
- Anderson, C., & Galinsky, A. D. (2006). Power, optimism, and risk-taking. *European Journal of Social Psychology, 36*, 511–536. doi:10.1002/ejsp.324
- Andreoni, J. (2001). The economics of philanthropy. In N. J. Smelser & P. B. Baltes (Eds.), *International encyclopedia of the social and behavioral sciences* (pp. 11369–11376). Oxford, England: Elsevier.
- Argyle, M. (1994). *The psychology of social class*. London, England: Routledge.
- Aron, A., Aron, E. N., Tudor, M., & Nelson, G. (1991). Close relationships as including other in the self. *Journal of Personality and Social Psychology, 60*, 241–253. doi:10.1037/0022-3514.60.2.241
- Aronson, E., & Carlsmith, J. M. (1968). Experimentation in social psychology. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology: Vol. 2. Research methods* (2nd ed., pp. 1–79). Reading, MA: Addison-Wesley.
- Balliet, D., Parks, C., & Joireman, J. (2009). Social values orientation and cooperation in social dilemmas: A meta-analysis. *Group Processes & Intergroup Relations, 12*, 533–547. doi:10.1177/1368430209105040
- Barbareschi, G., Sanderman, R., Kepmen, G. I. J. M., & Ranchor, A. V. (2008). The mediating role of perceived control on the relationship between socioeconomic status and functional changes in older patients with coronary heart disease. *Journal of Gerontology Series B: Social Sciences, 63*, 353–361.
- Baron, R. M., & Kenny, D. A. (1986). The moderator—mediator variable distinction in social psychology research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology, 51*, 1173–1182.
- Batson, C. D., & Ahmad, N. (2001). Empathy-induced altruism in a prisoner's dilemma II: What if the target of empathy has defected? *European Journal of Social Psychology, 31*, 25–36. doi:10.1002/ejsp.26
- Batson, C. D., & Moran, T. (1999). Empathy-induced altruism in a prisoner's dilemma. *European Journal of Social Psychology, 29*, 909–924. doi:10.1002/(SICI)1099-0992(199911)29:7<909::AID-EJSP965>3.0.CO;2-L
- Batson, C. D., & Shaw, L. L. (1991). Evidence for altruism: Toward a pluralism of prosocial motives. *Psychological Inquiry, 2*, 107–122. doi:10.1207/s15327965pli0202_1
- Berg, J., Dickhaut, J., & McCabe, K. (1995). Trust, reciprocity, and social history. *Games and Economic Behavior, 10*, 122–142. doi:10.1006/game.1995.1027
- Blascovich, J., Mendes, W. B., Hunter, S. B., Lickel, B., & Kowai-Bell, N. (2001). Perceiver threat in social interactions with stigmatized others. *Journal of Personality and Social Psychology, 80*, 253–267. doi:10.1037/0022-3514.80.2.253
- Callan, M. J., Ellard, J. H., Shead, N. W., & Hodgins, D. C. (2008). Gambling as a search for justice: Examining the role of personal relative deprivation in gambling urges and gambling behavior. *Personality and Social Psychology Bulletin, 34*, 1515–1529. doi:10.1177/0146167208322956
- Chen, E., & Matthews, K. A. (2001). Cognitive appraisal biases: An approach to understanding the relation between socioeconomic status and cardiovascular reactivity in children. *Annals of Behavioral Medicine, 23*, 101–111. doi:10.1207/S15324796ABM2302_4
- Chen, S., Lee-Chai, A. Y., & Bargh, J. A. (2001). Relationship orientation as a moderator of the effects of social power. *Journal of Personality and Social Psychology, 80*, 173–187. doi:10.1037/0022-3514.80.2.173
- Clark, M. S., Mills, J., & Powell, M. C. (1986). Keeping track of needs in communal and exchange relationships. *Journal of Personality and Social Psychology, 51*, 333–338. doi:10.1037/0022-3514.51.2.333
- Croizet, J. C., & Claire, T. (1998). Extending the concept of stereotype threat to social class: The intellectual underperformance of students from low socioeconomic backgrounds. *Personality and Social Psychology Bulletin, 24*, 588–594. doi:10.1177/0146167298246003
- Denavas-Walt, C., Proctor, B. D., & Lee, C. H. (2006). *Income, poverty and health insurance coverage in the United States: 2005* [U.S. Census Bureau, Current Population Report P60-235]. Washington, DC: U.S. Government Printing Office.
- Díaz-Giménez, J., Quadrini, V., & Rios-Rull, J.-V. (1997). Dimensions of inequality: Facts on the U.S. distributions of earnings, income, and wealth. *Federal Reserve Bank of Minneapolis Quarterly Review, 21*, 3–21.
- Domhoff, G. W. (1998). *Who rules America*. Mountain View, CA: Mayfield.
- Dovidio, J. F., Piliavin, J. A., Schroeder, D. A., & Penner, L. A. (2006). *The social psychology of prosocial behavior*. Mahwah, NJ: Erlbaum.
- Drentea, P. (2000). Age, debt, and anxiety. *Journal of Health and Social Behavior, 41*, 437–450. doi:10.2307/2676296

- Eisenberg, N. (2002). Empathy-related emotional responses, altruism, and their socialization. In J. Davidson & A. Harrington (Eds.), *Visions of compassion: Western scientists and Tibetan Buddhists examine human nature* (pp. 131–164). New York, NY: Oxford University Press.
- Eisenberg, N., Fabes, R. A., Miller, P. A., Fultz, J., Shell, R., Mathy, R. M., & Reno, R. R. (1989). Relation of sympathy and personal distress to pro-social behavior: A multimethod study. *Journal of Personality and Social Psychology, 57*, 55–66. doi:10.1037/0022-3514.57.1.55
- Forsythe, R., Horowitz, J. L., Savin, N. E., & Sefton, M. (1994). Fairness in simple bargaining experiments. *Games and Economic Behavior, 6*, 347–369. doi:10.1006/game.1994.1021
- Fowler, J. H., & Kam, C. D. (2007). Beyond the self: Social identity, altruism, and political participation. *The Journal of Politics, 69*, 813–827. doi:10.1111/j.1468-2508.2007.00577.x
- Frank, R. H. (1999). *Luxury fever: Why money fails to satisfy in an era of excess*. New York, NY: Free Press, Princeton University.
- Gallo, L. C., Bogart, L. M., Vranceanu, A., & Matthews, K. A. (2005). Socioeconomic status, resources, psychological experiences, and emotional responses: A test of the reserve capacity model. *Journal of Personality and Social Psychology, 88*, 386–399. doi:10.1037/0022-3514.88.2.386
- Gallo, L. C., & Matthews, K. A. (2003). Understanding the association between socioeconomic status and physical health: Do negative emotions play a role? *Psychological Bulletin, 129*, 10–51. doi:10.1037/0033-2909.129.1.10
- Gallo, L. C., Smith, T. W., & Cox, C. M. (2006). Socioeconomic status, psychosocial processes, and perceived health: An interpersonal perspective. *Annals of Behavioral Medicine, 3*, 109–119. doi:10.1207/s15324796abm3102_2
- Glaeser, E. L., Laibson, D. I., Scheinkman, J. A., & Soutter, C. L. (2000). Measuring trust. *The Quarterly Journal of Economics, 115*, 811–846. doi:10.1162/00335530054926
- Goetz, J. L., Keltner, D., & Simon-Thomas, E. (2010). Compassion: An evolutionary analysis and empirical review. *Psychological Bulletin, 136*, 351–374.
- Granzin, K. L., & Olsen, J. E. (1991). Characterizing participants in activities protecting the environment: A focus on donating, recycling, and conservation behaviors. *Journal of Public Policy & Marketing, 10*, 1–27.
- Greve, F. (2009, May 23). America's poor are its most generous. *The Seattle Times*. Retrieved from <http://seattletimes.nwsourc.com>
- Gross, J. L., & Levenson, R. W. (1993). Emotional suppression: Physiology, self-report, and expressive behavior. *Journal of Personality and Social Psychology, 64*, 970–986. doi:10.1037/0022-3514.64.6.970
- Hardy, C. L., & van Vugt, M. (2006). Nice guys finish first: The competitive altruism hypothesis. *Personality and Social Psychology Bulletin, 32*, 1402–1413. doi:10.1177/0146167206291006
- Heathcote, J., Storesletten, K., & Violante, G. (2008, May). *The macroeconomic implications of rising wage inequality in the United States*. Unpublished manuscript, Georgetown University.
- Henrich, J., Boyd, R., Bowles, S., Camerer, C., Fehr, E., Gintis, H., & McElreath, R. (2001). In search of homo economicus: Behavioral experiments in 15 small-scale societies. *American Economic Review, 91*, 73–78.
- Hewig, J., Hagemann, D., Seifert, J., Gollwitzer, M., Naumann, E., & Bartussek, D. (2005). A revised film set for the induction of basic emotions. *Cognition & Emotion, 19*, 1095–1109. doi:10.1080/02699930541000084
- Hoffman, M. L. (1981). Is altruism part of human nature? *Journal of Personality and Social Psychology, 40*, 121–137. doi:10.1037/0022-3514.40.1.121
- Independent Sector. (2002). *Giving and volunteering in the United States*. Washington, DC: Author.
- James, R. N., III, & Sharpe, D. L. (2007). The nature and causes of the U-shaped charitable giving profile. *Nonprofit and Voluntary Sector Quarterly, 36*, 218–238. doi:10.1177/0899764006295993
- Johnson, W., & Krueger, R. F. (2005). Higher perceived life control decreases genetic variance in physical health: Evidence from a national twin study. *Journal of Personality and Social Psychology, 88*, 165–173. doi:10.1037/0022-3514.88.1.165
- Johnson, W., & Krueger, R. F. (2006). How money buys happiness: Genetic and environmental processes linking finances and life satisfaction. *Journal of Personality and Social Psychology, 90*, 680–691. doi:10.1037/0022-3514.90.4.680
- Johnston, D. C. (2005, December 19). Study shows the superrich are not the most generous. *The New York Times*. Retrieved from <http://www.nytimes.com>
- Keltner, D., Gruenfeld, D. H., & Anderson, C. (2003). Power, approach, and inhibition. *Psychological Review, 110*, 265–284. doi:10.1037/0033-295X.110.2.265
- Keltner, D., van Kleef, G. A., Chen, S., & Kraus, M. W. (2008). A reciprocal influence model of social power: Emerging principles and lines of inquiry. *Advances in Experimental Social Psychology, 40*, 151–192. doi:10.1016/S0065-2601(07)00003-2
- Klapwijk, A., & Van Lange, P. A. M. (2009). Promoting cooperation and trust in “noisy” situations: The power of generosity. *Journal of Personality and Social Psychology, 96*, 83–103. doi:10.1037/a0012823
- Kluegel, J. R., & Smith, E. R. (1986). *Beliefs about inequality: Americans' views of what is and what ought to be*. Hawthorne, NY: Aldine de Gruyter.
- Kosfeld, M., Heinrichs, M., Zak, P., Fischbacher, U., & Fehr, E. (2005). Oxytocin increases trust in humans. *Nature, 435*, 673–676. doi:10.1038/nature03701
- Kraus, M. W., & Keltner, D. (2009). Signs of socioeconomic status: A thin-slicing approach. *Psychological Science, 20*, 99–106. doi:10.1111/j.1467-9280.2008.02251.x
- Kraus, M. W., Piff, P. K., & Keltner, D. (2009). Social class, the sense of control, and social explanation. *Journal of Personality and Social Psychology, 97*, 992–1004. doi:10.1037/a0016357
- Lachman, M. E., & Weaver, S. L. (1998). Sociodemographic variation in the sense of control by domain: Findings from the MacArthur studies of midlife. *Psychology and Aging, 13*, 553–562. doi:10.1037/0882-7974.13.4.553
- Link, B. G., Lennon, M. C., & Dohrenwend, B. P. (1993). Sociometric status and depression: The role of occupations involving direction, control, and planning. *American Journal of Sociology, 98*, 1351–1387. doi:10.1086/230192
- Nagourney, A. (2008, October 8). Economic woes set tone for rivals in 2nd debate. *The New York Times*, p. A1.
- Oakes, J. M., & Rossi, R. H. (2003). The measurement of SES in health research: Current practice and steps toward a new approach. *Social Science and Medicine, 56*, 769–784. doi:10.1016/S0277-9536(02)00073-4
- Ostrove, J. M., Adler, N. E., Kuppermann, M., & Washington, A. E. (2000). Objective and subjective assessments of socioeconomic status and their relationship to self-rated health in an ethnically diverse sample of pregnant women. *Health Psychology, 19*, 613–618. doi:10.1037/0278-6133.19.6.613
- Oveis, C., Horberg, E. J., & Keltner, D. (2010). Compassion, pride, and social intuitions of self–other similarity. *Journal of Personality and Social Psychology, 98*, 618–630. doi:10.1037/a0017628
- Oyserman, D., & Lee, S. W. S. (2008). Does culture influence what and how we think? Effects of priming individualism and collectivism. *Psychological Bulletin, 134*, 311–342. doi:10.1037/0033-2909.134.2.311
- Pakula, A. (Director). (1976). *All the President's men* [Motion picture]. Los Angeles, CA: Warner Bros.
- Penner, L. A., Dovidio, J. F., Piliavin, J. A., & Schroeder, D. A. (2005). Prosocial behavior: Multilevel perspectives. *Annual Review of Psychology, 56*, 1–28. doi:10.1146/annurev.psych.56.091103.070141

- Phillips, K. (2002). *Wealth and democracy: A political history of the American rich*. New York, NY: Broadway Books.
- Rand, A. (1960, February 17). *Faith and force: The destroyers of the modern world*. Lecture at Yale University.
- Roberts, G. (2005). Cooperation through interdependence. *Animal Behavior*, *70*, 901–908. doi:10.1016/j.anbehav.2005.02.006
- Scherer, S. E. (1974). Proxemic behavior of primary school children as a function of their socioeconomic class and subculture. *Journal of Personality and Social Psychology*, *29*, 800–805. doi:10.1037/h0036190
- Shiota, M. N., Keltner, D., & John, O. P. (2006). Positive emotion dispositions differentially associated with Big Five personality and attachment style. *The Journal of Positive Psychology Special Issue: Positive Emotions*, *1*, 61–71.
- Simpson, B., McGrimmon, T., & Irwin, K. (2007). Are Blacks really less trusting than Whites? Revisiting the race and trust question. *Social Forces*, *86*, 525–552.
- Singer, T., Snozzi, R., Bird, G., Petrovic, P., Silani, G., Heinrichs, M., & Dolan, R. J. (2008). Effects of oxytocin and prosocial behavior on brain responses to direct and vicariously experienced pain. *Emotion*, *8*, 781–791. doi:10.1037/a0014195
- Snibbe, A. C., & Markus, H. R. (2005). You can't always get what you want: Educational attainment, agency, and choice. *Journal of Personality and Social Psychology*, *88*, 703–720. doi:10.1037/0022-3514.88.4.703
- Sober, E., & Wilson, D. S. (1998). *Unto others: The evolution and psychology of unselfish behavior*. Cambridge, MA: Harvard University Press.
- Staggs, S. L., Long, S. M., Mason, G. E., Krishnan, S., & Riger, S. (2007). Intimate partner violence, social support, and employment in the post-welfare reform era. *Journal of Interpersonal Violence*, *22*, 345–367. doi:10.1177/0886260506295388
- Stephens, N. M., Markus, H. R., & Townsend, S. M. (2007). Choice as an act of meaning: The case of social class. *Journal of Personality and Social Psychology*, *93*, 814–830. doi:10.1037/0022-3514.93.5.814
- Stipek, D. J., & Ryan, R. H. (1997). Economically disadvantaged pre-schoolers: Ready to learn but further to go. *Developmental Psychology*, *33*, 711–723. doi:10.1037/0012-1649.33.4.711
- Twenge, J. M., Baumeister, R. F., DeWall, C. N., Ciarocco, N. J., & Bartels, J. M. (2007). Social exclusion decreases prosocial behavior. *Journal of Personality and Social Psychology*, *92*, 56–66. doi:10.1037/0022-3514.92.1.56
- Utz, S. (2004). Self-construal and cooperation: Is the interdependent self more cooperative than the independent self? *Self and Identity*, *3*, 177–190. doi:10.1080/13576500444000001
- van Kleef, G. A., Oveis, C., van der Löwe, I., LuoKogan, A., Goetz, J., & Keltner, D. (2008). Power, distress, and compassion: Turning a blind eye to the suffering of others. *Psychological Science*, *19*, 1315–1322. doi:10.1111/j.1467-9280.2008.02241.x
- Van Lange, P. A. M. (1999). The pursuit of joint outcomes and equality in outcomes: An integrative model of social value orientation. *Journal of Personality and Social Psychology*, *77*, 337–449. doi:10.1037/0022-3514.77.2.337
- Willer, R. (2009). Groups reward individual sacrifice: The status solution to the collective action problem. *American Sociological Review*, *74*, 23–43. doi:10.1177/000312240907400102
- Wong, R. Y., & Hong, Y. (2005). Dynamic influences of culture on cooperation in the prisoner's dilemma. *Psychological Science*, *16*, 429–434.

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