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THE MODERATING EFFECT OF AGE ON THE SOCIOECONOMIC STATUS AND
PROSOCIAL BEHAVIOR RELATION

by

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Abstract

Previous research found that upper-class people, those with greater resources (Oakes & Rossi, 2003) and perceptions of higher social rank (Adler et al., 2000), behave less prosocially than their lower-class counterparts, those with limited resources (Oakes & Rossi, 2003) and perceptions of lower social rank (Adler et al., 2000). However, this line of research only focused on younger ($M_{\text{age}} = 36.35$, $SD = 12.31$) people. Research suggests that older adults prioritize others' needs over their own needs. We aimed to replicate the social class and prosociality relationship (see Piff et al., 2010) in a large sample of adults between the age of 20-80 ($N = 796$). Beyond the social class and prosociality link, we hypothesized that older upper-class people are equally prosocial as their younger, middle-aged, and older-aged lower-class counterparts. Participants were randomly assigned into an upper-class or lower-class condition that led them to compare themselves to others in the U.S. with the best (worst) education, occupation, and income. Then, participants reported their objective social class (e.g., education, household income) and subjective social class (e.g., ladder). Afterward, participants indicated their attitudes toward charitable donations and played the dictator game that assessed their generosity. We found that participants in the upper-class condition and lower-class condition did not differ on generosity and charitable donation. Moderator analyses showed that age did not moderate the link between social class and prosociality. Thus, the results didn't replicate past research and didn't support our hypothesis that age would moderate the social class and prosociality link. The general discussion explores why we didn't replicate past findings and the lack of age as a moderator.

Keywords: Social class, socioeconomic status, prosocial behaviors, age

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The Moderating Effect of Age on the Socioeconomic Status and Prosocial Behavior Relation

The Moderating Effect of Age on the Social Class and Prosociality Link

Prosocial behaviors occur when one acts in ways that benefit others (Penner et al., 2005). Prosocial behavior is different from altruism in that the latter is a motive to increase another's welfare without conscious regard for one's self-interest (Batson, 2012, 2014; Eisenberg and Miller, 1987; Feigin, Owens, & Goodyear-Smith, 2014). Thus, all altruistic behavior is prosocial, but not all prosocial behavior is altruistic. The occurrence of prosocial behavior is fundamental to positive personal and group outcomes because it helps resolve key social problems, such as caretaking, cooperation, and group coordination (Keltner et al., 2014). Consequently, researchers have studied a broad range of processes that promote prosocial behaviors (Keltner et al., 2014), such as positive emotions (Lyubomirsky, King, & Diener, 2005), norms (Cialdini & Trost, 1998), and reputations (Feinberg, Willer, & Schultz, 2014). Particularly pertinent to the current research is an emerging line of research on social class and prosocial behaviors.

Class-Based Difference in Other-Oriented Processes

The concept of social class is a dynamic model comprised of both objective, quantifiable elements of wealth, education, and access to resources (Oakes & Rossi, 2003) as well as subjective perceptions of social rank with regard to others in society (Adler et al., 2000). These material elements and perceptual aspects of social class combine and intersect to shape the lives and identities of upper- and lower-class individuals. Limited resources and lower rank create conditions that hinder the outcomes of lower-class individuals, forming a perception of reduced control over life's outcomes (Kraus, Piff, & Keltner, 2009; Kraus et al., 2012). As a result, they align to the influences of the social context, promoting an inclination, desire, and

need for social connection with others. Upper class individuals are portrayed as financially independent, possessing greater personal control, and exercising freedom of choice (Snibbe & Markus, 2005; Stephens, Markus, & Townsend, 2007), conversely lower-class individuals endure limited personal control, depending on external influences to attain desired outcomes (Argyle, 1994; Domhoff, 1998). This bolsters the motivation of the lower class to behave in a manner that fosters relationships and promotes social engagement. Research provides support for the lower-class's heightened desire for relationship and social engagement (Piff et al., 2012; Stephens et al., 2012). Lower-class people display more contextual patterns of attribution (Grossmann & Varnum, 2011; Kraus, Piff, & Keltner, 2009); are more considerate and receptive to the preferences of other people (Stephens et al., 2007, 2011); showed more compassion compared to upper-class people (Oveis, Horberg, & Keltner, 2010); are more socially involved in their relationships (Kraus & Keltner, 2009); and responded to the suffering of others with lower heart-rate, an indication of higher compassion (Stellar et al., 2012). One way that lower class individuals increase social engagement and connections with others is prosocial behaviors.

Class-Based Difference in Prosociality

Recent research offers support for lower class people being more prosocial than their upper-class counterparts (Chen, Zhu, & Chen, 2013; Guinote et al. 2015; Piff et al., 2010, Piff et al., 2012). The findings indicate that lower class people, compared to their upper-class counterparts, are more generous, trusting, and helpful. Lower-class people showed more generosity, were more trusting in two separate economic games, desired more charitable donations, and were more helpful compared to their upper-class counterparts (Piff et al., 2010).

Additionally, lower-class people displayed greater prosociality regardless of whether the context was private (anonymous) or public (Kraus & Callaghan, 2016). A study of sharing behaviors across 15 cultures found that when provided with resources, individuals gave, on average, 39% of that resource to an anonymous stranger (Henrich et al., 2001). Additionally, variations in generosity were seen between individuals from interdependent cultures where large-scale cooperation is more common compared to independent cultures that rarely collaborate. Specifically, people in interdependent cultures gave more than did individuals from more independent cultures. A culture of interdependence increases people's generosity (Oyserman & Lee, 2008), to the degree that lower class individuals, with limited resources and experiencing greater dependence on others, prove to be more prosocial than their upper-class counterparts. Nationwide surveys have shown that lower class individuals provide a greater portion of their incomes through charitable donations when compared to their upper-class counterparts (Greve, 2009; James & Sharpe, 2007). 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 with income of more than \$75,000 contributed only 2.7%. Numerous explanations have been offered for this tendency, for example, class-based variances in religious association (Andreoni, 2001), noting that the correlational evidence indicates that lower class individuals are more charitable and generous than their upper-class counterparts.

Does Age Moderate the Social Class and Prosociality Link?

A limitation of previous research on social class and prosocial behaviors was the participants' narrow age range. We examined the participants' age and standard deviation of published articles on social class and prosocial behaviors that cited Piff et al., (2010). In total, we found 7 articles, including Piff et al., (2010), that directly tested the link between social class and

prosocial behaviors. The average age of the participants in these articles was 36.35 with an average standard deviation of 12.31 (see Table 1). This limitation raises a few interesting questions. First, the results were limited to younger people and can't be generalized to people from different age ranges. Moreover, the sample sizes of these studies were relatively small. Lastly, most of the participants were from early 20s or early 30s and lacks representation from other segments in the age spectrum.

These age-related limitations that we pinpointed sets the stage for our goals in the current research. First, we explore whether the baseline difference between lower-class and upper-class people on prosocial behaviors replicate across a representative sample of people from younger (20-40), middle-aged (41-60), and older adulthood (61-80). Previous research has not established which age group represents older adults; as a result, researchers use different age groups, usually starting between 55 and 65 years of age and ending between 74 and 79 years of age (Komp, 2012; Morris & Caro, 1997; Neugarten, 1974). Our age determination of older adults being ages 61-80 is consistent with previous research. Second, we examine whether age moderates the link between social class and prosocial behaviors. That is, does the baseline difference in social class and prosocial behaviors remain stable across the lifespan or perhaps, the effects change across the lifespan. In short, the current research addresses the age limitation and aims to replicate the class-based difference in prosociality with a large representative sample of participants from a wider age range. Specifically, research has shown that older adults prioritize engaging in emotionally meaningful activities (Blanchard-Fields, 2007; Carstensen, Gottman, & Levenson, 1995), spending time with close others (Carstensen, 1992; Carstensen et al., 1995, 1999) and helping people in need, prosocial behavior (Beadle et al., 2013; Newman, Vasudev, & Onawola, 1985). Studies support that concern for people besides self is essential to successful aging

(Antonovsky & Sagy, 1990; Erikson, 1982; Fisher, 1995). Consistent with this, older adults commit to helping others and taking other's needs into account more than do younger adults (Hoppmann, Coats, & Blanchard-Fields, 2008). Weiner and Graham (1989) found that compassion and willingness to help others increased with age. Additionally, older adults emphasized more concern for others than did younger adults (McAdams, St. Aubin, & Logan, 1993; Sze et al., 2012). These findings suggest that older upper-class adults will act in a more prosocial fashion than both younger and middle-aged upper-class adults. These lines of research set the stage for the possibility that older upper-class people are equally as prosocial as their lower-class counterparts at different age range.

The Current Research

We aimed to replicate the social class and prosociality relationship (Piff et al., 2010) and test age as a moderator of the social class and prosociality link in a large sample of adults (N = 796). We expected older upper-class participants to be equally as prosocial compared to younger, middle-aged, and older lower-class participants. Given that one of the aims was to replicate the social class and prosociality link in Piff et al., (2010), we adapted the experimental design from that article. Specifically, we manipulated participant's perception of their relative social class vis-a-vis others in society (Piff et al., 2010) by asking participants to either compare their own social standing to those higher or lower than them. We tested our hypothesis with a nationwide sample that represented a range of social class backgrounds and an evenly dispersed number of people from younger (N = 242; age 20-40), middle-aged (N = 262; 41-60) and older adulthood (N = 292; 61-80), while controlling for plausible alternative explanations (e.g., religiosity, ethnicity). We also assessed participants subjective SES (Adler et al., 2000) and objective SES (Oakes & Rossi, 2003).

Method

Participants and procedure

We conducted a power analyses based on an age x conditions interaction with a conservative effect size of $r = .15$, $p = .05$, and 95% power revealed that we needed a total of 600 people using G*Power to calculate a priori sample size. We recruited 962 participants for this study from CloudResearch (formerly TurkPrime) for a nominal compensation. We excluded 143 participants who did not complete anything and 23 participants who did not complete one or more of the necessary measures, leaving a final sample of 796 ($M_{\text{age}} = 50.4$ years old, $SD = 15.2$; 427 women, 369 men, 632 European Americans, 53 African Americans, 42 Asian Americans, 33 Hispanic Americans, and 36 others). Importantly, our sample was representative of people from young (20-40; $N = 242$; $M_{\text{age}} = 31.7$, $SD = 5.10$; 102 women, 140 men), middle (41-60; $N = 262$; $M_{\text{age}} = 49.4$, $SD = 5.81$; 144 women, 118 men), and older age (61-80; $N = 292$; $M_{\text{age}} = 61.9$, $SD = 4.38$; 181 women, 111 men). We should note that all analyses were conducted with age as a continuous variable.

Participants accessed the study online using a link and completed informed consent. Afterward, participants were randomly assigned into one of two conditions (upper-class vs. lower-class) to manipulate their relative social class standing. Then, participants completed the dictator game and the income allocation task (counterbalanced). Participants, then, reported subjective SES, education, household income level, subjective health, and religiosity. Lastly, we debriefed and thanked the participants.

Manipulation of relative social class

We manipulated participant's perception of their relative social class with an adaption of 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).

Participants were presented with an image of a ladder with 10 rungs and were randomly assigned to experience either low or high relative social class based on the following instructions (see

Figure 1):

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, education, and job status. Where would you place yourself on this ladder relative to these people at the very bottom (top)?

Participants were instructed to indicate where they feel they stand relative to people at the very bottom or top in the U.S. (1 = bottom rung, 10 = top rung).

The participants were then instructed to visualize themselves in a “getting acquainted interaction with one of the people you just thought about from the ladder above.” Specifically, participants were asked 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: an open-ended response component of the manipulation. This type of writing task is frequently used to activate rank-related states (e.g., Anderson & Galinsky, 2006; Kraus et al., 2009) and was included to reinforce the social class manipulation.

Dictator game

In this game, participants were informed that they were paired with an anonymous partner who is also completing the study right now (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 were led to believe that their cash payout at the end of the study would depend on how many points they had remaining. In actuality, participants were paid the same amount regardless of their behaviors in the dictator game. 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 were *not* actually paired with a partner. Therefore, they only completed the points distribution for the Dictator Game. After completing the study and collection of demographics, we debriefed, thanked, and paid the participants \$1.25. On average, participants donated $M = 5.61$ points, $SD = 3.39$, which is comparable to rates of generosity observed in previous research (Fowler & Kam, 2007; Piff et al., 2012).

Charitable donations

To assess attitudes concerning charitable donations, participants were asked to complete a survey regarding their views on "how you think people should spend their salary?" Following similar approaches taken in national survey research (e.g., Frank, 1999), participants indicated the percentage of income people should spend on typical expenses, including food, luxury items, bills, clothing, recreation, gifts, education, travel, and charitable donations. Participants' division of salary to each category was required to equal 100% of the total salary. Participant ratings of

the mean percent of annual income that people should spend on charitable donations is the main dependent measure ($M = 4.91\%$, $SD = 4.16\%$), which is comparable to the rates of charitable donation observed in previous research (Piff et al., 2012).

Demographics

Subjective SES. Participants completed 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 indicate on which rung 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 is given a number between 1 and 10, with higher numbers reflecting higher placement on the ladder ($M = 4.31$, $SD = 1.76$).

Objective SES. Objective social class was measured using participants' estimates of their annual family income. Participants rated their family income based on 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 ($M = 4.58$, $SD = 1.91$).

Education. Participants rated their level of education based on four categories: (1) Did not finish high school/no diploma, (2) High school graduate or some college, (3) College graduate, (4) Postgraduate degree ($M = 2.90$, $SD = 0.71$).

Religiosity. Participants rated their religiosity using a seven-point Likert scale: (1) Not Religious at all, (2) Slightly Religious, (3) Somewhat Religious, (4) Marginally Religious, (5)

Moderately Religious, (6) Very Religious, and (7) Extremely Religious ($M = 3.41$, $SD = 2.18$).

Subjective Health. Subjective Health was measured using participants' self-reported responses. Participants rated their general health based on five categories: (1) excellent, (2) very good, (3) good, (4) fair, or (5) poor ($M = 2.61$, $SD = 0.95$).

Results

We first discuss the results based on the experimental manipulation (Part 1). Then, we present the results collapsed across conditions and explored demographic results because the manipulation was unsuccessful (Part 2).

Part 1

Manipulation check. An independent coder naïve to the hypothesis of the study and conditions read all the open-ended responses to the manipulation. The coder assessed whether participants followed instruction and wrote about a hypothetical interaction with someone on the ladder (0 = definitely not, 1 = somewhat, 2 = definitely yes). In total, 269 of people were coded as 0, 310 of people were coded as 1, and 217 of people were coded as 2. However, the results of the manipulation remained the same whether we excluded people who were coded as 0 or not. Thus, the results were analyzed with the full sample. We found that participants who compared themselves with people at the bottom of the ladder ($M = 5.79$, $SD = 1.75$) versus those who compared themselves with people at the top of the ladder ($M = 5.71$, $SD = 1.72$), $t(794) = 0.68$, $p = .50$, $d = .048$, did not differ on their placement of social class rank. These results indicated that our manipulation of relative social class failed to shift people's sense of their relative class rank.

Order effect. Participants who completed the dictator game first or the income allocation task first did not differ on points given, ($M = 5.69$, $SD = 3.31$ vs $M = 5.53$, $SD = 3.47$), $t(794) = 0.68$, $p = .50$, $d = 0.05$, and charitable donation, ($M = 4.69$, $SD = 3.92$ vs $M = 5.12$, $SD = 4.38$), $t(794) = -1.45$, $p = .15$, $d = -0.10$. In short, there was no order effect on our outcomes.

Dictator game. A one-way ANOVA showed that there was no main effect of experimental conditions on points given, such that participants randomly assigned into the upper ($M = 5.72$, $SD = 3.33$) and lower ($M = 5.51$, $SD = 3.45$) class condition gave an equal number of points, $t(794) = -0.87$, $p = .383$, 95% CI [-0.68, 0.26].

Charitable donation. Similarly, there was no main effect of experimental conditions on charitable donations, such that participants in the upper ($M = 4.64$, $SD = 4.04$) and lower ($M = 5.18$, $SD = 4.27$) class condition reported an equal percentage of income should be allocated to charitable donation, $t(794) = 1.83$, $p = .07$, 95% CI [-0.04, 1.12].

Condition by age. We recoded as the experimental conditions (upper = 1, lower = -1) and standardized age as a continuous variable. We entered condition, age, and condition by age interaction into two separate regressions predicting generosity and charitable donations. There were no significant interactions predicting points given ($\beta = -.11$, $p = .12$, 95% CI [-.25, .03]) or charitable donations ($\beta = .11$, $p = .13$, 95% CI [-.03, .25]).

Part 2.

Given that our manipulation was unsuccessful, we collapsed the data across conditions. Then, we explored the relation between subjective social class, objective social class, and education with generosity, as well as charitable donation.

Correlation. The zero-order correlations are shown in Table 2 separated by age groups: Young is 20-40 (N = 242), middle-aged is 41-60 (N = 262), old is 61-80 (N = 292), and total (N = 796). As shown in Table 2, age was positively correlated with both generosity and charitable donations for all age groups ($r_s = .21/.10$, $p_s < .05$), respectively. Subjective social class was positively correlated with generosity ($r = .13$, $p = .03$) and charitable contributions ($r = .20$, $p < .001$) among middle-aged. Education was positively correlated with charitable contributions among middle-aged ($r = .18$, $p = .004$). Age was correlated with generosity and charitable contributions, with correlations tending to be smaller for middle-aged. Conversely, subjective SES and education were correlated with generosity and charitable contributions, with correlations tending to be smaller in younger and older adults than middle-aged adults. Objective SES was not correlated with generosity or charitable contributions across the three age groups.

Age by subjective SES interaction. We entered age, subjective SES, and the interaction into two separate regression models predicting generosity and charitable donation. We found a main effect of age predicting generosity ($\beta = .21$, 95% CI [.15, .28]; Table 3), and charitable donations ($\beta = .10$, 95% CI [.03, .16]; Table 3). There was no main effect of Subjective SES predicting generosity ($\beta = .06$, 95% CI [-.01, .13]) but it was significant predicting charitable donations ($\beta = .13$, 95% CI [.06, .20]). The interaction between age and Subjective SES predicting generosity ($\beta = .00$, 95% CI [-.07, .07]) and charitable donations ($\beta = -.01$, 95% CI [-.08, .05]) were not significant.

Age by objective SES interaction. We entered age, objective SES, and the interaction into a regression model predicting generosity and charitable donation. We found a main effect of age predicting generosity ($\beta = .21$, 95% CI [.15, .28]; Table 4), and charitable donations (β

= .10, 95% CI [.03, .17]); Table 4). The main effect of objective SES predicting generosity ($\beta = -.04$, 95% CI [-.11, .03]) or charitable donations ($\beta = .004$, 95% CI [-.07, .07]) were not significant. The interactions between age and objective SES predicting generosity ($\beta = .03$, 95% CI [-.04, .10]) and charitable donations ($\beta = .03$, 95% CI [-.04, .10]) were not significant.

Age by education interaction. We entered age, education, and the interaction into a regression model predicting generosity and charitable donation. We found a main effect of age predicting both generosity ($\beta = .22$, 95% CI [.15, .28]; Table 5), and charitable donations ($\beta = .10$, 95% CI [.03, .17]; Table 5). The main effect of education predicting generosity ($\beta = .03$, 95% CI [-.04, .10]) and charitable donations ($\beta = .06$, 95% CI [-.01, .13]) were not significant. We found the interactions between age and education predicting generosity ($\beta = .02$, 95% CI [-.05, .09]) and charitable donations ($\beta = .00$, 95% CI [-.07, .07]) were not significant.

General Discussion

Previous research found that upper-class people behave less prosocially than their lower-class counterparts (Piff et al., 2010). The current research sought to replicate this previous finding. In addition, we also sought to document whether the social class and prosociality link was moderated by age. We found that the results failed to replicate the previous finding that lower class compared to upper class people were more prosocial. Moreover, the results also didn't support our hypothesis that age would moderate the social class and prosociality link.

Why didn't we replicate previous findings? The biggest issue that may explain our non-significant findings was because the manipulation failed to shift people's relative social class standing. Our manipulation of relative social class was a verbatim replication used in the original research (Piff et al., 2010). While this type of writing task is frequently used to activate rank-related states (e.g., Anderson & Galinsky, 2006; Kraus et al., 2009) and was meant to reinforce

the social class manipulation, the manipulation is a more time-intensive inquiry. Recruiting participants from CloudResearch (formerly TurkPrime) for a nominal compensation potentially influenced the effectiveness of the participants' responses. Conducting research online lacks stringent internal controls compared to a lab setting; participants may not be focused on the task, may be distracted, or may be involved in other tasks while completing the questionnaire. Additionally, CloudResearch recruited participants' rate of compensation is affected by the speed with which the questionnaires are completed, further impacting the quality of detailed inquiries.

Nonetheless, we did find some interesting exploratory correlation findings. For example, there was a positive correlation between age and both generosity and charitable donations for all age groups ($r_s = .21/.10, p_s < .05$). These correlations are in-line with prior research that has shown that older people are more prosocial than their younger counter parts (Beadle et al., 2013; Newman, Vasudev, & Onawola, 1985). Also, subjective social class was positively correlated with generosity ($r = .13, p = .03$) and charitable contributions ($r = .20, p < .001$) among middle-aged and education was positively correlated with charitable contributions among middle-aged ($r = .18, p = .004$). These correlation findings are inconsistent with prior research, which showed that social class was inversely associated with prosocial behaviors. Future research should continue to examine the conditions under which lower-class behave more prosocially than their upper-class counter parts or vice versa. For example, higher class individuals reported that pride motivated their prosocial behavior more than lower class individuals, and this association partially accounted for class-based differences in prosociality in public versus private contexts (Kraus & Callaghan, 2016). There may be a more nuanced understanding of the social class and prosociality link.

Limitations

While the use of CloudResearch (formerly TurkPrime) to recruit participants provided a large representative sample along the age spectrum, the use of a crowdsourcing website limited the participant pool to those people that have internet access. Using a technology-based survey limits participants to people with computers and proficient computer skills, potentially discounting lower SES and older persons.

The effectiveness of the manipulation, or lack thereof, is directly related to the quality of participant's responses to the manipulation instrument. Participant efforts could be improved by conducting the research study in a laboratory environment, providing a more controlled environment (Falk & Heckman, 2009). Alternatively, participant efforts could be improved through enhanced incentives online (Porter & Whitcomb, 2003; Wolff, 2016). Emphasizing the importance of their participation, stressing the value of accurate and complete responses, and increasing the compensation, as well as setting a minimum time requirement for responding to the written portion of the manipulation instrument would incentivize participants (Deci et al., 1999).

Conclusion

Class-based prosocial behavior research found that upper-class people behave less prosocially than their lower-class counterparts; that research has been limited to younger people (See Table 2). Older adults prioritize helping people in need, exhibiting prosocial behavior (Beadle et al., 2013; Newman, Vasudev, & Onawola, 1985). Consistent with this, older adult's commitment to helping others exceeds that of younger adults (Hoppmann, Coats, & Blanchard-Fields, 2008) and increases as people age (Weiner and Graham, 1989). Despite these findings, we were unable to show that age affects the socioeconomic status and prosocial behavior

relationship. Future research should refine and build on the current work to gain an understanding of the moderating effects age has on class-based prosocial behavior and clarify the unique worldviews of older upper and lower class individuals.

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Appendix A



Figure 1: The MacArthur Scale of Subjective Social Status

Table 1:

Socioeconomic Status and Prosocial Behavior Study Participant Pool Ages

Article	Study	Independent Variable	Dependent Variable	Number of Participants	Mean Age	SD
Having less, giving more: The influence of social class on prosocial behavior	1	Subjective SES	Dictator game	115	22.57	7.95
	4	Objective SES	Duration of helping task selected	91	21.64	3.05
The Interrelations Between Social Class, Personal Relative Deprivation, and Prosociality	1	Relative Social Status	Social Value Orientation measure	564	34.36	10.84
	2	Relative Social Status	Aspiration Index scale	392	32.6	10.9
	3	Relative Social Status	Dictator game	546	33.68	11.42
	4	Relative Social Status	Communal Orientation Scale	338	31.18	10.33
	5	Relative Social Status	Communal Orientation Scale	393	33.72	11.02
Class impressions: Higher social class elicits lower prosociality	1	Relative Social Status	Dyadic SoMi paradigm with targeted social class	226	37.44	13.63
	2	Relative Social Status	Dyadic SoMi paradigm with targeted social class	300	36.72	12.64
	3	Relative Social Status	Dyadic SoMi paradigm with targeted social class	450	34.54	11.49
	4	Relative Social Status	Dyadic SoMi paradigm with targeted social class	442	35.43	11.5
Does Low (vs. High) Subjective Socioeconomic Status Increase Both Prosociality and Aggression?	1a	Subjective SES	Basic empathy scale	451	33.8	11.4
	1b	Subjective SES	Compassion questionnaire	522	25.9	8.9
	2a	Subjective SES	Percentage of income donated to charity	375	36	11.5
	2b	Subjective SES	Empathy response to an essay	398	39.6	12.5
	2c	Subjective SES	Empathy response to an essay	370	38	12
Social status modulates prosocial behavior and egalitarianism in preschool children and adults	1	Subjective SES	Unsolicited helping behavior on a minor task	44	20.3	2.58
A Large-Scale Test of the Effect of Social Class on Prosocial Behavior	1	Objective SES	Percentage of income donated to charity	9363	42.66	22.23
	3	Objective SES	Frequency of charitable donations	3975	46.87	17.37
	4	Objective SES	SOEP data single item question	33072	49.43	17.63
	5	Objective SES	Number of occurrences of volunteering	3983	46.89	17.38
	6	Objective SES	Number of occurrences of volunteering	32257	45.25	17.04
	7	Objective SES	Number of occurrences of helping	3902	46.78	17.33
	8	Objective SES	Trust game	1421	50.34	17.14
	Reciprocity belief and gratitude as moderators of the association between social status and charitable giving	1	Objective SES	Amount of charitable giving	315	32.94

Note. Participants across samples average age ($M = 36.35$, $SD = 12.31$).

Table 2

Correlations among Subjective SES, Objective SES, Education, Generosity, and Charitable Contributions Separated by Age Groups

	Age	Subjective SES	Objective SES	Education	Generosity	Charitable Contributions
Subjective SES	-.11/.03/.07/.01					
Objective SES	-.01/-.03/-.06/-.07	.53*/.59*/.57*/.56*				
Education	.09/.04/-.01/-.04	.33*/.42*/.30*/.35*	.33*/.42*/.31*/.36*			
Generosity	.08/.05/.08/.21*	.02/.13**/.03/.06	-.07/-.04/-.05/-.05	.02/.04/.04/.03		
Charitable Contributions	.08/-.01/.002/.10**	.09/.20*/.09/.13*	-.03/.04/-.004/-.003	.02/.18**/.005/.06	.09/.23*/.09/.15*	

Note. Young / Middle / Old / Total. ** $p < .05$, * $p < .001$

Table 3

Age by subjective SES Multiple Regression Analysis Predicting Generosity and Charitable Contributions

Predictor	Estimate	SE	95% CI		p
			LL	UL	
Generosity					
Intercept	2.71	0.50			< .001
Age	0.05	0.008	0.146	0.282	< .001
Subjective SES	0.12	0.067	-0.007	0.129	.078
Age x Subjective SES	0.00	0.004	-0.067	0.069	.987
Charitable Contributions					
Intercept	2.29	0.616			< .001
Age	0.03	0.010	0.026	0.163	.007
Subjective SES	0.31	0.083	0.060	0.198	< .001
Age x Subjective SES	-0.00	0.005	-0.083	0.055	.692

Table 4

Age by objective SES Multiple Regression Analyses Predicting Generosity and Charitable Contributions

Predictor	Estimate	SE	95% CI		P
			LL	UL	
Generosity					
Intercept	3.55	0.510			< .001
Age	0.05	0.008	0.143	0.280	< .001
Objective SES	-0.07	0.062	-0.106	0.030	.273
Age x Objective SES	0.003	0.004	-0.044	0.096	.438
Charitable Contributions					
Intercept	3.56	0.638			< .001
Age	0.03	0.010	0.026	0.165	.007
Objective SES	0.01	0.077	-0.067	0.072	.939
Age x Objective SES	0.004	0.005	-0.043	0.097	.446

Table 5

Age by Education Multiple Regression Analyses Predicting Generosity and Charitable Contributions

Predictor	Estimate	SE	95% CI		<i>p</i>
			<i>LL</i>	<i>UL</i>	
Generosity					
Intercept	2.72	0.639			< .001
Age	0.05	0.008	0.215	0.147	< .001
Education	0.16	0.165	0.035	-0.034	.318
Age x Education	0.01	0.011	-0.046	0.092	.509
Charitable Contributions					
Intercept	2.48	0.798			.002
Age	0.03	0.010	0.098	0.029	.006
Education	0.37	0.206	0.064	-0.005	.070
Age x Education	.0001	0.014	-0.070	0.070	.993