AMERICAN PSYCHOLOGICAL ASSOCIATION

Journal of Experimental Psychology: General

ISSN: 0096-3445

2023, Vol. 152, No. 10, 2747–2774
https://doi.org/10.1037/xge0001423

Economic Inequality Reduces Sense of Control and Increases the Acceptability of Self-Interested Unethical Behavior

Christopher To[1], Dylan Wiwad[2], and Maryam Kouchaki[3]
[1] Department of Human Resource Management, Rutgers University
[2] Research and Analytics, Slack Technologies, San Francisco, California, United States
[3] Department of Management and Organizations, Northwestern University

Societies worldwide are witnessing higher levels of economic inequality. While prior work has examined ethical judgments toward inequality itself (e.g., "is inequality unethical?"), less is known about how inequality shapes judgments of unethical behavior (e.g., "is unethical behavior more acceptable?"). In two correlational studies, we find that higher objective (Study 1; $n = 127{,}953$) and subjective (Study 2; $n = 806$) inequality is associated with greater acceptability of self-interested unethical behavior. In Studies 3a–6b (total $N = 4{,}851$; preregistered), we manipulated perceived inequality and test several mediating pathways. Results point toward the importance of sense of control as a mechanism: Under conditions of high inequality, individuals report a lower sense of control, which increases the acceptability of self-interested unethical behaviors. As a supplement, we also explore associations regarding why high inequality reduces sense of control (reduced perceptions of social mobility) and why sense of control is associated with greater acceptability of unethical behavior (greater situational attributions). Overall, our results suggest inequality changes ethical standards by reducing one's sense of control, providing evidence for another pathway through which inequality harms societies.

Public Significance Statement
This study advances the idea that higher levels of economic inequality reduce our sense of control and increase the acceptability of unethical behavior. This reflects a potentially serious problem because many of society's basic cornerstones—cooperation, interpersonal relations, trust, cohesion—are undermined when unethicality is more acceptable. Mitigating these downsides starts as an economic issue, yet may have deeper roots based in one's psychological sense of control.

Keywords: economic inequality, sense of control, ethical judgments

Supplemental materials: https://doi.org/10.1037/xge0001423.supp

Economic inequality is a growing concern to academics, politicians, and laypeople, with nearly half of the countries across the world experiencing a growth in inequality since 2000 (Savoia, 2017). Inequality—or the concentration of more wealth in fewer hands—continues to grow (Payne, 2017; Sokoloff & Engerman, 2000) with former President Obama referring to economic inequality as the "defining challenge of our time" (Obama, 2013). As such, a wealth of research has focused on understanding the psychosocial consequences of inequality for individuals and society's ability to function (Buttrick & Oishi, 2017; Wilkinson & Pickett, 2009).

One growing area of interest is the relationship between inequality and unethicality (e.g., Choe, 2008; Franks & Scherr, 2019; Neville, 2012). Earlier work in economics and criminal justice finds that inequality is associated with higher unethical behavior; for example, inequality is associated with higher financial crimes (Brush, 2007), property crime and theft (Choe, 2008), and even violent crimes

This article was published Online First June 15, 2023.
Christopher To https://orcid.org/0000-0003-1861-6957
These data were previously presented at the 2021 Annual Meeting of the Society for Personality and Social Psychology and the 2021 Academy of Management Annual Meeting.

We would like to sincerely thank Eliot Smith for insightful and thoughtful feedback during the review process. We would also like to thank Jillian Jordan for comments on an earlier draft, and Yin Li for her research assistance in testing our code. There is no conflict of interest for this article.

All appendices, data, and code (for primary studies) are available on https://osf.io/arj4q/.

Chris To served as lead for conceptualization, data curation, formal analysis, methodology, visualization, writing–original draft, writing–review and editing. Dylan Wiwad served in a supporting role for data curation, formal analysis, methodology, visualization, writing–review and editing. Maryam Kouchaki served as lead for supervision and served in a supporting role for conceptualization, funding acquisition, methodology, writing–review and editing.

Correspondence concerning this article should be addressed to Christopher To, Department of Human Resource Management, Rutgers University, 94 Rockafeller Road (Office 206), Piscataway, NJ 08854, United States. Email: Christopher.to@rutgers.edu

(Hsieh & Pugh, 1993). More recent work from social psychology explores when inequality is perceived as more or less ethical; for example, perceptions of the ethicality of inequality are shaped by individual differences and political motivations (e.g., Franks & Scherr, 2019; Kteily et al., 2017; Starmans et al., 2017). Here, we explore a third aspect of the relationship between inequality and ethicality: Does economic inequality make unethical behavior relatively more acceptable? By unethical behaviors, we refer to self-serving behaviors which violate accepted standards or rules (Bazerman & Gino, 2012; Gino & Ariely, 2012; Shu et al., 2011), including cheating, self-interested lying, and stealing. Thus, while prior work has examined ethical judgments toward inequality itself, we consider how inequality shapes judgments of self-interested unethical behavior.

Pragmatically, what is at stake is a basis of smooth societal functioning. Enforcing ethicality and honesty is a cornerstone to successful interpersonal relations (e.g., Haidt & Kesebir, 2010)—people cannot successfully interact if a fundamental basis of cooperation is undermined, and unethicality is more acceptable (Ayal et al., 2016; Ayal & Gino, 2011). While behavioral ethics has drawn attention toward various features that increase the acceptability of unethical behavior (e.g., Gino & Bazerman, 2009), we highlight perceptions of inequality as a societal feature. Below, we consider how inequality alters the acceptability of unethical behavior.

Ethical Judgments and Sense of Control

Traditionally, the acceptability of unethical behavior has been conceptualized as a product of an actor's internal control and external situation. This framework of considering an actors' control stems from basic models in attribution theory (e.g., Heider, 1958), whereby the acceptability of unethical behavior is judged based on the actor's personal control (Darley & Shultz, 1990; Fincham & Shultz, 1981; Shaver, 1985; Shultz et al., 1986): The more control a person is believed to have over their behaviors, the less acceptable unethicality is; conversely, the less control one has over their behavior, the more acceptable unethicality is (Cushman, 2008; Malle et al., 2014; Monroe et al., 2017; Reeder et al., 2002; Woolfolk et al., 2006).

As such, how much control we believe an actor has over their behavior provides a useful framework to explain judgments of unethical behavior. Those with a lower sense of control—which refers to beliefs about the extent to which people can shape the course of outcomes (Lachman, 1986; Lachman & Weaver, 1998)—believe that their own and others' behaviors are controlled by situational factors (Kraus et al., 2009, 2012; Sirola & Pitesa, 2018; Stephens et al., 2014). For example, those lower in sense of control report more contextual explanations for others' behaviors (e.g., why a supermarket cashier was irritated; Beauvois & Dubois, 1988; Kraus et al., 2012) and for broader social outcomes (e.g., why one was laid off at work or received a promotion; Kraus et al., 2009; Sirola & Pitesa, 2018). Likewise, those experimentally induced to feel lower in control report greater contextual explanations for an others' behavior (e.g., why an author was writing an article regarding the opposition of nuclear power; Pittman & Pittman, 1980).

As per this attributions framework, when one believes that their own and others' behaviors are controlled by situational factors outside of their control, they should find unethical behaviors more acceptable (Cushman, 2008; Malle et al., 2014; Monroe et al., 2017; Reeder et al., 2002; Woolfolk et al., 2006). Indeed, correlational studies suggest that people who have less control develop less extreme reactions to unethical behaviors (Cornwell & Higgins, 2019). Work regarding free will makes a similar point—those who believe they (and others) have less agency punish unethicality less harshly, presumably because they believe behavior driven by situational forces are less blameworthy (Genschow et al., 2017; Martin et al., 2017; Shariff et al., 2014). Indeed, social projection theory suggests that people generalize from their own experiences when making inferences on what others' experiences and motivations are (e.g., Cronbach, 1955; Ross et al., 1977). Cumulatively, this suggests those with a lower sense of control develop situational attributions for others' behaviors (Kraus et al., 2009, 2012; Sirola & Pitesa, 2018; Stephens et al., 2014), and with a lower sense of control should also find unethicality more acceptable.

Inequality and Sense of Control

The question then becomes—how does inequality shape one's sense of control? We expect inequality to create a worldview where one has a relatively lower sense of control. One's sense of control is determined by the extent to which people believe one can shape important domains in their life (Lachman, 1986; Lachman & Weaver, 1998). One domain that people care about is improving their social mobility, which refers to the degree to which individuals living in that society can change their socioeconomic status (SES) through personal endeavors (Day & Fiske, 2017). Inequality tends to decrease social mobility, both in the objective sense (Andrews & Leigh, 2009) and subjectively (McCall et al., 2017); experiments indicate that increasing perceptions of inequality also increases the salience of external barriers that reduce social mobility (e.g., family wealth, well-educated parents; McCall et al., 2017), thus reducing one's subjective sense of mobility (Davidai, 2018). Such salience of external barriers would reduce one's feelings of control, as one perceives important outcomes in their life are more controlled by external features. Prior work indirectly supports this: Inequality lowers people's feelings of socioeconomic standing (Sánchez-Rodríguez, Jetten, et al., 2019), and lower socioeconomic standing also reduces one's sense of control (Kraus et al., 2009). This suggests that the reduced perceived social mobility associated with inequality will also reduce one's sense of control over their lives.

We can also consider prior conceptual work to support the notion that inequality is associated with a lower sense of control. One primary psychological consequence of inequality is that it creates feelings of relative deprivation (Payne et al., 2017; Smith & Pettigrew, 2014). Explicit in the definition of relative deprivation is that ones' position cannot be improved without intervention—that one has little control and influence in changing their current standing or life (Smith et al., 2012). Thus, despite little empirical work directly linking inequality to a reduced sense of control (c.f., Lynch et al., 2001), prior theory suggests (and is in fact predicated on the notion) that inequality reduces feelings of control.

Overall, this theorizing predicts that inequality reduces one's sense of control and increases the acceptability of unethical behavior. Indeed, past work touches upon various aspects of our theorizing. For example, sociological work on anomie and strain theory

makes similar predictions whereby inequality increases the acceptability of unethical behavior. Anomie, which refers to a state of society characterized by social dysfunction (Sprong et al., 2019), is understood to be associated with perceptions that a social system and its moral values and controls are in a state of decline (Teymoori et al., 2017). Inequality and subsequent perceptions of anomie are argued to produce a state of normlessness due to a lack of social control or dysfunctionality of societal control mechanisms (Çam & Irmak, 2014; Merton, 1938). We contend that it is this reduced sense of control in one's life that can increase the acceptability of unethical behavior. Other work suggests that inequality increases situational attributions for social outcomes and behaviors, and reduced perceptions of social mobility (McCall et al., 2017). Indeed, the experience of relative deprivation increases situational attributions of economic outcomes (Davidai, 2018, 2022), and less prosperous economic environments lead to a reduced sense of control (Sirola & Pitesa, 2018). This prior work indirectly supports the idea that as inequality rises, people develop a lower sense of control and greater situational attributions for their own and others' behaviors; such attributions may help explain why inequality increases the acceptability of unethicality.[1]

Additional Mechanisms

Of course, we do not contend that sense of control is the only mechanisms that can explain the association between inequity and ethical judgments. We reviewed the research on the psychological consequences of inequality and identified at least two other pathways, which may be relevant to ethical judgments—the expected commonality of others' unethical behavior (Neville, 2012) and competitiveness (Sommet et al., 2019). We expand on these explanations below and then offer tests of each mechanism in our studies.

Another line of reasoning is that perceived inequality increases actual unethicality, which may produce expectations that unethical behavior is more common and normatively acceptable. For various reasons related to relative deprivation (Hsieh & Pugh, 1993) or lack of trust (Neville, 2012), inequality is associated with higher levels of unethicality in the lab (Gino & Pierce, 2009) and in the field in terms of academic cheating (Neville, 2012) and crime rates (Choe, 2008). When unethical behavior is common, people may view others' unethical behavior as more normative and acceptable (Cialdini & Goldstein, 2004): As unethical behaviors become more frequent, unethicality can "become an integral part of day-to-day activities to such an extent that individuals may be unable to see the inappropriateness of their behaviors" (Ashforth & Anand, 2003, p. 4). Overall, this work suggests people may view unethical behaviors as more acceptable if they are common and expected.

Another line of reasoning is that people are more competitive when they perceive high amounts of inequality (Wilkinson & Pickett, 2009) and therefore see unethicality as more acceptable. For example, recent surveys and experiments show an association between perceived inequality and inferences that competitiveness is normative (Sánchez-Rodríguez, Willis et al., 2019; Sommet et al., 2019). When norms are competitive, self-interested unethical behaviors come to be more expected (e.g., Pierce et al., 2013; To et al., 2020). Consistent with this, competitiveness decreases people's moral awareness—or the extent to which they detect ethical issues in others' behavior—which increases the acceptability of otherwise unethical behaviors (Butterfield et al., 2000). Thus, this line of work suggests competitiveness may also provide another pathway for how inequality increases others' unethicality.

In sum, a review of the inequality literature indicates multiple reasons for why inequality may increase the acceptability of unethical behavior. Below, across nine studies (eight preregistered), we provide tests of this hypothesis and its mechanisms.

Overview of Studies

We first provide correlational evidence utilizing responses from the World Values Survey (WVS) (Study 1; $N = 127{,}953$) to establish how country-level inequality covaries with the acceptability of unethical behavior. Study 2 provides a correlational extension using subjective perceptions of inequality in the United States (Study 2; $N = 808$). We then replicate our effects in an experimental context, finding that perceptions of high inequality increase the acceptability of unethical behavior in comparison to low inequality (Study 3a; $N = 352$) and a neutral control (Study 3b; $N = 328$). Then, we test for the joint causal effect of inequality and sense of control in a moderation-by-process design by manipulating our mechanism of sense of control (Study 4a; $N = 1{,}375$) and also test for potential moderation via self-other differences (Study 4b; $N = 646$). Finally, we explore correlations for why sense of control is associated with greater acceptability of unethical behavior (greater situational attributions; Study 5; $N = 594$), and why inequality reduces one's sense of control (perceived social mobility; Studies 6a and 6b; $N = 1{,}556$). Although not theorized a priori, we also test for moderation by SES and, when possible, test for perceived societal unfairness as an alternative mechanism.

Overall, we find that self-interested unethical behaviors are judged as more acceptable when inequality is high. We find inconsistent support for competitiveness and expected frequency of unethical behavior as mediating mechanisms. Instead, a lower sense of control appears to be the most consistent mechanism, and manipulating sense of control in a moderation-by-process design helps provide further support for the causal role of sense of control. Thus, while there appear to be multiple potential pathways for how inequality affects the acceptability of unethicality, the current work rules in sense of control as one mechanism.

Transparency and Demographics

Except for Study 1 (responses from the WVS), all study sample sizes and measures were preregistered. We report all experimental conditions, and all data for Studies 2–6b were collected until our preregistered sample sizes were reached or surpassed. As reported in the online supplemental material, our tests were adequately powered. We provide all the data, materials, and preregistrations at https://osf.io/arj4q/. We asked for respondent sex using a close-ended choice between "male" and "female" (Studies 2a, 4a, 6a) or "male," "female," and "other" (Studies 3a, 3b, 4b, 5, 6b). We

[1] It is worth clarifying that we are discussing the acceptability of unethicality in the relative sense, and not in the absolute sense. Self-interested dishonesty (e.g., cheating on taxes, lying) tends to be universally unacceptable in the absolute sense (Haidt et al., 1993; Mikhail, 2007; Schein & Gray, 2018); however, our arguments suggest such unethicality is relatively more acceptable under conditions of high inequality. That is, our predictions focus on the relative acceptability of unethical behavior, rather than absolute judgements of whether unethicality is acceptable.

asked for ethnicity using a close-ended selection between "White," "Southeast Asian," "East Asian," "South Asian," "Middle Eastern," "Native American," "African American/Black," "Hispanic," "Mixed," and "Other" (Studies 3a, 3b, 4b).

Study 1: Evidence From Observational Data

Method

As a first test of our question, we merged data from the Standardized World Income Inequality Database (SWIID), the WVS, and the Penn World Table (PWT). The SWIID is a database of Gini indices for 196 countries from 1960 to the present (Solt, 2019); it contains two measures of country-level inequality: (a) disposable income inequality (i.e., gross income minus taxes and transfers paid), and (b) market income inequality (i.e., gross income before taxes and transfers; Solt, 2019). The WVS is a popular survey representing samples from roughly 90% of the world's population between 1981 and 2014; it contains measures regarding the acceptability of dishonest behavior (e.g., "cheating on taxes"; 1 = *Never justifiable*; 10 = *Always justifiable*) and proxies for each of our mediators. The PWT is a standardized database on economic output and development covering 182 countries since 1950 (Feenstra et al., 2015); it contains control variables for country-level economic development including gross domestic product (GDP) per capita, and human capital index.

To construct our dataset, we took individual-level survey responses and demographics (from the WVS) and merged in country-level data on inequality (from the SWIID) and economic development (from the PWT). All data were merged during the exact year a participant was surveyed (e.g., if a response was completed in 1983, we used inequality measures from 1983).

Participants

Individual-level responses (i.e., ethical judgments, control variables) were obtained from the 2014 multiwave version of the WVS. For the combination of variables that were of interest (described below; ethical judgments, mediators, and demographics), 124,806 responses were available. The responses came from 70 countries across an 18-year period.

Measures

In the WVS, each year, respondents were asked to report whether several unethical behaviors were unjustifiable. To maximize sample size, we selected the four behaviors that were repeated during every wave of the survey—that is, "avoiding fare on public transit," "cheating on taxes," "accepting a bribe," and "claiming government benefits you are not entitled to" (1 = *Never justifiable*; 10 = *Always justifiable*). We averaged these items to create an aggregate measure of unethical acceptability ($\alpha = .75$).

We assessed our potential mediators using proxies from prior work. To measure sense of control (Kakkar & Sivanathan, 2017), we used a question related to participant's personal control over their life: "How much freedom of choice and control you feel you have over the way your life turns out" (1 = *No choice at all*; 10 = *A great deal of choice*). To measure expectations of unethical behavior, we used a proxy for whether participants thought others would behave opportunistically; expectations of whether others will behave opportunistically are foundational for generalized trust (Uslaner, 2002) ("Generally speaking, would you say that most people can be trusted or that you need to be very careful in dealing with people?"; 1 = *Most people can be trusted*; 2 = *Need to be very careful*). To measure competitiveness, we use zero-sum construal as a proxy. Individuals with a generalized zero-sum construal view the world more competitively and behave as such (Różycka-Tran et al., 2015). Participants were asked to indicate to what degree they view success as zero-sum (1 = *People can only get rich at the expense of others*; 10 = *Wealth can grow so there is enough for everyone*). We reverse-coded this item such that higher scores represented higher competitiveness.

Income Inequality

We obtained country-level inequality through the SWIID. The Gini coefficient was calculated in two ways: Based on (a) disposable income (i.e., inequality in income minus taxes and transfers paid) and (b) market income (i.e., inequality in income before taxes and transfers; Solt, 2019). The two measures of inequality were highly correlated ($r = .65$).

Control Variables

We utilized demographic and individual-level controls from the WVS, including a respondent's age, sex, income, and political orientation. To address concerns regarding individuals' trust in structures intended to reduce crime, we controlled for respondents' confidence in the courts, police, and government ($\alpha = .80$). We also controlled for country-level variables including the logged GDP expenditure per capita, and human capital index, which refers to the quality of a country's education and health systems. These variables capture a country's wealth and economic development and were taken from the PWT. We account for yearly differences using a linear trend, although results replicate using dummy variables. Results are robust to the inclusion and exclusion of controls.

Results

Since data were collected in different countries, we accounted for the nested structure of the data. We estimated multilevel models, nesting individual responses within countries. Country- and individual-level variables were group mean centered (Bell & Jones, 2015). We first fit a null intercept-only model and found substantial country-level variability in ethical judgments (Intraclass correlation = 11.1%), thus warranting a multilevel model approach. Descriptive statistics and correlations between all variables are provided in Table 1.

Total Effects

In Table 2, Models 1–2 display the relationship between income inequality and acceptability of unethical behavior. There was a positive relationship, both when inequality was measured through disposable income, $\beta = 0.04$, $p < .001$ (Model 1), and market income, $\beta = 0.04$, $p < .001$ (Model 2). This suggests income inequality is associated with a higher acceptability of unethical behavior. Models 3–4 display the effects of income inequality on sense of control. There was a negative relationship, both when inequality was measured through disposable income, $\beta = -0.02$, p

Table 1
Study 1: Correlations and Descriptive Statistics

Variable	*M*	*SD*	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Acceptability of unethical behavior	2.36	1.70	—												
2. Gini (market)	45.76	7.95	.11**	—											
3. Gini (disposable income)	37.10	8.79	.14**	.65**	—										
4. Expectations of dishonesty	1.72	0.45	.04**	.07**	.20**	—									
5. Competitiveness	7.06	2.22	−.03**	.04**	.04**	−.04**	—								
6. Sense of control	4.63	2.66	.02**	−.03**	−.07**	.00	−.12**	—							
7. Subjective SES	4.78	2.35	.01*	−.04**	−.08**	−.10**	.14**	−.05**	—						
8. Sex	1.50	0.50	−.02**	−.01	−.02**	.00	−.02**	−.03**	−.03**	—					
9. Age	41.85	16.23	−.15**	−.04**	−.20**	−.07**	−.03**	−.01**	−.08**	−.01**	—				
10. Political orientation	5.68	2.31	.00	−.04**	.05**	.02**	.09**	−.07**	.06**	−.02**	.01**	—			
11. Confidence in police and government	2.44	0.72	−.07**	.02**	.00	−.13**	.07**	−.04**	.05**	.00	.04**	.11**	—		
12. Population	3.50	1.56	−.03**	.04**	.35**	.05**	.01**	.01**	−.06**	−.03**	−.06**	.06**	−.02**	—	
13. Human capital index	0.98	0.26	.01**	−.10**	−.53**	−.16**	.05**	−.01**	.08**	.04**	.26**	−.06**	−.03**	−.31**	—
14. Real GDP per capita	9.51	0.98	−.05**	−.01**	−.46**	−.18**	.10**	−.01**	.07**	.03**	.25**	−.08**	−.01**	−.15**	.81**

Note. Human capital index and Real GDP per capita were logged; statistics are prior to group mean centering; political orientation (1 = *Left*; 10 = *Right*); sex (1 = *Male*; 2 = *Female*). SES = socioeconomic status; GDP = gross domestic product.
*$p < .05$. **$p < .01$.

< .001 (Model 3), and market income, β = −0.03, $p < .001$ (Model 4). This suggests that inequality is associated with a lower sense of control.

Models 5–6 display the effects of income inequality on expectations of unethical behavior. There was a positive relationship, both when inequality was measured through disposable income, β = 0.02, $p < .001$ (Model 5), and market income, β = 0.02, $p < .001$ (Model 6). This suggests that inequality is associated with greater expectations of dishonesty.

Models 7–8 display the effects of inequality on competitiveness. There was no significant relationship between inequality and competitiveness when measured through disposable income, β = 0.00, $p = .161$ (Model 7) or market income, β = 0.01, $p = .067$ (Model 8). This suggests that inequality was unrelated to competitiveness (as measured through our proxy).

Indirect Effects

We test for mediation in Models 9–10. We regressed acceptability of unethical behaviors onto income inequality, our three potential mediators, and our control variables. Sense of control had a negative relationship with the acceptability of unethicality, both when inequality was measured through disposable income, β = −0.03, $p < .001$ (Model 9), and market income, β = −0.03, $p < .001$ (Model 10). This suggests those with a lower sense of control saw unethical behavior as more acceptable.

Expectations of dishonesty was not associated with the acceptability of unethicality, both when inequality was measured through disposable income, β = 0.00, $p = .691$ (Model 9), and market income, β = 0.00, $p = .646$ (Model 10). This suggests that expectations of dishonesty (as measured through our proxy) did not affect ethical judgments.

Competitiveness was positively associated with acceptability of unethicality, both when inequality was measured through disposable income, β = 0.04, $p < .001$ (Model 9), and market income, β = 0.04, $p < .001$ (Model 10). Overall, this suggests unethical behaviors are more acceptable when one is lower in sense of control and higher in competitiveness.

We computed bootstrapped bias-corrected confidence intervals for the indirect relationship in a multiple mediation analysis (see Figure 1). When inequality was measured through disposable income, the relationship between inequality and acceptability of unethicality was significantly mediated via sense of control (95% confidence interval [95% CI] = [.00030, .00088]), but not competitiveness (95% CI = [−.00006, .00036]) or expected commonality of unethicality (95% CI = [−.00072, .00035]). When inequality was measured through market income, the relationship between inequality and acceptability of unethicality was significantly mediated via sense of control (95% CI = [.00030, .00088]), but not competitiveness (95% CI = [−.00072, .00030]) or expectations of unethicality (95% CI = [−.00006, .00036]).[2] Overall, this suggests inequality is associated with a reduced acceptability of unethical behavior, via a lower sense of control.

Supplemental Analyses

In the online supplemental material, we report several additional analyses. First, we replicate our models without controls. Second, we run additional model specifications, including using country fixed-effects (i.e., dummy variables for each country) to account for unobservable time-invariant differences between countries, adding country grouped-means into our random-effects models to account for between-groups differences (Bell & Jones, 2015), and logging the Gini coefficient. Third, we found the relationship between inequality and our outcome variables was not moderated by SES. Finally, we conducted mediation analyses with each mediator independently (rather than simultaneously, as above) and find similar patterns.

[2] We note that the numerical estimates of our indirect effects are small, and we suspect this is due to the inclusion of multiple controls and mediators, which may reduce indirect effect sizes. Specifically, some variance in the outcome variable gets explained via control variables and additional mediators leaving only a restricted range of the variance left to explain by the focal mediator (Walters, 2019). Indeed, as seen in the online supplemental material, using fixed effects with no control variables increased our numerical effect sizes from β = .03 to β = .24. The fact that these indirect effects are still significant despite these additional factors suggests these indirect effects are meaningful.

Table 2
Study 1: Regressions

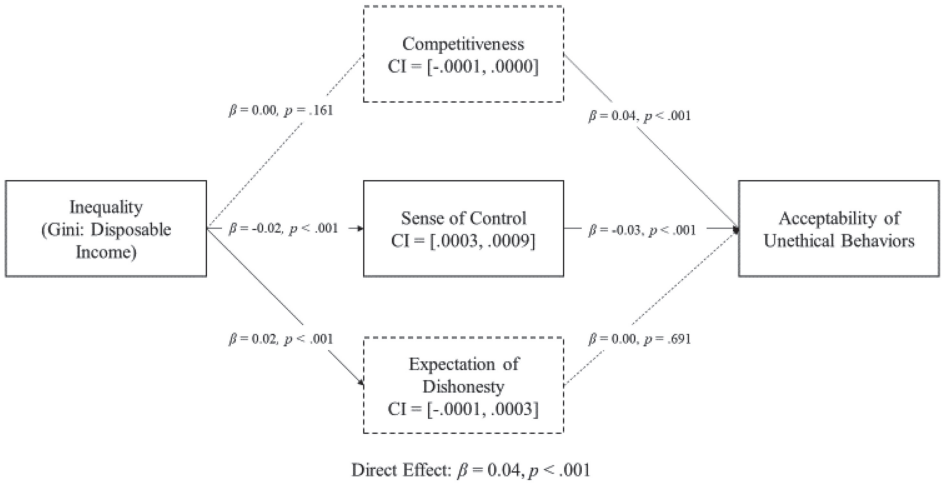
	Dependent variable:									
	Acceptability of unethical behavior		Sense of control		Expectations of dishonesty		Competitiveness		Acceptability of unethical behavior	
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Yearly trend	−0.01	−0.03**	0.12***	0.14***	−0.06***	−0.07***	−0.06***	−0.06***	−0.002	−0.02*
Subjective SES	0.02***	0.02***	0.12***	0.12***	−0.06***	−0.06***	−0.06***	−0.06***	0.02***	0.02***
Sex	−0.03***	−0.03***	−0.02***	−0.02***	0.003	0.003	−0.03***	−0.03***	−0.03***	−0.03***
Age	−0.13***	−0.13***	−0.03***	−0.03***	−0.002	−0.002	−0.02***	−0.02***	−0.13***	−0.13***
Political orientation	0.01***	0.01***	0.07***	0.07***	0.02***	0.02***	−0.05***	−0.05***	0.01***	0.01***
Confidence in police and government	−0.03***	−0.03***	0.06***	0.06***	−0.09***	−0.09***	−0.05***	−0.05***	−0.03***	−0.03***
Country population	0.03***	0.03***	−0.01**	−0.02***	0.01+	0.01*	−0.03***	−0.03***	0.03***	0.03***
Human capital index	0.09***	0.09***	−0.02***	−0.02***	0.03***	0.03***	0.03***	0.03***	0.09***	0.09***
Real GDP per capita	−0.06***	−0.06***	−0.01**	−0.02***	0.04***	0.04***	0.09***	0.09***	−0.07***	−0.06***
Gini (disposable income)	0.04***		−0.02***		0.02***		0.004		0.04***	
Gini (market income)		0.04***		−0.03***		0.02***		0.01+		0.04***
Sense of control									−0.03***	−0.03***
Expectations of dishonesty									0.04***	0.04***
Competitiveness									0.001	0.001
Log likelihood	−234,336	−234,361	−269,809	−269,794	−69,104	−69,108	−295,008	−295,008	−234,143	−234,169

Note. Coefficients are standardized. SES = socioeconomic status; GDP = gross domestic product.
$^{+}p < .1$. $^{*}p < .05$. $^{**}p < .01$. $^{***}p < .001$.

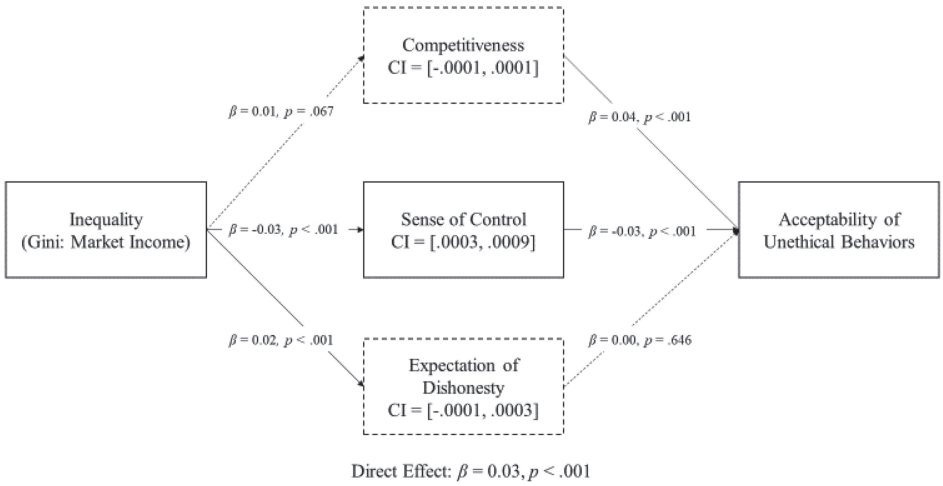
Figure 1

Study 1: Simultaneous Mediation Analysis

a) Inequality (Disposable Income)



b) Inequality (Market Income)



Study 2: Correlational Evidence

Study 1 provides a generalizable test using survey responses from samples representing 90% of the world's population, across a range of nationalities, demographics, and time periods. Study 2 provides several extensions. First, we conducted a survey measuring subjective levels of inequality, while utilizing a different measure of ethical judgments (Gino & Margolis, 2011). Second, we also measured sense of control using a validated scale, given evidence of its role from Study 1. Third, we also include a measure of situational attributions to assess why sense of control is associated with the acceptability of unethical behavior. Although our primary focus is on sense of control, assessing situational attributions can help explain why a reduced sense of control is associated acceptability of unethical behavior.

Method

Participants

We did not have any a priori effect size and decided to recruit 800 participants. This gave us adequate power ($\beta = .80$, $\alpha = .05$) to detect effect sizes as small as $r = .098$ (a small effect size). We successfully recruited 808 participants from Amazon's Mechanical Turk (344 men, 464 women; $M_{age} = 43.86$, $SD = 13.33$). We did not preregister any exclusions, so all respondents were kept in the dataset.

Table 3
Study 2: Correlation and Descriptive Statistics

Variable	*M*	*SD*	1	2	3
1. Subjective inequality	2.76	1.18			
2. Acceptability of unethical behavior	2.68	1.27	.11**		
3. Sense of control	4.91	1.10	−.11**	−.19**	
4. Situational attributions	2.19	1.03	.16**	.24**	−.36**

**$p < .01$.

Subjective Inequality

We adopted a previously used measure of subjective inequality (Kteily et al., 2017). Participants viewed an image of a ladder with ten rungs, where each rung had various bags of money. Participants were told each rung represented 10% of the people in a fictitious society and the bags of money represented wealth. There were five ladders, and each ladder depicted a different level of wealth inequality. For example, in the most unequal ladder, most of the money bags were held by the top 10%, whereas the bottom 10% held very few money bags. In the most equal ladder, money bags were more evenly distributed.

Participants selected which ladder they believed best represented the wealth distribution of their local area. Respondents then briefly explained why the image they selected best represented the area they lived via an open-ended response.

Ethical Judgments, Sense of Control, and Attributions

To assess ethical judgments, we adopted a scale from prior work (Gino & Margolis, 2011), where participants were asked to rate the acceptability of various unethical behaviors (1 = *Never justifiable*; 7 = *Always justifiable*). The behaviors included "cheating on an exam," "forging a friend's signature," "copying/downloading a piece of software you do not have copyrights for," "stealing an additional TV cable connection," and "using office supplies for your personal needs" ($\alpha = .87$).

To assess sense of control, we adapted a scale as used by Kraus et al. (2009) (e.g., "I could do just about anything I really set my mind to"; $\alpha = .91$).

To assess situational attributions of others' behavior, we adopted the locus of causality subscale (three items) from the Causal Dimension Scale (Russell, 1982). We also added three additional items to capture situational versus personal attributions of behaviors. Respondents were asked to explain why people behave unethically and were given bipolar response scales where one scale-point referred to situational attributions and the other scale point referred to personal and internal attributions. For example, the question stem began with "If someone behaves unethically, it …" and included questions such as "(1) reflects something outside of the person's control; (7) reflects the person's own control" or "(1) is based on aspects outside the person's control; (7) is based on aspects within the person's control" ($\alpha = .94$). Items were reverse-coded such that higher scores represented greater situational attributions.

Participants also indicated their sex (1 = *Male*; 2 = *Female*) and their age. We report results controlling for sex and age; results replicate without including sex and age.

Results

Correlations and descriptive statistics are displayed in Table 3. As per our preregistration, we report the results of using Ordinary Least Squares (OLS) regression (Table 4).

Total Effects

Inequality was associated with a greater acceptability of unethical behavior ($\beta = .10$, $p = .002$), lower sense of control ($\beta = -.10$, $p = .003$), and greater situational attributions for others' unethical behavior ($\beta = .15$, $p < .001$).

Indirect Effects

We first test for simple mediation using only sense of control as a mediator. Replicating Study 1, we found that sense of control was negatively associated with the acceptability of unethical behavior ($\beta = -.17$, $p < .001$) and that sense of control mediated the association between inequality and acceptability of unethical behavior (95% CI = [0.0057, 0.0350]).

As a supplement, we also tested for serial and parallel mediation (see Table 4). Bias-corrected bootstrapped confidence interval for the indirect effects excluded zero which suggests all mediation

Table 4
Study 2: Indirect Pathways

Pathway	
Simple mediation	
Inequality → Sense of control → Ethical judgments	95% CI = [.0057, .0350] Indirect effect = .0181
Inequality → Attributions → Ethical judgments	95% CI = [.0098, .0408] Indirect effect = .0226
Parallel mediation	
Inequality → Sense of control → Ethical judgments	95% CI = [.0043, .0305] Indirect effect = .0146
Inequality → Attributions → Ethical judgments	95% CI = [.0042, .0319] Indirect effect = .0150
Serial mediation	
Inequality → Sense of control → Attributions → Ethical judgments	95% CI = [.0008, .0087] Indirect effect = .0035

Note. Pathways represent bootstrapped bias-corrected confidence intervals. CI = confidence interval.

paths are significant. Overall, this suggests that those who perceived greater inequality in their area viewed behaviors such as stealing and cheating as more acceptable, and this relationship could be explained, in part, via a reduced sense of control.

Studies 3a and 3b: Experimental Evidence

In Study 2, we found that respondents who perceived more inequality reported a lower sense of control and, as a result, also saw unethical behaviors such as cheating are more acceptable. In Studies 3a and 3b, we moved to an experimental context to better establish causality. We adopted a role-playing experiment (Blake & Brooks, 2019; Sprong et al., 2019) whereby participants were asked to rate the acceptability of others' unethical behaviors under various levels of inequality. In Study 3a, we manipulate high versus low levels of inequality; in Study 3b, we introduce a neutral control to test whether high inequality uniquely drives our effects.

Study 3a: High Versus Low Inequality

Method

Participants. We targeted a sample size of 400 participants (see online supplemental material). We successfully recruited 399 participants from Amazon's Mechanical Turk (233 men, 164 women, two other; $M_{age} = 35.47$, $SD = 10.62$; 277 Caucasian/White, seven Southeast Asian, 19 East Asian, three South Asian, one Middle Eastern, five Native American, 60 African American/Black, 18 Hispanic, nine Mixed, zero other). As per our preregistration, we removed "low-effort" responses on open-ended questions (e.g., "very good," question prompt was copy-pasted as response). This resulted in a final sample size of 352 participants, which gave us enough power to detect an effect size of $d = .30$.

Manipulation. We randomly assigned participants to a high or low-inequality condition. To manipulate participants psychological experience under conditions of high or low inequality, we adopted a role-playing paradigm where respondents were asked to imagine moving to a new fictitious society (Blake & Brooks, 2019; Sprong et al., 2019). Just like any other society, this society (named Bimboola) was described as having different income tiers, which contained the richest 20% (Tier 3), the middle 20% (Tier 2), and the poorest 20% (Tier 1). All participants were told to imagine they belonged in the middle 20% (Tier 2) and that their income (50,000 Bimboolan dollars [BD]) was the mean and median income for the middle 20%. Thus, participants always belonged to the middle-income group, and their income was held constant across conditions.

In the high-inequality condition, the richest 20% (Tier 1; earning 97,000 BD per year) were presented as having substantially greater wealth than the poorest 20% (Tier 3; earning 3,000 BD per year). In the low-inequality condition, the income inequality was less pronounced, where the wealthiest earned 60,000 BD per year and the poorest group earned 40,000 BD per year.

To provide visual stimuli on inequality, we asked participants to start their new life by selecting a house, mode of transportation, vacation, and cellphone. The items participants could select were held constant across conditions. However, the items that other income groups could select varied by condition. For example, participants in the high-inequality condition could observe inequalities in the houses available for purchase (e.g., large mansions vs. a small house); in the low-inequality condition, the pictures of the other income groups' houses depicted lower inequality (e.g., slightly larger houses vs. slightly smaller houses). Similar inequalities were presented for modes of transportation (e.g., sports cars vs. older junk cars), cellphones (e.g., smartphones vs. burner phones), and vacations (e.g., a luxurious skiing holiday vs. no vacation). After choosing their items and viewing the inequalities available to each income group, participants were asked to respond to an open-ended question asking them to describe what they thought their daily life would be like.

Measures. Participants responded to two measures of ethical judgment in random order. First, we adapted the same four measures of unethical judgments used in Study 1 from the WVS. Participants were asked to rate how unjustifiable it would be if someone committed different ethical violations (e.g., "avoiding fare on public transit," "cheating on taxes"; 1 = *Never justifiable*; 10 = *Always justifiable*; $\alpha = .91$). Second, we adopted four vignettes where participants read about another person engaging in ethical misconduct (e.g., stealing money, overstating tax-exempt expenses; Sharma et al., 2014). Participants then rated the behavior in each vignette on how "wrong," "blameworthy," "unacceptable," and "inappropriate" they were (−3 = *Strongly disagree*; +3 = *Strongly agree*; $\alpha = .98$). The two measures were correlated ($r = .37$), thus suggesting convergence between the two measures. We reverse-coded the vignette measures such that higher scores indicated greater acceptability.

Next, we assessed our three mediators, which were presented in random order. To assess competitiveness, we adapted a scale that asked participants to rate how competitive they believed this society would be (e.g., "In Bimboola, I would be competing with others"; $\alpha = .95$; Sommet et al., 2019). To measure expected commonality of unethical behavior, we adapted a scale where participants rated how much unethical behavior they expected in Bimboola, as assessed via expectations of crimes (e.g., "In Bimboola, when I am away from home, I would worry about the safety of my property"; $\alpha = .98$) (Ferraro & LaGrange, 1987; Vauclair & Bratanova, 2017). To assess sense of control, we adapted the scale from Study 2 (e.g., "In Bimboola, I could do just about anything I really set my mind to"; $\alpha = .93$).

Manipulation Check. At the end of the survey, participants rated how much inequality they believed was in Bimboola (1 = *Very low*; 6 = *Very high*). Participants assigned to the high-inequality condition ($M = 5.48$, $SD = 1.02$) believed there was more inequality than participants assigned to the low-inequality condition ($M = 1.98$, $SD = 1.34$), $t(350) = 27.66$, $p < .001$, 95% CI = [3.25, 3.75], $d = 2.95$. Thus, our manipulation worked as expected.

Results

Descriptive statistics and correlations are displayed in Table 5.

Total Effects. Independent *t*-tests indicated that participants assigned to the high-inequality condition saw unethical behaviors as more acceptable. Using our measure from the WVS, participants in the high (vs. low) inequality condition saw others' unethical behaviors as more acceptable ($M_{Low} = 2.65$, $SD_{Low} = 2.00$ vs. $M_{High} = 3.55$, $SD_{High} = 2.47$), $t(350) = 3.72$, $p < .001$, 95% CI = [−1.37, −0.42], $d = 0.40$. Using our vignette measure of ethical misconduct, participants in the high-inequality condition saw others' unethical behaviors as less wrong and inappropriate ($M_{Low} = 1.71$, $SD_{Low} = 0.99$ vs. $M_{High} = 1.96$, $SD_{High} = 1.28$), $t(350) = 2.04$, $p = .042$, 95%

Table 5
Study 3a: Correlations and Descriptive Statistics

Variable	*M*	*SD*	1	2	3	4	5
1. Condition	0.51	0.50					
2. Acceptability of unethical behavior (WVS)	3.12	2.29	.20**				
3. Acceptability of unethical behavior (Vignettes)	1.84	1.16	.11*	.37**			
4. Competitiveness	4.72	1.51	.46**	.20**	.03		
5. Expectation of dishonesty	5.26	2.91	.55**	.32**	.15**	.61**	
6. Sense of control	4.64	1.39	−.41**	−.31**	−.28**	−.27**	−.45**

Note. Condition (0 = *Low inequality*; 1 = *High inequality*). WVS = World Values Survey.
*$p < .05$. **$p < .01$.

CI = [−0.49, −0.01], $d = 0.22$.[3] The means, in an absolute sense, suggest unethical behaviors are still seen as unacceptable because they are below the scale midpoints. However, unethical behavior appears to be relatively more acceptable when inequality is high.

Independent *t*-tests indicated that participants assigned to the high-inequality condition reported greater competitiveness, increased expected commonality of unethical behavior, and lowered sense of control. That is, participants in the high-inequality condition believed society would be more competitive ($M_{Low} = 4.00$, $SD_{Low} = 1.52$ vs. $M_{High} = 5.39$, $SD_{High} = 1.14$), $t(350) = 9.73$, $p < .001$, 95% CI = [1.11, 1.67], $d = 1.04$. Participants also expected more frequent unethical and dishonesty behavior ($M_{Low} = 3.62$, $SD_{Low} = 2.46$ vs. $M_{High} = 6.83$, $SD_{High} = 2.40$), $t(350) = 12.37$, $p < .001$, 95% CI = [2.69, 3.71], $d = 1.32$. Finally, participants in the high-inequality condition reported a lower sense of control ($M_{Low} = 5.22$, $SD_{Low} = 1.13$ vs. $M_{High} = 4.09$, $SD_{High} = 1.39$), $t(350) = 8.34$, $p < .001$, 95% CI = [−1.39, −0.86], $d = 0.89$ (see Figure 2).

Indirect Effects. We regressed ethical judgments onto a dummy variable for condition and all three mediators simultaneously (see Table 6).

Using the WVS measure, we found both expected commonality of unethical behavior, β = 0.22, $p = .002$, and sense of control, β = −0.22, $p < .001$, were associated with the acceptability of unethical behavior; competitiveness had no relationship with acceptability of unethical behavior, β = 0.01, $p = .879$. Mediation analysis (bias-corrected intervals) indicated significant indirect effects for both expected commonality of dishonesty, 95% CI = [0.048, 0.198], and sense of control, 95% CI = [0.038, 0.147]. There was no indirect effect via competitiveness, 95% CI = [−0.047, 0.056].

Using the vignette measure, we found that only sense of control had a significant association with acceptability of unethical behavior, β = −0.27, $p < .001$; there was no relationship via expected commonality of dishonesty, β = 0.08, $p = .253$, or competitiveness, β = −0.09, $p = .161$. Mediation analysis indicated a significant indirect effect for sense of control, 95% CI = [0.061, 0.175]; no indirect effect was found via expected commonality of unethical behavior, 95% CI = [−0.025, 0.116], or competitiveness, 95% CI = [−0.102, 0.007]. Overall, utilizing two measures of ethical judgment, the evidence suggests economic inequality reduces the acceptability of others' unethical behavior, and this effect is mediated by a reduced sense of control (see Figure 3).

Finally, similar to Study 1, we conducted our mediation analyses with each mediator independently (rather than simultaneously, as reported above). When tested individually, we generally find support for increased competitiveness and expectations of unethicality as a mediator (see online supplemental material). However, the simultaneous mediation analysis (reported above) indicates that sense of control plays the strongest mediating role above and beyond competitiveness and expectations of unethicality. Overall, this suggests that while expectations of frequent unethicality and competitiveness can play a mediating role when tested independently, sense of control may be a more proximal mediator, above and beyond competitiveness and expectations of dishonesty.

Study 3b: High, Low, Neutral Inequality

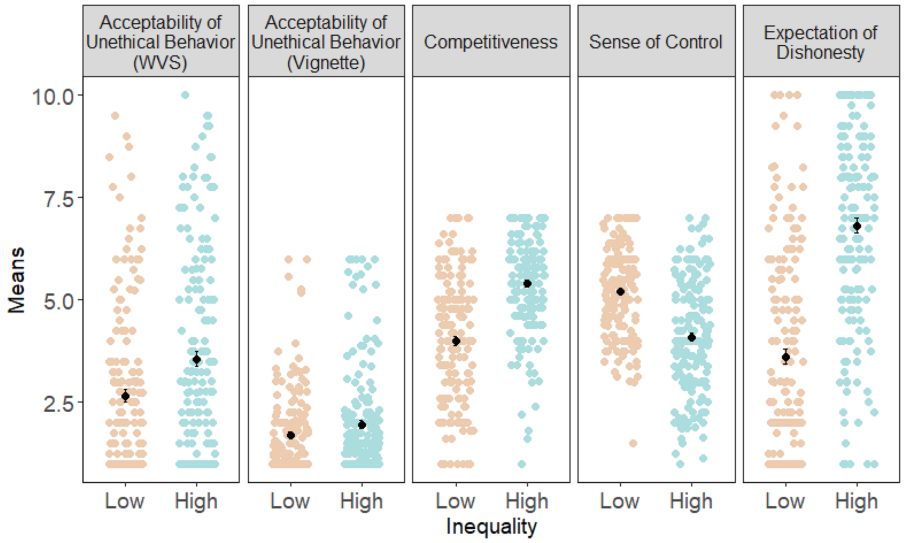
In Study 3a, we provide a useful step toward causality and internal validity by experimentally replicating our correlational studies (Studies 1 and 2) across two measures of ethical judgments. In Study 3b, we introduce a neutral control condition. An alternative explanation is that discussing any form of inequality may reduce one's sense of control or may prime the acceptability of unethical behavior. Thus, the neutral condition is helpful in isolating the effects of high inequality: Given our proposed mediators focus on individuals' experience under high inequality, we expected differences when comparing the high-inequality condition to the neutral control, but not when comparing low inequality to the neutral control. Similar to Study 2, we focused on sense of control as a mediator having explored other mediators in Study 3a.

Method

Participants. We aimed to recruit 350 participants, and successfully recruited 359 participants from Amazon's Mechanical Turk (194 male, 162 female, three other; $M_{age} = 37.37$, $SD = 10.77$; 257 Caucasian/White, seven Southeast Asian, 10 East Asian, three South Asian, zero Middle Eastern, three Native American, 42 African American/Black, 25 Hispanic, 10 Mixed, two Other). As per our preregistration, we removed "low-effort" responses on open-ended questions (e.g., "very good," question prompt was copy-pasted as response). This resulted in a final sample

[3] It is worth noting that the effect size for the vignette measure appears much smaller than the shorter scale ($d = .22$ vs. $d = .40$). The two measures are correlated ($r = .37$), and we suspect the smaller effect size may be related to at least two empirical artifacts. First, the vignette measure was lengthier and provided superfluous details on actors' situations, which may have increased respondent fatigue and potential contaminating factors. Second, the vignette measure combined attributions (e.g., "blameworthy") and acceptability (e.g., "wrong"), which may have produced a less valid measure of acceptability. As a result, in future studies, we focus primarily on our shorter measure that focuses on acceptability.

Figure 2
Study 3a: Means



Note. See the online article for the color version of the figure.

size of 328 participants, which gave us 80% power to detect an effect size of $f = .17$.

Manipulation. We randomly assigned participants to one of the three conditions: high inequality, low inequality, or control. The manipulation for high and low inequality was identical to Study 3a—participants were asked to imagine life in a fictitious society named Bimboola and were asked to select a house, mode of transportation, vacation, and a cellphone.

The key difference was the inclusion of a neutral control condition. Participants in the control condition were told they made 50,000 BD (the same amount of income as other participants in the high and low-inequality conditions; Tier 2). Furthermore, they were still asked to select a house, mode of transportation, vacation, and a cellphone. However, they were not shown the income or choices of other income groups, and there was no mention of the income distribution of Bimboola. Therefore, participants in the neutral control engaged in the same task, but were not given any information on other income groups or the income distribution of Bimboola.

Measures. We measured ethical judgments using the same scale World Values scale from Studies 1 and 3a. Participants were asked to imagine how justifiable several actions would be in Bimboola (e.g., cheating on taxes; $\alpha = .91$). We assessed sense of control using the same measure in Studies 2 and 3a (e.g., "In Bimboola, I could do just about anything I really set my mind to"; $\alpha = .92$).

Manipulation Check. At the end of the experiment, participants rated how much inequality they believed was in Bimboola (1 = *Very low*; 4 = *Neither low nor high*; 7 = *Very high*). A one-way analysis of variance (ANOVA) indicated a significant difference across conditions, $F(2, 325) = 224.74$, $p < .001$, $\eta^2 = 0.58$. Participants in the high-inequality condition ($M = 6.47$, $SD = 1.08$) believed there was more inequality than participants in the control condition ($M = 4.14$, $SD = 1.04$), $t(325) = 12.58$, $p < .001$, $d = 2.20$, and participants in the low

Table 6
Study 3a: Regressions

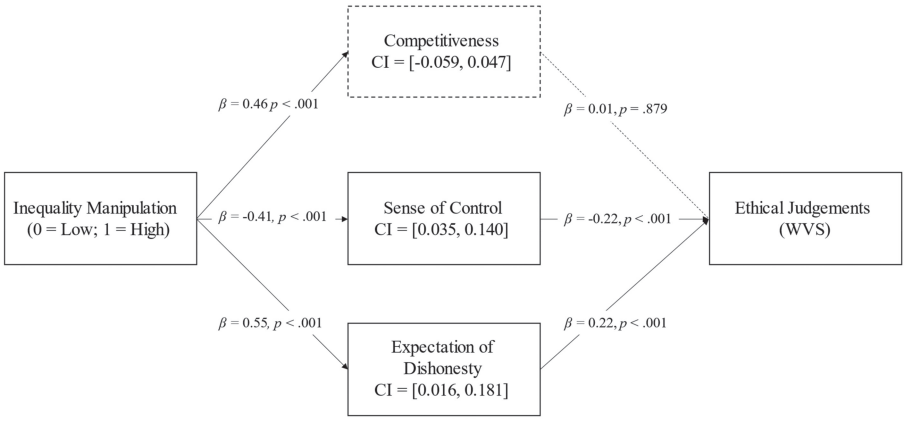
	Dependent variable:						
Variable	Acceptability of unethical behavior WVS) (1)	Acceptability of unethical behavior vignette) (2)	Competitiveness (3)	Expectations of dishonesty (4)	Sense of control (5)	Acceptability of unethical behavior WVS) (6)	Acceptability of unethical behavior vignette) (7)
Condition	0.20***	0.11*	0.46***	0.55***	−0.41***	−0.02	−0.01
Competitiveness						0.01	−0.09
Expectation of unethicality						0.22**	0.08
Sense of control						−0.22***	−0.27***
R^2	0.03	0.01	0.21	0.30	0.17	0.14	0.09
Adjusted R^2	0.03	0.01	0.21	0.30	0.16	0.13	0.08

Note. Condition (0 = *Low inequality*; 1 = *High inequality*). Coefficients are standardized. WVS = World Values Survey.
*$p < .05$. **$p < .01$. ***$p < .001$.

Figure 3

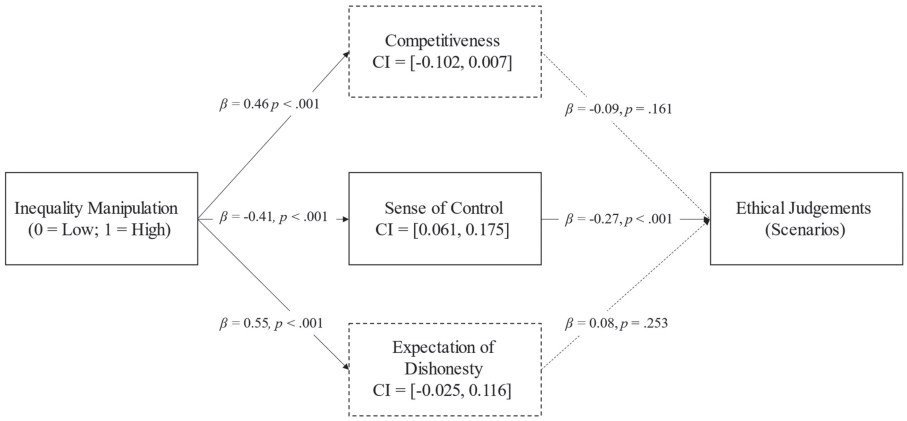
Study 3a: Simultaneous Mediation Analysis

a) Acceptability of Unethical Behaviors (WVS)



Total Effect: $t(350) = 3.37$, $p < .001$, $d = 0.36$

b) Acceptability of Unethical Behaviors (Vignette)



Total Effect: $t(350) = 2.04$, $p = .042$, $d = 0.22$

condition ($M = 2.56$, $SD = 1.81$), $t(325) = 21.11$, $p < .001$, $d = 2.62$. Participants in the low-inequality condition believed there was less inequality than participants in the control condition, $t(325) = -8.70$, $p < .001$, $d = 1.07$. Thus, our manipulation worked as expected.

Results

Descriptive statistics and correlations are displayed in Table 7.

Total Effects. A one-way ANOVA on the acceptability of unethicality indicated a significant difference across conditions, $F(2, 325) = 7.93$, $p < .001$, $\eta^2 = 0.05$ (see Figure 4). Participants in the high-inequality condition ($M = 3.43$, $SD = 2.53$) saw unethicality as more acceptable than participants in the control condition ($M = 2.33$, $SD = 1.85$), $t(325) = -3.67$, $p < .001$, $d = .50$, and participants in the low-inequality condition ($M = 2.47$, $SD = 2.16$), $t(325) = -3.21$, $p = .001$, $d = .41$. There was no difference in acceptability between the control and low-inequality conditions, $t(325) = -0.46$, $p = .646$, $d = .07$. Therefore, participants in the high-inequality condition saw unethical behaviors as more acceptable compared to participants in the low inequality and neutral control conditions.

A 1 × 3 ANOVA on sense of control indicated a significant difference across conditions, $F(2, 325) = 19.67$, $p < .001$, $\eta^2 = 0.11$ (see Figure 4). Participants in the high-inequality condition ($M = 4.19$, $SD = 1.43$) reported a lower sense of control compared to participants in the control condition ($M = 4.95$, $SD = 1.12$), $t(325) = -4.56$, $p < .001$, $d = .59$, and the low-inequality condition ($M = 5.19$, $SD = 1.11$), $t(325) = -6.04$, $p < .001$, $d = .78$. There was no difference in sense of control between the control and low-inequality conditions, $t(325) = -1.51$, $p = .132$, $d = .21$. Therefore, participants in the high-inequality condition reported a lower sense of control compared to participants in the low-inequality and neutral control condition.

Table 7
Study 3b: Correlations and Descriptive Statistics

Variable	*M*	*SD*	1	2	3	4
1. High-inequality condition (1 = *High*; 0 = *Else*)	0.32	0.47	—			
2. Low-inequality condition (1 = *Low*; 0 = *Else*)	0.34	0.47	−.49**	—		
3. Control inequality condition (1 = *Control*; 0 = *Else*)	0.34	0.47	−.49**	−.52**	—	
4. Acceptability of unethical behavior	2.73	2.23	.21**	−.08	−.13*	—
5. Sense of control	4.79	1.29	−.32**	.23**	.09	−.42**

Note. WVS = World Values Survey.
*$p < .05$. **$p < .01$.

Indirect Effects. Consistent with our previous studies, we found that a lower sense of control was associated with increased acceptability of unethical behavior, $\beta = -0.40$, $p < .001$. Bias-corrected intervals of the indirect effect suggested that the high-inequality manipulation decreased perceptions of sense of control, which then reduced the acceptability of unethical behavior. This occurred both when high inequality was compared to the neutral control, 95% CI = [−0.175, −0.061], and the low-inequality manipulation, 95% CI = [−0.215, −0.096]. Overall, the evidence suggests that the experience of high inequality (compared to a neutral control) lowers one's sense of control, thus reducing the acceptability of unethical behavior.

Studies 4a and 4b: Tests of Moderation

While Studies 1 and 2 provided external validity, Studies 3a and 3b provided evidence for causality. In Studies 4a and 4b, we explore tests of moderation: In Study 4a, we test the joint causal effect of inequality and sense of control in a moderation-by-process design; in Study 4b, we test whether the effect of inequality varies based on whether the perpetrator of unethical behavior is oneself or somebody else.

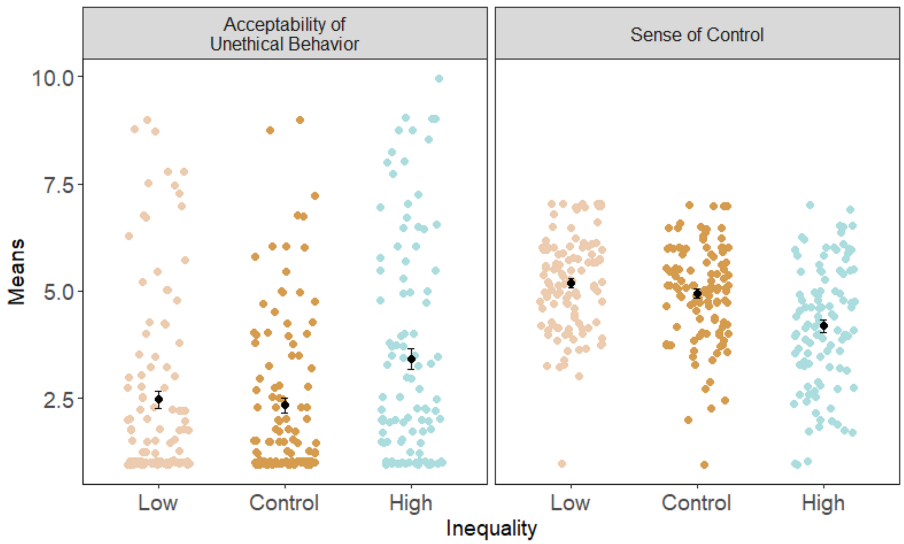
Study 4a: Sense of Control and Moderation-by-Process

In Study 4a, we tested the joint causal effects of inequality and sense of control via a moderation-by-process design. Specifically, we used a 3 (Sense of Control: Neutral, Low, High) × 2 (Inequality: High, Low) between-subjects design. In the neutral sense of control condition—where sense of control is allowed to freely vary—we expect to replicate the effects of high versus low inequality found in Studies 3a and 3b. In the high sense of control condition—which would buffer the negative effects of high inequality on sense of control by maintaining a high level of sense of control—we expected the effect of our inequality to attenuate. In the low sense of control condition—which could further enhance the negative effects of high inequality on sense of control—we expected the effect of our inequality manipulation to increase. Study 4a thus provides a test of the causal effects of inequality and sense of control.

Method

Participants. We targeted a sample size of 1,400 and oversampled by targeting 1,500 respondents given our preregistered exclusions. We recruited 1,504 respondents from Amazon's Mechanical Turk (721 male, 783 female; $M_{age} = 41.36$, $SD =$

Figure 4
Study 3b: Means



Note. See the online article for the color version of the figure.

12.38). As per our preregistration, we removed respondents who provided the same response on scales that contained reverse-coded items (e.g., answering all "6" despite our scale containing reverse-coded items; $n = 34$), respondents who failed an attention check regarding our manipulation ("What were you asked to recall in this survey? Your life in Bimboola [neutral sense of control condition] or your sense of control in Bimboola [high or low sense of control condition]"; $n = 34$), and respondents who failed a general attention check (i.e., "please type the number of letters that appear in the word "Monday'"; $n = 71$). The final sample size was 1,375 participants, which gave us enough power to detect effect sizes as small as $f = .08$.

Manipulation. We randomly assigned respondents to a 2 (Inequality: High, Low) × 3 (Sense of Control: Neutral, High, Low) between-subjects design. The inequality manipulation was identical to that found in Study 3a.

Afterwards we manipulated sense of control by asking respondents to imagine ways in which they would have very high or low control in Bimboola. In a pilot study, we asked respondents to freely recall ways in which they had high or low control in their lives, and many respondents discussed control in the domains of career, residence, income, health, family, and education. Hence, we adapted those domains to our manipulations because they appear to be domains in which people value control and can easily engage with during free recall.

In the (low/high) sense of control condition, participants read:

> People in Bimboola feel like they have a very [low/high] sense of control over their circumstances and personal lives. This is related to how people in Bimboola face [higher/lower] situational constraints and [decreased/increased] ability to influence their life. For example, Bimboolan's have [few/many] opportunities and face [many/few] constraints regarding one's career, residence, income, health, family, or education, among other aspects of their life.
>
> Please think of 3 ways in which you would have a very [low/high] sense of control in Bimboola. What would it be like to have a [low/high] sense of control?

In the neutral sense of control condition, respondents were asked the same open-ended prompt on what they thought life in Bimboola would be like (identical to Studies 3a and 3b).

Measures. Afterwards, participants responded to the sense of control measure from Studies 2–3b as a manipulation check ($\alpha = .96$). The inequality manipulation check was identical to that of Studies 3a–3b. To assess acceptability of unethical behavior, we used the same measure from Studies 1, 3a, and 3b ($\alpha = .90$).

Manipulation Check. Participants in the high-inequality condition ($M = 6.61$, $SD = 1.08$) reported greater inequality than those in the low-inequality condition ($M = 1.86$, $SD = 1.35$), $t(1,373) = 71.64$, $p < .001$, $d = 3.89$. Moreover, participants reported differences in sense of control based on the sense of control manipulation, $F(2, 1,372) = 353.38$, $p < .001$, $\eta^2 = 0.34$. Participants in the low sense of control condition ($M = 3.39$, $SD = 1.39$) reported a lower sense of control than those in the neutral condition ($M = 4.92$, $SD = 1.19$), $t(1,372) = 19.06$, $p < .001$, $d = 1.26$, and those in the high sense of control condition ($M = 5.18$, $SD = 1.11$), $t(1,372) = 25.59$, $p < .001$, $d = 1.69$. Participants in the high condition reported a greater sense of control than the neutral condition, $t(1,372) = 6.58$, $p < .001$, $d = .43$. Thus, our manipulation worked as expected.

Results

A 2 × 3 ANOVA on the acceptability of unethical behavior indicated a main effect of inequality, $F(1, 1,371) = 92.20$, $p < .001$, $\eta^2 = 0.06$. Participants in the high-inequality condition ($M = 2.84$, $SD = 2.16$) saw unethical behavior as more acceptable than participants in the low-inequality condition ($M = 1.91$, $SD = 1.43$), $t(1,371) = 9.41$, $p < .001$, $d = .51$.

We also found a main effect for our sense of control manipulation, $F(2, 1,371) = 25.60$, $p < .001$, $\eta^2 = 0.04$. Participants in the low sense of control condition ($M = 2.84$, $SD = 2.25$) saw unethical behavior as more acceptable than those in the neutral control condition ($M = 2.25$, $SD = 1.74$), $t(1,371) = 5.00$, $p = < .001$, $d = .33$, and those in the high sense of control condition ($M = 2.25$, $SD = 1.74$), $t(1,371) = 6.93$, $p < .001$, $d = .46$. There was no difference between the neutral control and the high sense of control conditions, $t(1,371) = 1.95$, $p = .051$, $d = .13$. This provides a useful test in that decreasing sense of control, independent of inequality, increases the acceptability of unethical behavior.

Importantly, we found an interaction, $F(2, 1,369) = 3.97$, $p = .019$, $\eta^2 = 0.005$ (see Figure 5). In the neutral sense of control condition, we replicated our prior studies: Respondents believed unethical behavior was more acceptable in the high-inequality condition ($M = 2.71$, $SD = 1.99$) compared to the low-inequality condition ($M = 1.80$,

Figure 5
Study 4a: Means

Note. See the online article for the color version of the figure.

$SD = 1.30$), $t(1,369) = 5.47$, $p < .001$, $d = .51$. In the high sense of control condition, the effect of inequality was attenuated: Respondents still believed unethical behavior was more acceptable in the high-inequality condition ($M = 2.30$, $SD = 1.70$) compared to the low-inequality condition ($M = 1.72$, $SD = 1.15$), $t(1,369) = 3.43$, $p < .001$, $d = .32$, although the effect size was smaller by 37% compared to the aforementioned effect of inequality in the neutral sense of control condition. In the low sense of control condition, the effect of inequality was strengthened: Respondents believed unethical behavior was more acceptable in the high-inequality condition ($M = 3.47$, $SD = 2.52$) compared to the low-inequality condition ($M = 2.23$, $SD = 1.75$), $t(1,369) = 7.42$, $p < .001$, $d = .69$, and the effect size was larger than the neutral control condition by 35% compared to the effect of inequality in the natural sense of control condition.

Study 4a tests the causal effects of sense of control and inequality. First, we observed a main effect for sense of control, such that a low sense of control increased the acceptability of unethical behavior, relative to a neutral control and a high sense of control. Second, we observed that jointly manipulating sense of control and inequality provided patterns consistent with our expectations: When sense of control was held high, thus buffering the negative effects of inequality on one's sense of control, the effect of inequality attenuated; when sense of control was held low, thus further reducing one's sense of control, the effect of inequality increased.

Study 4b: Self Versus Other Differences

Study 4a provided causal evidence that a lower sense of control increases the acceptability of unethical behavior. In Study 4b, we tested whether the acceptability of unethical behavior varies between self/other judgments. One potential empirical limitation of our prior studies is that it is sometimes unclear who is engaging in the unethical behavior—we remedy this by making the character of each scenario more explicit (self vs. other). Furthermore, when considering the link between sense of control and judgments of ethicality, some accounts might suggest those who severely lack control may harshly punish others unethical behaviors to restore control (Landau et al., 2015). Although some empirical evidence suggests the opposite (those lower in control find unethical behavior more acceptable and punish unethicality less harshly; Cornwell & Higgins, 2019; Wiltermuth & Flynn, 2013), we could potentially explore this by examining self-other differences. If lacking control causes people to punish others more harshly to restore control, these differences should exist for judgments directed toward others, but not necessarily for judgments directed toward the self. Therefore, Study 4b addresses both empirical and conceptual concerns.

Method

Participants. We expected a small effect size ($d = .35$) and calculated an a priori sample size to detect an effect with 80% power. However, we also want to test the interaction between inequality and self/other judgments. Using an equivalent effect size of $f = .175$, we calculated that a sample size of 600 would be needed to test the interaction with 99% power. We therefore aimed to recruit 650 participants to oversample.

We successfully recruited 651 participants from Amazon's Mechanical Turk (303 male, 346 female, two other; $M_{age} = 40.41$, $SD = 12.80$; 497 Caucasian/White, 13 Southeast Asian, 36 East Asian, eight South Asian, one Middle Eastern, three Native American, 44 African American/Black, 29 Hispanic, 17 Mixed, three Other). As planned in our preregistration, we removed "low-effort" responses on open-ended questions that contained irrelevant responses (e.g., less than 10 words; "very good"). This resulted in a final sample size of 646 participants.

Manipulations and Measures. Participants were randomly assigned to a 2 (Inequality: High vs. Low) × 2 (Judgment: Self vs. Other) between-subjects design. The manipulation of inequality was identical to Study 3a. Next, participants were presented with four unethical behaviors that were designed to reflect the behaviors from Studies 1, 3a–4a (i.e., cheating on taxes, avoiding fare on public transportation, claiming unearned government benefits, accepting a bribe). In line with a between-subjects design and prior work (Lammers et al., 2010; Polman & Ruttan, 2012), participants responded to each unethical behavior by rating how acceptable it would be if others engaged in the described behavior, or alternatively, if they themselves engaged in the described behavior. Participants responded to three items related to acceptability on a scale of 1–7 (acceptable, justifiable, appropriate; $\alpha = .95$). Sense of control was assessed using the same items from prior studies ($\alpha = .95$).

Manipulation Check. As in Study 3, participants rated how much inequality they believed was in Bimboola (1 = *Very low*; 6 = *Very high*). Participants in the high-inequality condition ($M = 5.58$, $SD = 0.94$) believed there was more inequality than participants in the low-inequality condition ($M = 1.91$, $SD = 1.23$), $t(644) = 42.55$, $p < .001$, 95% CI = [3.50, 3.84], $d = 3.35$. Thus, our manipulation worked as expected.

Results

Correlation and descriptive statistics are displayed in Table 8.

Total Effects. We ran a 2 × 2 ANOVA on ethical judgments. As expected, participants in the high-inequality condition ($M = 2.43$, $SD = 1.28$) reported unethical behaviors as more acceptable than participants in the low-inequality condition ($M = 1.91$, $SD = 1.05$), $F(1, 643) = 7.68$, $p = .006$, $f = 0.11$. There were no differences between self ($M = 1.97$, $SD = 1.18$) and other judgments ($M = 2.11$, $SD = 1.18$), $F(1, 642) = 1.75$, $p = .186$, $f = .05$, nor a significant interaction, $F(1, 642) = 2.65$, $p = .104$, $f = .06$.[4] Therefore, using scenarios consistent with our prior studies, we replicate the finding that inequality increases the acceptability of unethical behavior. We did not observe self-other differences in judgments.

A 2 × 2 ANOVA on sense of control indicated identical results from our prior studies. Participants in the high-inequality condition ($M = 4.41$, $SD = 1.26$) reported lower sense of control than participants in the low-inequality condition ($M = 5.26$, $SD = 1.07$), $F(1, 642) = 84.10$, $p < .001$, $f = .36$. As expected, there were no differences in sense of control between the self ($M = 4.87$, $SD = 1.28$)

[4] Within the "self" condition, high inequality did not significantly increase the acceptability of unethical behavior, $t(652) = -0.77$, $p = .439$; within the "other" condition, high inequality significantly increased the acceptability of unethical behavior, $t(652) = -3.19$, $p = .001$. This difference was not significant, as indicated by the interaction term. If the interaction were significant, the results would suggest the effects of inequality are especially driven by judgements of others' behaviors, which is consistent with our focus from our prior studies.

Table 8
Study 4b: Correlations and Descriptive Statistics

Variable	*M*	*SD*	1	2	3
1. Inequality condition (1 = *High*; 0 = *Low*)	0.50	0.50			
2. Self versus other condition (1 = *Other*; 0 = *Self*)	0.50	0.50	.06		
3. Acceptability of unethical behavior	2.04	1.18	−.11**	−.06	
4. Sense of control	4.84	1.24	−.34**	−.02	.23**

**$p < .01$.

and other conditions ($M = 4.81$, $SD = 1.20$), $F(1, 643) = 0.00$, $p = .978$, $f = .00$, nor a significant interaction, $F(1, 642) = 0.00$, $p = .999$, $\eta^2 = .00$.

Indirect Effects. We conducted mediation analysis by regressing ethical judgments onto dummy variables for inequality, and self-other judgments (see Table 9). Replicating our previous studies, we found that a sense of control was associated with the acceptability of unethical behavior, $\beta = -0.21$, $p < .001$. Mediation analysis (5,000 bootstraps; bias-corrected) indicates a significant indirect effect whereby the high-inequality manipulation decreased perceptions of control, which then increased the acceptability of unethical behavior, 95% CI = [0.039, 0.109]. This mediation did not vary by self (vs. other) judgments.[5]

Study 4b helps addresses a potential empirical concern by explicitly highlighting who was engaging in unethical behavior. Overall, we replicate our prior effects of inequality on ethical judgments using scenarios that explicitly state which characters are being judged; the effect of inequality did not differ by self/other differences.

Study 5: Inequality in the United States

Thus far, we have highlighted how inequality increases the acceptability of unethical behavior, and how this can be explained via a reduced sense of control. We had three goals for Study 5. First, we wanted to measure situational versus personal attributions for unethical behavior, and explore its role explaining the link between sense of control and acceptability of unethical behavior. Second, we wanted to conduct a study outside of the Bimboola role-playing paradigm where we manipulated perceptions of inequality in one's area of residence within the United States.

Third, we explored a potential alternative mediating mechanism regarding perceptions of societal unfairness. Inequality may increase the perceived unfairness of society, which may increase the normative acceptability of unethical behavior. To measure this possibility, we included two societal-level fairness measures: Belief in ultimate justice and a belief in just world.

Method

Participants

We targeted 800 participants and successfully recruited 813 participants from Amazon's Mechanical Turk (342 male, 468 female, three other; $M_{age} = 41.33$, $SD = 12.75$). As per our preregistration, we removed "low-effort" responses on open-ended questions (e.g., "very good," question prompt was copy-pasted as response; $n = 0$), respondents who provided the same response on our sense of control scale (e.g., answering all "6" despite our scale containing reverse-coded items; $n = 9$), respondents who failed an attention check regarding our manipulation ("In [respondent's state of residence], how much more do you think the very rich earn, compared to the very poor?"; $n = 205$), and respondents who failed a general attention check (i.e., "please type the number of letters that appear in the word 'Monday'"; $n = 8$). This resulted in a final sample size of 594 participants, which gave us 80% power to detect a small effect size ($d = .23$). Results are identical in significance using the entire sample.

Manipulation

We told respondents we were interested in people's experiences in their local communities. To that extent, respondents were told we collected economic data for each state in the United States and asked respondents to input their state. Once respondents inputted their state, we showed them one of two statistics which ostensibly reflected the wealth distribution in their state.

In the high-inequality condition, respondents were told that the household wealth of the richest 20% was $527,400 while the wealth of the poorest 20% was $28,700 (difference of 18×). In the low-inequality condition, respondents were told the household wealth of the richest 20% was $237,000 while the wealth of the poorest 20% was $42,700 (difference of 5×).

To supplement the inequality information, we provided comparison data from the Organization for Economic Cooperation and Development (taken from table 1 of Aizenman et al., 2018), which highlighted that in one of the most equal countries in the world (Norway), the rich earned 4× more than the poor; in one of the most unequal countries in the world (South Africa), the rich earned approximately 27× more than the poor. After viewing statistics reflecting the inequality in their state, respondents were then asked to recall three times in which they felt their state contained a (high/low) amount of inequality, and times in which they felt the gap between the rich and poor was very (large/small).

Measures

We used the same measures of sense of control from prior studies ($\alpha = .94$). We assessed situational attributions of others' behavior by using the same six-item measure from Study 2 ($\alpha = .94$). Higher scores represented greater situational attributions.

To assess acceptability of unethical behavior, we created scenarios based on our WVS measure from Study 3a and adapted the scenarios to explicitly focus on others unethicality ($\alpha = .95$). Higher scores represented greater acceptability of unethical behavior.

[5] We also tested whether the relationship between sense of control and ethical judgements was moderated by self (vs. other) judgements. This analysis is reported in the online supplemental material. We did not find evidence that the relationship between sense of control and ethical judgments was moderated by self (vs. other) differences.

Table 9
Study 4b: Regressions

	Dependent variable				
	Sense of control		Acceptability of unethical behavior		
	(1)	(2)	(3)	(4)	(5)
Inequality condition (1 = *High*; 0 = *Low*)	−0.34***	−0.34***	0.11**	0.04	−0.03
Self versus other condition (1 = *Other*; 0 = *Self*)	−0.001	−0.001	0.05	−0.01	−0.01
Inequality × Self Versus Other interaction		0.00		0.11	0.11+
Sense of control					−0.21***
R^2	0.12	0.12	0.02	0.02	0.06
Adjusted R^2	0.11	0.11	0.01	0.01	0.05

Note. Coefficients are standardized.
$^{+}p < .10$. $^{**}p < .01$. $^{***}p < .001$.

To measure perceived societal unfairness, we included two measures. We used scales regarding the belief in ultimate justice (Laurin et al., 2011) ($\alpha = .90$; e.g., "I believe that bad people are punished in life, although not always immediately"; 1 = *Strongly disagree*; 7 = *Strongly agree*) and just world beliefs (Lipkus, 1991) ($\alpha = .89$; e.g., "I believe that, by and large, people get what they deserve"; 1 = *Strongly disagree*; 7 = *Strongly agree*).

Manipulation Check

Respondents indicated how much inequality they believed was in their local area (1 = *Low*; 5 = *High*). A *t*-test indicated a significant difference across conditions where participants in the high-inequality condition ($M = 4.56$, $SD = 0.67$) believed there was more inequality in their local area than respondents from the low-inequality condition ($M = 2.52$, $SD = 1.04$), $t(592) = 29.06$, $p < .001$, $d = 2.43$. Thus, our manipulation worked as expected.

Results

Correlation and descriptive statistics are displayed in Table 10.

Total Effects

t-Tests indicated that participants in the high-inequality condition reported a lower sense of control, $M_{Low} = 5.05$, $SD_{Low} = 1.19$ versus $M_{High} = 4.56$, $SD_{High} = 1.30$; $t(592) = 4.66$, $p < .001$, $d = 0.39$, and had more situational attributions of unethical behavior, $M_{Low} = 1.93$, $SD_{Low} = 0.90$ versus $M_{High} = 2.19$, $SD_{High} = 1.11$; $t(592) = 3.01$, $p = .003$, $d = 0.25$. There was no effect regarding the acceptability of unethical behavior, $M_{Low} = 1.55$, $SD_{Low} = 0.82$ versus $M_{High} = 1.61$, $SD_{High} = 0.87$; $t(592) = 0.76$, $p = .446$, $d = 0.06$ (see Figure 6).

Unlike previous studies (Studies 1–4b), we did not find an effect of our manipulation on the acceptability of unethical behavior in the current study. We suspect there could be at least two factors for why we observe a null effect of our manipulation on the acceptability of unethical behavior. First, we measured unethical acceptability using longer vignette scenarios (as compared to shorter scales), which provided superfluous details on actors' situation. Indeed, as observed in Study 3a, this longer vignette scenario may result in weaker effect sizes potentially due to respondent fatigue. Second, the null effect may be related to our paradigm: Compared to manipulating perceived inequality in a novel society and context (Studies 3a–4b), manipulating perceived inequality in the United States may introduce additional factors which may weaken our observed effect sizes.

Indirect Effects

We first test for simple mediation using only sense of control as a mediator. Replicating Studies 1–4b, we found that sense of control was negatively associated with the acceptability of unethical behavior ($\beta = -.10$, $p = .015$) and that sense of control mediated the effect of inequality on acceptability of unethical behavior (95% CI = [0.0002, 0.0477]).

As a supplement, we also tested for serial and parallel mediation (Table 11). Similar to Study 2, we find significant serial mediation via sense of control and attributions, and parallel mediation with attributions. We did not find mediation via sense of control when tested in parallel with attributions.[6]

Perceived Societal Unfairness

We tested the mediating role of societal unfairness in two ways. First, we tested societal unfairness as an independent mediator. Second, we add societal unfairness as a parallel mediator (in addition to sense of control as a mediator). Overall, we see that inequality increased perceptions of societal unfairness. However, societal unfairness was not associated with the acceptability of unethicality, and therefore did not mediate the effect of inequality on the acceptability of unethicality.

First, we tested societal unfairness as an independent mediator. The high-inequality manipulation decreased belief in ultimate justice, $M_{Low} = 4.15$, $SD_{Low} = 1.06$ vs. $M_{High} = 3.80$, $SD_{High} = 1.22$; $t(591) = 3.56$, $p < .001$, $d = 0.30$, and just world perceptions, $M_{Low} = 4.23$, $SD_{Low} = 3.33$ vs. $M_{High} = 3.99$, $SD_{High} = 1.24$; $t(592) = 2.39$, $p = .017$, $d = 0.20$. To test for mediation

[6] Although we find mediation via sense of control in our prior studies, we suspect the lack of mediation in Study 5 may be related to an empirical artifact: Situational attributions were always measured directly before our measure of unethical behavior (in our other studies, the order of our mediators was randomized). Nonetheless, we have reason to suspect that sense of control directly affects the acceptability of unethical behavior. First, as reported in Study 4b, directly manipulating sense of control directly increases the acceptability of unethical behavior. Second, we replicate the association between sense of control and the acceptability of unethical behavior in all our other studies (Studies 1–4a, 6a).

Table 10
Study 5: Correlations and Descriptive Statistics

Variable	*M*	*SD*	1	2	3	4	5
1. Inequality condition (1 = *High*; 0 = *Low*)	0.59	0.49					
2. Acceptability of unethical behavior	1.59	0.85	.03				
3. Sense of control	4.76	1.28	−.19**	−.10*			
4. Situational attributions	2.08	1.04	.12**	.20**	−.34**		
5. Belief in ultimate justice	3.94	1.17	−.14**	.02	.52**	−.13**	
6. Belief in just world	4.09	1.22	−.10*	−.00	.50**	−.13**	.80**

*$p < .05$. **$p < .01$.

(Table 12), we regressed acceptability of unethical behavior onto our manipulation and belief in ultimate justice ($\beta = 0.02$, $p = .491$; Model 6) and just world perceptions ($\beta = 0.00$, $p = .983$; Model 8)—both were unrelated to the acceptability of unethical behavior.

Second, we retested our mediation models while controlling for belief in ultimate justice or just world perceptions. As seen in Table 11, all pathways were identical in direction and significance after controlling for belief in ultimate justice and just world beliefs. Ultimately, while inequality does increase perceptions of societal unfairness, perceptions of societal unfairness do not seem to be associated with the acceptability of unethical behavior.

Studies 6a and 6b: Perceived Social Mobility as a Mechanism

In Studies 6a and 6b, we explored why inequality reduces one's sense of control. Prior work suggests that inequality reduces perceived social mobility because inequality increases awareness of the external barriers to mobility (e.g., family wealth, well-educated parents; McCall et al., 2017). Such awareness of external barriers should reduce one's feelings of control, because people perceive important outcomes in their life as controlled by external factors. If so, then we should expect inequality is associated with reduced social mobility, which explains the association between inequality and sense of control. We test this using correlational (Study 6a) and experimental (Study 6b) designs.

Study 6a: Correlational Evidence

Study 6a builds on Study 2's correlational design, but with several additions. First, we assessed perceived social mobility as a mediator: We expected that inequality is associated with lower perceptions of social mobility, which is then associated with a lower sense of control. Although our primary mechanism is one's sense of control, measuring social mobility can provide a supplement by exploring why inequality reduces one's sense of control.

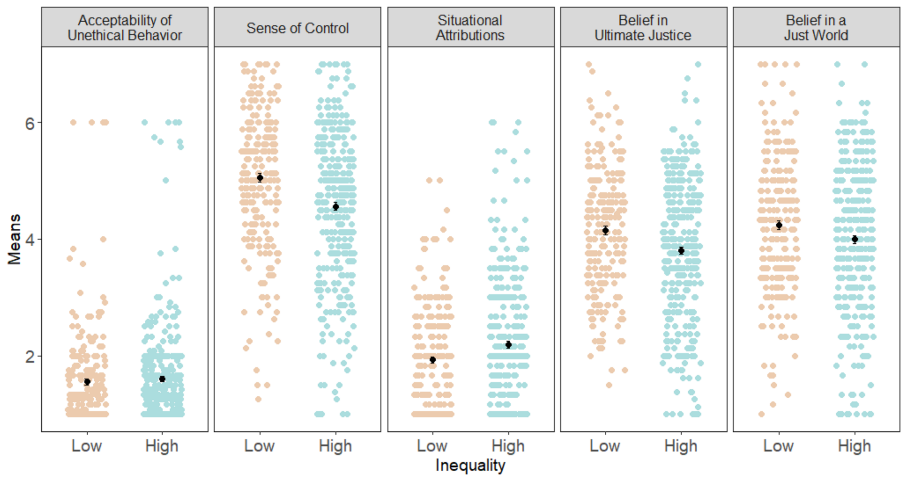
Second, we also wanted to control for SES because SES is correlated with one's sense of control and external attributions (Kraus et al., 2009). Third, we were concerned that our MTurk respondents came from lower- to middle-income backgrounds, which may bias our results. We therefore contracted Prolific to recruit 33% of our respondents from lower-income backgrounds, 33% of our respondents from middle-income backgrounds, and 33% of our respondents from upper-income backgrounds.

Method

Participants. We decided to recruit 1,100 participants. This gave us adequate power ($\beta = .80$) to detect effect sizes as small as $r = .088$.

We created a balanced sample based on household income. In 2021, the bottom one-third of households in United States made between $0 and $44,000, the middle one-third of households made $44,000–$99,000, and the top one-third of households made above $100,000.

Figure 6
Study 5: Means



Note See the online article for the color version of the figure.

Table 11
Study 5: Indirect Pathways

Pathway	No controls	Controlling for belief in ultimate justice	Controlling for belief in a just world
Simple mediation			
Inequality → Sense of control → Ethical judgments	95% CI = [.0002, .0477] Indirect effect = .0191	95% CI = [.0027, .0481] Indirect effect = .0177	95% CI = [.0001, .0543] Indirect effect = .0189
Inequality → Attributions → Ethical judgments	95% CI = [.0084, .0540] Indirect effect = .0247	95% CI = [.0060, .0508] Indirect effect = .0217	95% CI = [.0067, .0531] Indirect effect = .0226
Parallel mediation			
Inequality → Sense of control → Ethical judgments	95% CI = [−.0098, .0277] Indirect effect = .0075	95% CI = [−.0011, .0324] Indirect effect = .0102	95% CI = [−.0065, .0359] Indirect effect = .0097
Inequality → Attributions → Ethical judgments	95% CI = [.0080, .0490] Indirect effect = .0231	95% CI = [.0056, .0434] Indirect effect = .0191	95% CI = [.0064, .0455] Indirect effect = .0206
Serial mediation			
Inequality → Sense of control → Attributions → Ethical judgments	95% CI = [.0048, .0245] Indirect effect = .0116	95% CI = [.0024, .0184] Indirect effect = .0007	95% CI = [.0034, .0218] Indirect effect = .0092

Note. Pathways represent bootstrapped bias-corrected confidence intervals. CI = confidence interval.

We contracted Prolific Academic and prescreened 366 respondents from households making less than $40,000, 366 respondents from households making between $40,000 and $99,000, and 366 respondents from households making above $100,000. As expected, we successfully recruited approximately 366 respondents from each one-third of the income distribution (see online supplemental material for breakdown in subjective SES and income).

As per our preregistration, we removed respondents who provided the same response on any scales that contained reverse-coded items (e.g., answering all "6" despite our scale containing reverse-coded items; $n = 24$) and respondents who failed a general attention check (i.e., "please type the number of letters that appear in the word 'Monday'"; $n = 89$). This resulted in a final sample size of 989 participants (446 male, 543 female; $M_{age} = 39.57$, $SD = 13.39$).

Measures. We used the same measures from Study 2 to assess subjective inequality (Kteily et al., 2017), sense of control (Kraus et al., 2009; $\alpha = .76$), situational attributions (adapted from Russell, 1982; $\alpha = .94$), and ethical judgments (Gino & Margolis, 2011; $\alpha = .86$). We measured perceptions of social mobility using a 6-item scale adapted from Day and Fiske (2017) ($\alpha = .84$; e.g., "There are many opportunities for me to move up in society"; 1 = *Strongly disagree*; 7 = *Strongly agree*). We randomized the presentation of all mediators.

Participants also indicated their subjective SES (Adler et al., 2000), as well as their household income (1 = *<$20,000*; 2 = *$20,001–40,000*; 3 = *$40,001–60,000*, 4 = *$60,001–80,000*; 5 = *$80,000–100,000*; 6 = *$100,000–150,000*; 7 = *$>150,000*). Below, we report our analyses controlling for subjective SES. Results replicate when controlling for household income.

Results

Correlations and descriptive statistics are displayed in Table 13. As per our preregistration, we report the results of using OLS regression (Table 14).

Total Effects. Inequality was associated with greater acceptability of unethical behavior ($\beta = .12$, $p < .001$; Model 1), lower social mobility ($\beta = -.18$, $p < .001$; Model 2), lower sense of control ($\beta = -.09$, $p = .001$; Model 3), and greater situational attributions ($\beta = .07$, $p = .021$; Model 4).

Indirect Effects. We first assessed whether sense of control independently mediated the relationship between inequality and ethical judgments. Replicating our prior studies, we found that inequality was negatively associated with sense of control ($\beta = -.09$, $p = .001$), that sense of control was negatively associated with the acceptability of unethical behavior ($\beta = -.24$, $p < .001$), and a significant indirect effect via sense of control (95% CI = [.0091, .0390]).

As a supplement, we tested for serial and parallel mediation (see Table 15). When tested in parallel, sense of control emerged as s significant mediator above and beyond social mobility and situational attributions. We also found significant serial mediation model, whereby the relationship between inequality and the acceptability of unethical behavior was serially mediated via reduced social mobility, a lower sense of control, and greater situational attributions.

Study 6b: Experimental Evidence

In Study 6a, we examined perceived social mobility as a mediator for the association between inequality and sense of control. In Study 6b, we sought to provide experimental evidence by testing whether manipulating inequality reduced perceptions of social mobility and one's sense of control. To this end, we used the same paradigm from Study 5 (Inequality: High, low) and measured perceptions of social mobility and one's sense of control. We also tested for perceived fairness of the economy and perceived fairness of the levels of inequality, given that prior research suggests perceptions of social mobility are also associated with a willingness to defend systems and view them as fair (e.g., Day & Fiske, 2017).

Method

Participants. We decided to recruit 800 participants, which gave us adequate power to detect effect sizes as small as $d = .20$ (a small effect size). We successfully recruited 804 participants from Amazon's Mechanical Turk (374 male, 423 female, seven other, $M_{age} = 42.07$, $SD = 12.69$). As per our preregistration, we removed respondents who provided the same response on any scales

Table 12
Study 5: Regressions

	Serial mediation				Alternative mediator: Belief in ultimate justice		Alternative mediator: Just world beliefs		Serial mediation: Controlling for belief in ultimate justice or just world beliefs					
	Acceptability of unethical behavior	Sense of control	Situational attributions	Acceptability of unethical behavior	Belief in ultimate justice	Acceptability of unethical behavior	Just world beliefs	Acceptability of unethical behavior	Sense of control		Situational attributions		Acceptability of unethical behavior	
Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)
Inequality manipulation (0 = *Low*; 1 = *High*)	0.03	−0.19***	0.06	0.001	−0.14***	0.04	−0.10*	0.03	−0.11**	−0.14***	0.06	0.06	0.01	0.001
Sense of control				−0.04							−0.36***	−0.35***	−0.09+	−0.07
Situational attributions			−0.33***	0.19***									0.18***	0.19***
Belief in ultimate justice						0.03			0.50***		0.07		0.10*	
Just world beliefs								0.001		0.49***		0.05		0.06
R^2	0.001	0.04	0.12	0.04	0.02	0.002	0.01	0.001	0.28	0.27	0.12	0.12	0.05	0.04
Adjusted R^2	−0.001	0.03	0.12	0.04	0.02	−0.002	0.01	−0.002	0.28	0.27	0.12	0.12	0.04	0.04

Note. Coefficients are standardized.
+$p < .10$. *$p < .05$. **$p < .01$. ***$p < .001$.

that contained reverse-coded items (e.g., answering all "6" despite our scale containing reverse-coded items; $n = 16$), respondents who failed an attention check regarding our manipulation ("In [respondent's state of residence], how much more do you think the very rich earn, compared to the very poor?"; $n = 219$), and respondents who failed a general attention check (i.e., "please type the number of letters that appear in the word 'Monday'"; $n = 10$). This resulted in a final sample size of 567 participants. Results are identical when using the entire sample.

Manipulation. We used the same manipulation as Study 5.

Social Mobility and Sense of Control. We measured perceptions of social mobility using a six-item scale adapted from Day and Fiske (2017) ($\alpha = .86$; e.g., "There are many opportunities for me to move up in society"; 1 = *Strongly disagree*; 7 = *Strongly agree*). To assess sense of control, we adapted the same scale used in Studies 2–5 by Kraus et al. (2009) ($\alpha = .93$). Higher scores represented greater situational attributions.

Fairness of Economic System, and Fairness of Inequality. We also measured two alternative mediators related to the perceived fairness of economic systems. First, we measured perceived fairness of economic systems via the economic system justification scale from Jost and Thompson (2000; $\alpha = .91$; e.g., "Economic positions are legitimate reflections of people's achievements"; 1 = *Strongly disagree*; 7 = *Strongly agree*). Second we measured perceived fairness of current levels of inequality using a four item scale from Schmalor and Heine (2022; $\alpha = .88$; "It is extremely unfair if the overall amount of economic inequality is very high"; 1 = *Strongly disagree*; 7 = *Strongly agree*). We reverse-coded the scores for perceived fairness of inequality, such that higher scores on both fairness scales represented greater perceived fairness. The order of all scales was randomized.

Manipulation Check. Respondents indicated how much inequality they believed was in their local area (1 = *Low*; 5 = *High*). A *t*-test indicated a significant difference across conditions where participants in the high-inequality condition ($M = 4.44$, $SD = 0.72$) believed there was more inequality in their local area than respondents from the low-inequality condition ($M = 2.49$, $SD = 1.07$), $t(565) = 25.83$, $p < .001$, $d = 2.13$. Thus, our manipulation worked as expected.

Results

Correlations and descriptive statistics are displayed in Table 16. As per our preregistration, we report the results of using *t*-tests and OLS regression (Table 17).

Total Effects. Participants assigned to the high-inequality condition reported a lower sense of control, $M_{Low} = 4.71$, $SD_{Low} = 1.30$ versus $M_{High} = 4.25$, $SD_{High} = 1.33$; $t(565) = 4.04$, $p < .001$, $d = 0.34$, and had lower perceptions of social mobility, $M_{Low} = 3.48$, $SD_{Low} = 1.34$ versus $M_{High} = 3.13$, $SD_{High} = 1.20$; $t(565) = 3.22$, $p = .001$, $d = 0.27$.

There were no significant differences between conditions when examining perceived fairness of the economy, $M_{Low} = 3.28$, $SD_{Low} = 1.11$ versus $M_{High} = 3.26$, $SD_{High} = 1.06$; $t(565) = 0.24$, $p = .812$, $d = 0.02$, or perceived fairness of inequality, $M_{Low} = 3.06$, $SD_{Low} = 1.58$ versus $M_{High} = 2.85$, $SD_{High} = 1.43$; $t(565) = 1.63$, $p = .103$, $d = 0.14$ (see Figure 7).

Indirect Effects. We conducted parallel mediation analyses to test which mediators significantly mediated the effect of inequality

Table 13
Study 6a: Correlations and Descriptive Statistics

Variable	*M*	*SD*	1	2	3	4	5	6	7	8
1. Inequality	2.76	1.26								
2. Acceptability of unethical behavior	3.02	1.32	.10**							
3. Social mobility	3.23	1.14	−.16**	−.31**						
4. Sense of control	4.54	0.87	−.06	−.28**	.44**					
5. Situational attributions	2.30	1.05	.06*	.26**	−.24**	−.25**				
6. Age	21.57	13.39	.03	−.46**	.11**	.14**	−.23**			
7. Sex	1.55	0.50	−.07*	−.00	−.06	−.16**	−.04	.01		
8. Subjective SES	5.10	1.80	.06	−.09**	.23**	.41**	−.09**	.07*	−.13**	
9. Household income	4.19	1.89	.03	−.07*	.16**	.35**	−.11**	.03	−.11**	.66**

Note. Sex (1 = *Male*; 2 = *Female*); household income (1 = *<$20,000*; 2 = *$20,001–40,000*; 3 = *$40,001–60,000*; 4 = *$60,001–80,000*; 5 = *$80,000–100,000*; 6 = *$100,000–150,000*; 7 = *$>150,000*). SES = socioeconomic status.
*$p < .05$. **$p < .01$.

on sense of control (see Table 17; Figure 8). In a single regression, we simultaneously regressed sense of control onto social mobility ($\beta = .46$, $p < .001$), perceived fairness of the economy ($\beta = .16$, $p = .003$), and perceived fairness of inequality ($\beta = .06$, $p = .199$) (Model 5). We then conducted a parallel mediation analysis (bias-corrected intervals) computing all three indirect effects at once. Results indicate a significant indirect effect of inequality on sense of control via perceived social mobility (95% CI = [−0.1061, −0.0269]), but not perceived fairness of the economy (95% CI = [−0.0910, 0.0723]) or perceived fairness of inequality (95% CI = [−0.0194, 0.0009]). Overall, this suggests that lower perceived social mobility helps explain why inequality reduces one's sense of control.

General Discussion

We present nine studies (eight preregistered) and find that unethicality was deemed more acceptable when inequality was perceived to be high. While mediation analyses provide some support for competitiveness and expectations of unethical behavior as mediating variables, the most consistent mediating mechanism appeared to be a reduced sense of control—those with a reduced sense of control found unethical behaviors more acceptable. We also explore supplemental correlations for why inequality reduces sense of control (reduced perceived social mobility) and why a higher sense of control is associated with greater acceptability of unethicality (greater situational attributions for behaviors).

Theoretical Implications

This work has several implications for research on inequality and ethical judgments. First, a body of literature on the epidemiology of inequality proposes sense of control as a pathway for explaining why inequality worsens health outcomes (e.g., Marmot & Bobak, 2000; Wilkinson, 1996). However, sense of control as a mechanism in this literature is inferred with econometric or health data and not directly tested (c.f., Lynch et al., 2001). Our work empirically demonstrates that a reduced sense of control is one downstream consequence of inequality.

In doing so, we uncover a psychological mechanism underlying the experience of inequality that is consistent with previous theorizing, yet also offers new directions for research. For example, a lower sense of control is associated with decreased trust, poorer health and hopelessness, increased risk taking, and increased preferences for a strong leader (Kakkar & Sivanathan, 2017; Kouchaki et al., 2014; Uslaner, 2002), all of which are also consequences of high economic inequality (Buttrick & Oishi, 2017; Payne et al., 2017; Sprong et al., 2019). Thus, a lower sense of control seems to offer an integrative mechanism for the effects of inequality that is consistent with prior research. Yet, sense of control also offers a useful lens to explore

Table 14
Study 6a: Regressions

	Dependent variable						
Variable	Acceptability of unethical behavior (1)	Social mobility (2)	Sense of control (3)	Situational attributions (4)	Sense of control (5)	Situational attributions (6)	Acceptability of unethical behavior (7)
Inequality	0.116***	−0.179***	−0.094**	0.072*	−0.031	0.029	0.062*
Social mobility					0.348***	−0.142***	−0.191***
Sense of control						−0.178***	−0.145***
Situational attributions							0.081**
Age	−0.456***	0.096**	0.111***	−0.230***	0.078**	−0.197***	−0.402***
Sex	0.003	−0.043	−0.113***	−0.043	−0.098***	−0.069*	−0.019
Subjective SES	−0.059*	0.228***	0.395***	−0.080*	0.315***	0.023	0.049+
R^2	0.224	0.094	0.201	0.067	0.310	0.126	0.308
Adjusted R^2	0.221	0.091	0.198	0.063	0.307	0.121	0.303

Note. Coefficients are standardized. SES = socioeconomic status.
+$p < .1$. *$p < .05$. **$p < .01$. ***$p < .001$.

Table 15
Study 6a: Indirect Pathways

Pathway	Controlling for subjective SES	Controlling for household income
Simple mediation		
Inequality → Social mobility → Ethical judgments	95% CI = [.0286, .0674] Indirect effect = 0.0464	95% CI = [.0264, .0645] Indirect effect = 0.0441
Inequality → Sense of control → Ethical judgments	95% CI = [.0091, .0390] Indirect effect = 0.0225	95% CI = [.0056, .0354] Indirect effect = 0.0192
Inequality → Attributions → Ethical judgments	95% CI = [.0014, .0232] Indirect effect = 0.0106	95% CI = [.0011, .0226] Indirect effect = 0.0104
Parallel mediation		
Inequality → Social mobility → Ethical judgments	95% CI = [.0196, .0532] Indirect effect = 0.0343	95% CI = [.0181, .0508] Indirect effect = 0.0323
Inequality → Sense of control → Ethical judgments	95% CI = [.0051, .0261] Indirect effect = 0.0136	95% CI = [.0032, .0233] Indirect effect = 0.0112
Inequality → Attributions → Ethical Judgments	95% CI = [.0008, .0150] Indirect effect = 0.0058	95% CI = [.0007, .0152] Indirect effect = 0.0058
Serial mediation		
Inequality → Social mobility → Sense of control → Ethical judgments Indirect effect = 0.0090	95% CI = [.0047, .0154] 95% CI = [.0046, .0152] Indirect effect = 0.0088	
Inequality → Sense of control → Attributions → Ethical judgments Indirect effect = 0.0013	95% CI = [.0003, .0035] 95% CI = [.0002, .0031] Indirect effect = 0.0011	
Inequality → Social mobility → Sense of control → Attributions → Ethical judgments	95% CI = [.0003, .0020] Indirect effect = 0.0009	95% CI = [.0002, .0020] Indirect effect = 0.0008

Note. Pathways represent bootstrapped bias-corrected confidence intervals. SES = socioeconomic status; CI = confidence interval.

additional outcomes of inequality, especially given its pervasive role in social perceptions and decision-making (e.g., Folkman, 1984; Kraus et al., 2009; Landau et al., 2015). For example, a reduced sense of control increases conspiracy beliefs (Stojanov & Halberstadt, 2020) and illusory perceptions (Whitson & Galinsky, 2008), which provides another pathway for why inequality fosters conspiracy beliefs (Jetten et al., 2022; Salvador Casara et al., 2022). As a more speculative example, a reduced sense of control increases the belief one has enemies who seek to undermine them (Sullivan et al., 2010), which is consistent with arguments that inequality creates worse interpersonal relations and more group divisions in society (Wilkinson & Pickett, 2017). Thus, we contribute to inequality research by offering a sense of control as a useful mechanism for exploring established, and potentially new, consequences of inequality.

The results regarding the expected commonality of unethical behavior also helps extend existing inequality research. Researchers are starting to consider how inequality fosters different societal norms, such as increased competitiveness and individualism (Sánchez-Rodríguez, Willis, et al., 2019; Sommet et al., 2019). We extend this research by highlighting perceptions of ethical descriptive norms (e.g., Cialdini & Goldstein, 2004)—inequality increases expectations that others may behave more unethically, an effect that is consistent with prior research on how inequality decreases interpersonal and generalized trust (e.g., Neville, 2012; Wilkinson & Pickett, 2009). Norms provide a basis for several phenomenon in interpersonal relations including conformity, compliance, and behavioral and attitudinal mimicry (e.g., Cialdini & Goldstein, 2004), and future work could examine how economic inequality shapes such phenomenon through the lens of ethical norms. For example, unethicality may spread more quickly when people believe that others are engaging in unethical behaviors (Gino, Ayal, et al., 2009; Gino & Bazerman, 2009; Gino, Gu, et al., 2009). This would seem to be consistent with early sociological observations that economic inequality in Boston may have contributed to the rapid spread of looting during riots in the early 20th century (Jacobs, 1979; Ziskand, 1940). Our research furthers our understanding of how inequality shapes perceived societal norms.

Third, we advance the literature on ethical judgments by providing further evidence that a low sense of control drives ethical judgments (Cornwell & Higgins, 2019). By implicating sense of control as a driver of ethical judgments, we conceptually replicate related work from literatures on power and free will—individuals who are low in power (e.g., Wiltermuth & Flynn, 2013), or believe that they (or others) lack free will (e.g., Martin et al., 2017; Monroe et al., 2017) view unethical behavior as more acceptable. In doing so, we also extend prior research on the socioeconomic drivers of behavioral ethics. Prior research identifies features such as social class and education (Dubois et al., 2015; Pitesa & Thau, 2014), or economic upturns (e.g., Bianchi & Mohliver, 2016) as drivers of ethical behavior. In the current work, we focus on broader contexts such as subjective inequality, thus

Table 16
Study 6b: Correlation and Descriptive Statistics

Variable	*M*	*SD*	1	2	3	4
1. Inequality condition (0 = *Low*; 1 = *High*)	0.57	0.50				
2. Social mobility	3.28	1.27	−.13**			
3. Sense of control	4.45	1.33	−.17**	.62**		
4. Fairness of economy	3.27	1.08	−.01	.67**	.52**	
5. Fairness of inequality	2.94	1.50	−.07	.60**	.47**	.75**

**$p < .01$.

Table 17
Study 6b: Regression Analysis

Variable	Dependent variable				
	Sense of control (1)	Social mobility (2)	Fairness of economy (3)	Fairness of inequality (4)	Sense of control (5)
Inequality manipulation (0 = *Low*; 1 = *High*)	−0.168***	−0.134**	−0.010	−0.069	−0.099**
Social mobility					0.465***
Fairness of economy					0.161**
Fairness of inequality					0.063
R^2	0.028	0.018	0.0001	0.005	0.421
Adjusted R^2	0.026	0.016	−0.002	0.003	0.417

Note. Coefficients are standardized.

extending research on how perceptions of economic features, such as the presence of money and wealth, affect ethical behaviors and judgments (c.f., Gino & Pierce, 2009; Kouchaki et al., 2013).

Fourth, although not theorized in our earlier studies (Studies 1–4b), we explore an alternative mechanism of perceived fairness in Studies 5 and 6b. Although we did not find that fairness serves as an alternative mechanism, we did find that inequality reduces perceived fairness of society (Study 5) but not the perceived fairness of the economy or inequality, more specifically (Studies 6b). Such results may have implications for work on how inequality shapes perceptions of fairness: Perhaps by broadening the focus of fairness to the societal level, people tend to evaluate fairness along different dimensions (e.g., social or moral dimensions) as opposed to when fairness is focused on purely the economic dimension. Future work should explore whether inequality can cause individuals to develop generalized cynical views of society, but not about specific views about levels of inequality and the economy.

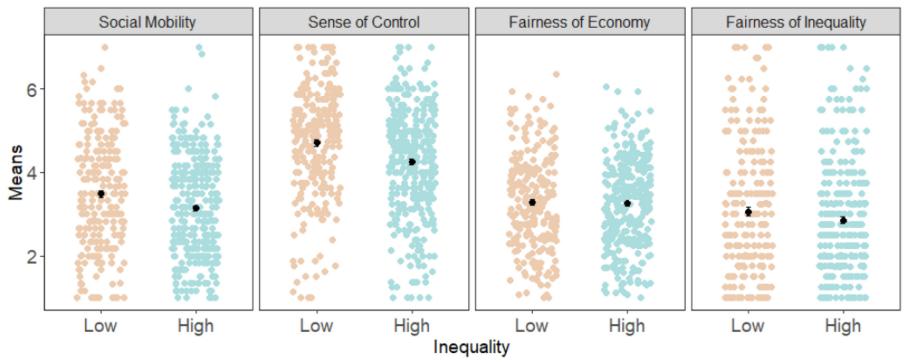
Finally, our work extends research in the intersection between inequality and ethics. Research on inequality and ethics could be broadly characterized as having two streams: (a) how inequality affects unethical behaviors (e.g., Choe, 2008; Gino & Pierce, 2009; Neville, 2012) and (b) when inequality itself is seen as more or less ethical (e.g., Franks & Scherr, 2019). Our work pivots research attention toward a third question, namely "how does inequality affect what is considered unethical?" Our work highlights that inequality not only affects our own unethical behaviors, but also affects how we perceive and accept unethical behaviors as well. Accepting others' unethical behaviors has costly societal financial and social downsides (Ayal et al., 2016), and our work offers a starting point for future work to explore this question of when and how inequality affects the acceptability of others' unethical behaviors.

Strengths, Qualifications, and Future Directions

Our range of methodologies increases our confidence in the robustness of the association between inequality, sense of control, and judgments of unethicality. Nevertheless, this work is not without limitations and there remain important questions that deserve further attention.

First, future work could consider additional nuances regarding different types of unethical behavior. We focused on unethical behaviors reflecting self-interested dishonesty because such behaviors tend to be universally frowned upon (Haidt et al., 1993; Mikhail, 2007; Schein & Gray, 2018), and our measures included behaviors to advance one's financial (e.g., lying about taxes) and nonfinancial self-interests (e.g., downloading a piece of software you do not have copyrights for). Future work could explore nuances regarding different types of unethical behavior, such as whether the self-interested behaviors harm society (e.g., tax evasion) versus specific individuals (e.g., stealing from a friend). Future work could also explore if inequality affects the acceptability of "unethical" behaviors reflecting sociocultural moral norms (e.g., abortion,

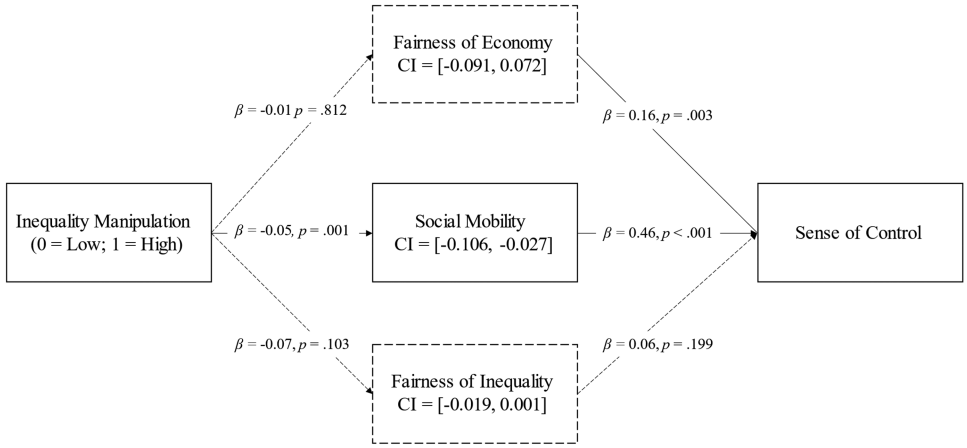
Figure 7
Study 6b: Means



Note. See the online article for the color version of the figure.

Figure 8

Study 6b: Serial Mediation



Total Effect: $t(565) = 4.04$, $p < .001$, $d = 0.34$

homosexuality, or divorce). Our focus on self-interested behaviors universally deemed to be unethical was done to establish generalizability (i.e., dishonesty and harm; Haidt et al., 1993; Mikhail, 2007; Schein & Gray, 2018) and although we take a step toward establishing a general link between inequality and the acceptability of unethicality, future work could further explore nuances on different types of unethicality.

Second, future work could also explore the causal order of our mediators. Prior work suggests bidirectionality for our mediators: External attributions can reduce one's sense of control (e.g., Davidai, 2018), while a lower sense of control can also lead to external attributions (e.g., Kraus et al., 2009). Likewise, a lack of control over barriers to wealth may reduce one's perceptions of social mobility (McCall et al., 2017), whereas perceptions of greater social mobility can also increase one's sense of agency (e.g., Davidai & Wienk, 2021). Our work suggests a correlation between sense of control and external attributions and, as such, is limited by such correlations (e.g., Fiedler et al., 2011, 2018). Our work focused on attributions as a final stage mediator because most theorizing on the acceptability of unethical behavior highlights external versus dispositional attributions as a proximal predictor. Although our work rules-in sense of control as having a causal effect (Study 4b), future work could consider the bidirectionality regarding sense of control and situational attributions.

Third, our selection of mechanisms was informed by a review of the inequality literature (e.g., Buttrick & Oishi, 2017; Wilkinson & Pickett, 2009, 2017), but future work could explore other mechanisms arising from behavioral ethics research. For example, inequality may also reduce the use of deontological (i.e., rule-based) reasoning due to a low sense of control (e.g., Fleischmann & Lammers, 2020), which may increase the acceptability of others' unethicality. Future work could also consider potential moderators—for example, inequality may have a pronounced effect on racial minorities, who already suffer lower rates of objective social mobility (Kraus & Tan, 2015). Future work could also explore additional mechanisms for why inequality decreases one's sense of control. For example, recent work suggests inequality is associated with lower perceptions of community support (Jachimowicz et al., 2020). To the extent a lack of trust or expectations of dishonesty represent a lack of community support, this may suggest another micromechanism for why inequality decreases sense of control.

Fourth, although one of our studies utilizes a sample representing approximately 95% of the world's population (Study 1), future studies should test whether our experiments and surveys can generalize beyond a US-based population. For example, Martin et al. (2017) suggests that free-will predicted greater acceptance of unethical behaviors and that this effect was stronger amongst countries higher in institutional integrity (which shares many similarities to a WEIRD profile; Martin et al., 2017). This suggests that the association between sense of control and acceptance of unethical behavior may be stronger in some countries rather than others. Most of our theory was informed from studies primarily drawn from US-based populations and so future research should explore additional populations to test the generalizability of our effects.

The Role of SES

Finally, future work could explore nuances regarding the role of SES. Conceptually, there could be competing arguments for the interactive effects of inequality and one's SES: On the one hand, the negative effects of inequality on our mechanisms (e.g., sense of control, perceived mobility) may be stronger for those lower in SES because they tend to feel the greatest burden from inequality (e.g., Laurin et al., 2011; Oishi et al., 2011); on the other hand, similar to a floor effect, because those lower in SES already suffer from a lower sense of control and mobility, the negative effects of inequality may be larger among those higher in SES because they are more susceptible to changes in their sense of control and mobility.

As reported in our Appendix, we did not find that subjective SES consistently moderated any of our effects in the correlational studies (S1, S2, and S6a) or experimental studies (S3–S5). We see significant moderation in two out of 26 tests (S4a: The positive effect of inequality on the acceptability of unethical behavior is stronger among those lower in SES; S6b: The negative effect of inequality

on social mobility is stronger among those higher in SES). However, these effects were not consistent across studies. Notably, our correlational studies suggest that SES and inequality have two separate main effects on sense of control and acceptability of unethical behavior (Study 1 and Study 6a), but no interaction.

Future work could explore the conditions under which an interactive effect may emerge. For example, perhaps if we focused on sense of control regarding one's finances and economic well-being (rather than in sense of control in general), we might see that inequality is especially harmful to those lower in SES. Likewise, we might observe moderation effects among low SES respondents who are especially high in social comparison tendencies—if upward mobility is a key micromechanism, then the effects of inequality should be stronger among low SES members who tend to compare upwards. Overall, although we observe two main effects of inequality and SES, future work could provide greater nuance on its potential interactive effects.

Conclusion

In the public domain, debates rage on how seriously we should take the issue of inequality. Our work complements the growing narrative arising from psychological research that laymen and policy makers should heed the dangers of economic inequality: Inequality appears to undermine one fundamental element of properly functioning societies—the acceptability of unethical behavior.

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*(6), 586–592. https://doi.org/10.1037/0278-6133.19.6.586

Aizenman, J., Jinjarak, Y., Ngo, N., & Noy, I. (2018). Vocational education, manufacturing, and income distribution: International evidence and case studies. *Open Economies Review*, *29*(3), 641–664. https://doi.org/10.1007/s11079-017-9475-7

Andrews, D., & Leigh, A. (2009). More inequality, less social mobility. *Applied Economics Letters*, *16*(15), 1489–1492. https://doi.org/10.1080/13504850701720197

Ashforth, B. E., & Anand, V. (2003). The normalization of corruption in organizations. *Research in Organizational Behavior*, *25*(03), 1–52. https://doi.org/10.1016/S0191-3085(03)25001-2

Ayal, S., & Gino, F. (2011). Honest rationales for dishonest behavior. In M. Mikulincer & P. R. Shaver (Eds.), *The social psychology of morality: Exploring the causes of good and evil* (pp. 149–166). American Psychological Association.

Ayal, S., Hochman, G., & Ariely, D. (2016). Editorial: Dishonest behavior, from theory to practice. *Frontiers in Psychology*, *7*, Article 1521. https://doi.org/10.3389/fpsyg.2016.01521

Bazerman, M. H., & Gino, F. (2012). Behavioral ethics: Toward a deeper understanding of moral judgment and dishonesty. *Annual Review of Law and Social Science*, *8*(1), 85–104. https://doi.org/10.1146/annurev-lawsocsci-102811-173815

Beauvois, J. E., & Dubois, N. (1988). The norm of internality in the explanation of psychological events. *European Journal of Social Psychology*, *18*(4), 299–316. https://doi.org/10.1002/ejsp.2420180402

Bell, A., & Jones, K. (2015). Explaining fixed effects: Random effects modeling of time-series cross-sectional and panel data. *Political Science Research and Methods*, *3*(1), 133–153. https://doi.org/10.1017/psrm.2014.7

Bianchi, E. C., & Mohliver, A. (2016). Do good times breed cheats? Prosperous times have immediate and lasting implications for CEO misconduct. *Organization Science*, *27*(6), 1488–1503. https://doi.org/10.1287/orsc.2016.1101

Blake, K. R., & Brooks, R. C. (2019). Status anxiety mediates the positive relationship between income inequality and sexualization. *Proceedings of the National Academy of Sciences of the United States of America*, *116*(50), 25029–25033. https://doi.org/10.1073/pnas.1909806116

Brush, J. (2007). Does income inequality lead to more crime? A comparison of cross-sectional and time-series analyses of United States counties. *Economics Letters*, *96*(2), 264–268. https://doi.org/10.1016/j.econlet.2007.01.012

Butterfield, K. D., Trevino, L. K., & Weaver, G. R. (2000). Moral awareness in business organizations: Influences of issue-related and social context factors. *Human Relations*, *53*(7), 981–1018. https://doi.org/10.1177/0018726700537004

Buttrick, N. R., & Oishi, S. (2017). The psychological consequences of income inequality. *Social and Personality Psychology Compass*, *11*(3), Article e12304. https://doi.org/10.1111/spc3.12304

Çam, T., & Irmak, F. (2014). An overview of Durkheim and Merton's social anomie. *International Journal of Human Sciences*, *11*(2), 1297–1305. https://doi.org/10.14687/ijhs.v11i2.3083

Choe, J. (2008). Income inequality and crime in the United States. *Economics Letters*, *101*(1), 31–33. https://doi.org/10.1016/j.econlet.2008.03.025

Cialdini, R. B., & Goldstein, N. J. (2004). Social influence: Compliance and conformity. *Annual Review of Psychology*, *55*(1), 591–621. https://doi.org/10.1146/annurev.psych.55.090902.142015

Cornwell, J. F. M., & Higgins, E. T. (2019). Sense of personal control intensifies moral judgments of others' actions. *Frontiers in Psychology*, *10*, Article 2261. https://doi.org/10.3389/fpsyg.2019.02261

Cronbach, L. J. (1955). Processes affecting scores on "understanding of others" and "assumed similarity". *Psychological Bulletin*, *52*(3), 177–193. https://doi.org/10.1037/h0044919

Cushman, F. (2008). Crime and punishment: Distinguishing the roles of causal and intentional analyses in moral judgment. *Cognition*, *108*(2), 353–380. https://doi.org/10.1016/j.cognition.2008.03.006

Darley, J. M., & Shultz, T. R. (1990). Moral rules: Their content and acquisition. *Annual Review of Psychology*, *41*(1), 525–556. https://doi.org/10.1146/annurev.ps.41.020190.002521

Davidai, S. (2018). Why do Americans believe in economic mobility? Economic inequality, external attributions of wealth and poverty, and the belief in economic mobility. *Journal of Experimental Social Psychology*, *79*, 138–148. https://doi.org/10.1016/j.jesp.2018.07.012

Davidai, S. (2022). How do people make sense of wealth and poverty? *Current Opinion in Psychology*, *43*, 42–47. https://doi.org/10.1016/j.copsyc.2021.06.010

Davidai, S., & Wienk, M. N. A. (2021). The psychology of lay beliefs about economic mobility. *Social and Personality Psychology Compass*, *15*(8), Article e12625. https://doi.org/10.1111/spc3.v15.8

Day, M. V., & Fiske, S. T. (2017). Movin' on up? How perceptions of social mobility affect our willingness to defend the system. *Social Psychological and Personality Science*, *8*(3), 267–274. https://doi.org/10.1177/1948550616678454

Dubois, D., Rucker, D. D., & Galinsky, A. D. (2015). Social class, power, and selfishness: When and why upper and lower class individuals behave unethically. *Journal of Personality and Social Psychology*, *108*(3), 436–449. https://doi.org/10.1037/pspi0000008

Feenstra, R. C., Inklaar, R., & Timmer, M. P. (2015). The next generation of the Penn World: Version 8.0. *American Economic Review*, *105*(10), 3150–3182. https://doi.org/10.1257/aer.20130954

Ferraro, K. F., & LaGrange, R. (1987). The measurement of fear of crime. *Sociological Inquiry*, *57*(1), 70–97. https://doi.org/10.1111/j.1475-682X.1987.tb01181.x

Fiedler, K., Harris, C., & Schott, M. (2018). Unwarranted inferences from statistical mediation tests—An analysis of articles published in 2015. *Journal of Experimental Social Psychology*, *75*, 95–102. https://doi.org/10.1016/j.jesp.2017.11.008

Fiedler, K., Schott, M., & Meiser, T. (2011). What mediation analysis can (not) do. *Journal of Experimental Social Psychology*, *47*(6), 1231–1236. https://doi.org/10.1016/j.jesp.2011.05.007

Fincham, F. D., & Shultz, T. R. (1981). Intervening causation and the mitigation of responsibility for harm. *British Journal of Social Psychology*, *20*(2), 113–120. https://doi.org/10.1111/j.2044-8309.1981.tb00483.x

Fleischmann, A., & Lammers, J. (2020). Power and moral thinking. *Current Opinion in Psychology*, *33*, 23–27. https://doi.org/10.1016/j.copsyc.2019.06.008

Folkman, S. (1984). Personal control and stress and coping processes: A theoretical analysis. *Journal of Personality and Social Psychology*, *46*(4), 839–852. https://doi.org/10.1037/0022-3514.46.4.839

Franks, A. S., & Scherr, K. C. (2019). Economic issues are moral issues: The moral underpinnings of the desire to reduce wealth inequality. *Social Psychological and Personality Science*, *10*(4), 553–562. https://doi.org/10.1177/1948550618772821

Genschow, O., Rigoni, D., & Brass, M. (2017). Belief in free will affects causal attributions when judging others' behavior. *Proceedings of the National Academy of Sciences*, *114*(38), 10071–10076. https://doi.org/10.1073/pnas.1701916114

Gino, F., & Ariely, D. (2012). The dark side of creativity: Original thinkers can be more dishonest. *Journal of Personality and Social Psychology*, *102*(3), 445–459. https://doi.org/10.1037/a0026406

Gino, F., Ayal, S., & Ariely, D. (2009). Contagion and differentiation in unethical behavior: The effect of one bad apple on the barrel. *Psychological Science*, *20*(3), 393–398. https://doi.org/10.1111/j.1467-9280.2009.02306.x

Gino, F., & Bazerman, M. H. (2009). When misconduct goes unnoticed: The acceptability of gradual erosion in others' unethical behavior. *Journal of Experimental Social Psychology*, *45*(4), 708–719. https://doi.org/10.1016/j.jesp.2009.03.013

Gino, F., Gu, J., & Zhong, C. B. (2009). Contagion or restitution? When bad apples can motivate ethical behavior. *Journal of Experimental Social Psychology*, *45*(6), 1299–1302. https://doi.org/10.1016/j.jesp.2009.07.014

Gino, F., & Margolis, J. D. (2011). Bringing ethics into focus: How regulatory focus and risk preferences influence (un)ethical behavior. *Organizational Behavior and Human Decision Processes*, *115*(2), 145–156. https://doi.org/10.1016/j.obhdp.2011.01.006

Gino, F., & Pierce, L. (2009). The abundance effect: Unethical behavior in the presence of wealth. *Organizational Behavior and Human Decision Processes*, *109*(2), 142–155. https://doi.org/10.1016/j.obhdp.2009.03.003

Haidt, J., & Kesebir, S. (2010). Morality. In S. Fiske, D. Gilbert, & G. Lindzey (Eds.), *Handbook of social psychology* (5th ed., pp. 797–832). Wiley. https://doi.org/10.5840/traddisc2009/201036345

Haidt, J., Koller, S. H., & Dias, M. G. (1993). Affect, culture, and morality, or is it wrong to eat your dog? *Journal of Personality and Social Psychology*, *65*(4), 613–628. https://doi.org/10.1037/0022-3514.65.4.613

Heider, F. (1958). *The psychology of interpersonal relations*. Wiley.

Hsieh, C., & Pugh, M. (1993). Poverty, income inequality, and violent crime: A meta-analysis of recent aggregate data studies. *Criminal Justice Review*, *18*(2), 182–202. https://doi.org/10.1177/073401689301800203

Jachimowicz, J. M., Szaszi, B., Lukas, M., Smerdon, D., Prabhu, J., & Weber, E. U. (2020). Higher economic inequality intensifies the financial hardship of people living in poverty by fraying the community buffer. *Nature Human Behaviour*, *4*(7), 702–712. https://doi.org/10.1038/s41562-020-0849-2

Jacobs, D. (1979). Inequality and police strength: Conflict theory and coercive control in metropolitan areas. *American Sociological Review*, *44*(6), 913–925. https://doi.org/10.2307/2094716

Jetten, J., Peters, K., & Casara, B. G. S. (2022). Economic inequality and conspiracy theories. *Current Opinion in Psychology*, *47*, Article 101358. https://doi.org/10.1016/j.copsyc.2022.101358

Jost, J. T., & Thompson, E. P. (2000). Group-based dominance and opposition to equality as independent predictors of self-esteem, ethnocentrism, and social policy attitudes among African Americans and European Americans. *Journal of Experimental Social Psychology*, *36*(3), 209–232. https://doi.org/10.1006/jesp.1999.1403

Kakkar, H., & Sivanathan, N. (2017). When the appeal of a dominant leader is greater than a prestige leader. *Proceedings of the National Academy of Sciences of the United States of America*, *114*(26), 6734–6739. https://doi.org/10.1073/pnas.1617711114

Kouchaki, M., Oveis, C., & Gino, F. (2014). Guilt enhances the sense of control and drives risky judgments. *Journal of Experimental Psychology: General*, *143*(6), 2103–2110. https://doi.org/10.1037/a0037932

Kouchaki, M., Smith-Crowe, K., Brief, A. P., & Sousa, C. (2013). Seeing green: Mere exposure to money triggers a business decision frame and unethical outcomes. *Organizational Behavior and Human Decision Processes*, *121*(1), 53–61. https://doi.org/10.1016/j.obhdp.2012.12.002

Kraus, M. W., Piff, P., & Keltner, D. (2009). Social class, sense of control, and social explanation. *Journal of Personality and Social Psychology*, *97*(6), 992–1004. https://doi.org/10.1037/a0016357

Kraus, M. W., Piff, P. K., Mendoza-Denton, R., Rheinschmidt, M. L., & Keltner, D. (2012). Social class, solipsism, and contextualism: How the rich are different from the poor. *Psychological Review*, *119*(3), 546–572. https://doi.org/10.1037/a0028756

Kraus, M. W., & Tan, J. J. X. (2015). Americans overestimate social class mobility. *Journal of Experimental Social Psychology*, *58*, 101–111. https://doi.org/10.1016/j.jesp.2015.01.005

Kteily, N. S., Sheehy-Skeffington, J., & Ho, A. K. (2017). Hierarchy in the eye of the beholder: (Anti-)egalitarianism shapes perceived levels of social inequality. *Journal of Personality and Social Psychology*, *112*(1), 136–159. https://doi.org/10.1037/pspp0000097

Lachman, M. E. (1986). Locus of control in aging research: A case for multidimensional and domain-specific assessment. *Psychology and Aging*, *1*(1), 34–40. https://doi.org/10.1037/0882-7974.1.1.34

Lachman, M. E., & Weaver, S. (1998). The sense of control as a moderator of social class differences in health and well-being. *Journal of Personality and Social Psychology*, *74*(3), 763–773. https://doi.org/10.1037/0022-3514.74.3.763

Lammers, J., Stapel, D. A., & Galinsky, A. D. (2010). Power increases hypocrisy: Moralizing in reasoning, immorality in behavior. *Psychological Science*, *21*(5), 737–744. https://doi.org/10.1177/0956797610368810

Landau, M. J., Kay, A. C., & Whitson, J. A. (2015). Compensatory control and the appeal of a structured world. *Psychological Bulletin*, *141*(3), 694–722. https://doi.org/10.1037/a0038703

Laurin, K., Fitzsimons, G. M., & Kay, A. C. (2011). Social disadvantage and the self-regulatory function of justice beliefs. *Journal of Personality and Social Psychology*, *100*(1), 149–171. https://doi.org/10.1037/a0021343

Lipkus, I. (1991). The construction and preliminary validation of a global belief in a just world scale and the exploratory analysis of the multidimensional belief in a just world scale. *Personality and Individual Differences*, *12*(11), 1171–1178. https://doi.org/10.1016/0191-8869(91)90081-L

Lynch, J., Smith, G. D., Hillemeier, M., Shaw, M., Raghunathan, T., & Kaplan, G. (2001). Income inequality, the psychosocial environment, and health: Comparisons of wealthy nations. *The Lancet*, *358*(9277), 194–200. https://doi.org/10.1016/S0140-6736(01)05407-1

Malle, B. F., Guglielmo, S., & Monroe, A. E. (2014). A theory of blame. *Psychological Inquiry*, *25*(2), 147–186. https://doi.org/10.1080/1047840X.2014.877340

Marmot, M., & Bobak, M. (2000). International comparators and poverty and health in Europe. *BMJ*, *321*(7269), 1124–1128. https://doi.org/10.1136/bmj.321.7269.1124

Martin, N. D., Rigoni, D., & Vohs, K. D. (2017). Free will beliefs predict attitudes toward unethical behavior and criminal punishment. *Proceedings of the National Academy of Sciences*, *114*(28), 7325–7330. https://doi.org/10.1073/pnas.1702119114

McCall, L., Burk, D., Laperrière, M., & Richeson, J. A. (2017). Exposure to rising inequality shapes Americans' opportunity beliefs and policy support. *Proceedings of the National Academy of Sciences of the United States of America*, *114*(36), 9593–9598. https://doi.org/10.1073/pnas.1706253114

Merton, R. K. (1938). Social structure and anomie. *American Sociological Review*, *3*(5), 672–682. https://doi.org/10.2307/2084686

Mikhail, J. (2007). Universal moral grammar: Theory, evidence and the future. *Trends in Cognitive Sciences*, *11*(4), 143–152. https://doi.org/10.1016/j.tics.2006.12.007

Monroe, A. E., Brady, G. L., & Malle, B. F. (2017). This isn't the free will worth looking for: General free will beliefs do not influence moral judgments, agent-specific choice ascriptions do. *Social Psychological and Personality Science*, *8*(2), 191–199. https://doi.org/10.1177/1948550616667616

Neville, L. (2012). Do economic equality and generalized trust inhibit academic dishonesty? Evidence from state-level search-engine queries. *Psychological Science*, *23*(4), 339–345. https://doi.org/10.1177/0956797611435980

Obama, B. (2013). *Remarks by the President on economic mobility*. The White House. http://www.whitehouse.gov/the-pressoffice/2013/12/04/remarks-president-economic-mobility

Oishi, S., Kesebir, S., & Diener, E. (2011). Income inequality and happiness. *Psychological Science*, *22*(9), 1095–1100. https://doi.org/10.1177/0956797611417262

Payne, B. K. (2017). *The Broken ladder: How inequality affects the way we think, live, and die*. Penguin Random House.

Payne, B. K., Brown-Iannuzzi, J. L., & Hannay, J. W. (2017). Economic inequality increases risk taking. *Proceedings of the National Academy of Sciences of the United States of America*, *114*(18), 4643–4648. https://doi.org/10.1073/pnas.1616453114

Pierce, J. R., Kilduff, G. J., Galinsky, A. D., & Sivanathan, N. (2013). From glue to gasoline: How competition turns perspective takers unethical. *Psychological Science*, *24*(10), 1986–1994. https://doi.org/10.1177/0956797613482144

Pitesa, M., & Thau, S. (2014). A lack of material resources causes harsher moral judgments. *Psychological Science*, *25*(3), 702–710. https://doi.org/10.1177/0956797613514092

Pittman, T. S., & Pittman, N. L. (1980). Deprivation of control and the attribution process. *Journal of Personality and Social Psychology*, *39*(3), 377–389. https://doi.org/10.1037/0022-3514.39.3.377

Polman, E., & Ruttan, R. L. (2012). Effects of anger, guilt, and envy on moral hypocrisy. *Personality and Social Psychology Bulletin*, *38*(1), 129–139. https://doi.org/10.1177/0146167211422365

Reeder, G. D., Kumar, S., Hesson-McInnis, M. S., & Trafimow, D. (2002). Inferences about the morality of an aggressor: The role of perceived motive. *Journal of Personality and Social Psychology*, *83*(4), 789–803. https://doi.org/10.1037/0022-3514.83.4.789

Ross, L., Greene, D., & House, P. (1977). The "false consensus effect": An egocentric bias in social perception and attribution processes. *Journal of Experimental Social Psychology*, *13*(3), 279–301. https://doi.org/10.1016/0022-1031(77)90049-X

Różycka-Tran, J., Boski, P., & Wojciszke, B. (2015). Belief in a zero-sum game as a social axiom: A 37-nation study. *Journal of Cross-Cultural Psychology*, *46*(4), 525–548. https://doi.org/10.1177/0022022115572226

Russell, D. (1982). The Causal Dimension Scale: A measure of how individuals perceive causes. *Journal of Personality and Social Psychology*, *42*(6), 1137–1145. https://doi.org/10.1037/0022-3514.42.6.1137

Salvador Casara, B. G., Suitner, C., & Jetten, J. (2022). The impact of economic inequality on conspiracy beliefs. *Journal of Experimental Social Psychology*, *98*, Article 104245. https://doi.org/10.1016/j.jesp.2021.104245

Sánchez-Rodríguez, Á, Jetten, J., Willis, G., & Rodríguez-Bailón, R. (2019). High economic inequality makes us feel less wealthy. *International Review of Social Psychology*, *32*(1), Article 17. https://doi.org/10.5334/irsp.333

Sánchez-Rodríguez, Á., Willis, G. B., Jetten, J., & Rodríguez-Bailón, R. (2019). Economic inequality enhances inferences that the normative climate is individualistic and competitive. *European Journal of Social Psychology*, *49*(6), 1114–1127. https://doi.org/10.1002/ejsp.2557

Savoia, A. (2017). *Global inequality is on the rise—But at vastly different rates across the world*. The Conversation. http://theconversation.com/global-inequality-is-on-the-rise-but-at-vastly-different-rates-across-the-world-88976

Schein, C., & Gray, K. (2018). The theory of dyadic morality: Reinventing moral judgment by redefining harm. *Personality and Social Psychology Review*, *22*(1), 32–70. https://doi.org/10.1177/1088868317698288

Schmalor, A., & Heine, S. J. (2022). Subjective economic inequality decreases emotional intelligence, especially for people of high social class. *Social Psychological and Personality Science*, *13*(2), 608–617. https://doi.org/10.1177/19485506211024024

Shariff, A. F., Greene, J. D., Karremans, J. C. Luguri, J. B., Clark, C. J., Schooler, J. W., Baumeister, R. F., & Vohs, K. D. (2014). Free will and punishment: A mechanistic view of human nature reduces retribution free will and punishment: A mechanistic view of human nature reduces retribution. *Psychological Science*, *25*(8), 1563–1570. https://doi.org/10.1177/0956797614534693

Sharma, E., Mazar, N., Alter, A. L., & Ariely, D. (2014). Financial deprivation selectively shifts moral standards and compromises moral decisions. *Organizational Behavior and Human Decision Processes*, *123*(2), 90–100. https://doi.org/10.1016/j.obhdp.2013.09.001

Shaver, K. G. (1985). *The attribution of blame: Causality, responsibility, and blameworthiness*. Springer-Verlag.

Shu, L. L., Gino, F., & Bazerman, M. H. (2011). Dishonest deed, clear conscience: When cheating leads to moral disengagement and motivated forgetting. *Personality and Social Psychology Bulletin*, *37*(3), 330–349. https://doi.org/10.1177/0146167211398138

Shultz, T. R., Wright, K., & Schleifer, M. (1986). Assignment of moral responsibility and punishment. *Child Development*, *57*(1), 177–184. https://doi.org/10.2307/1130649

Sirola, N., & Pitesa, M. (2018). The macroeconomic environment and the psychology of work evaluation. *Organizational Behavior and Human Decision Processes*, *144*, 11–24. https://doi.org/10.1016/j.obhdp.2017.09.003

Smith, H. J., & Pettigrew, T. F. (2014). The subjective interpretation of inequality: A model of the relative deprivation experience. *Social and Personality Psychology Compass*, *8*(12), 755–765. https://doi.org/10.1111/spc3.12151

Smith, H. J., Pettigrew, T. F., Pippin, G. M., & Bialosiewicz, S. (2012). Relative deprivation: A theoretical and meta-analytic review. *Personality and Social Psychology Review*, *16*(3), 203–232. https://doi.org/10.1177/1088868311430825

Sokoloff, K. L., & Engerman, S. L. (2000). History lessons: Institutions, factor endowments, and paths of development in the new world. *Journal of Economic Perspectives*, *14*(3), 217–232. https://doi.org/10.1257/jep.14.3.217

Solt, F. (2019). *Measuring income inequality across countries and over time: The standardized world income inequality database*. https://doi.org/10.31235/osf.io/mwnje

Sommet, N., Elliot, A. J., Jamieson, J. P., & Butera, F. (2019). Income inequality, perceived competitiveness, and approach-avoidance motivation. *Journal of Personality*, *87*(4), 767–784. https://doi.org/10.1111/jopy.12432

Sprong, S., Jetten, J., Wang, Z., Peters, K., Mols, F., Verkuyten, M., Bastian, B., Ariyanto, A., Autin, F., Ayub, N., Badea, C., Besta, T., Butera, F., Costa-Lopes, R., Cui, L., Fantini, C., Finchilescu, G., Gaertner, L., Gollwitzer, M., … Wohl, M. J. A. (2019). "Our country needs a strong leader right now": Economic inequality enhances the wish for a strong leader. *Psychological Science*, *30*(11), 1625–1637. https://doi.org/10.1177/0956797619875472

Starmans, C., Sheskin, M., & Bloom, P. (2017). Why people prefer unequal societies. *Nature Human Behaviour*, *1*(4), Article 0082. https://doi.org/10.1038/s41562-017-0082

Stephens, N. M., Markus, H. R., & Phillips, L. T. (2014). Social class culture cycles: How three gateway contexts shape selves and fuel inequality. *Annual Review of Psychology*, *65*(1), 611–634. https://doi.org/10.1146/annurev-psych-010213-115143

Stojanov, A., & Halberstadt, J. (2020). Does lack of control lead to conspiracy beliefs? A meta-analysis. *European Journal of Social Psychology*, *50*(5), 955–968. https://doi.org/10.1002/ejsp.2690

Sullivan, D., Landau, M. J., & Rothschild, Z. K. (2010). An existential function of enemyship: Evidence that people attribute influence to personal and political enemies to compensate for threats to control. *Journal of Personality and Social Psychology*, *98*(3), 434–449. https://doi.org/10.1037/a0017457

Teymoori, A., Bastian, B., & Jetten, J. (2017). Toward a psychological analysis of anomie. *Political Psychology*, *38*(6), 1009–1023. https://doi.org/10.1111/pops.12377

To, C., Kilduff, G. J., & Rosikiewicz, B. L. (2020). When interpersonal competition helps and when it harms: An integration via challenge and threat. *Academy of Management Annals*, *14*(2), 908–934. https://doi.org/10.5465/annals.2016.0145

Uslaner, E. (2002). The moral foundations of trust. In *The moral foundations of trust*. Cambridge University Press. https://doi.org/10.4337/9780857935854

Vauclair, C. M., & Bratanova, B. (2017). Income inequality and fear of crime across the European region. *European Journal of Criminology*, *14*(2), 221–241. https://doi.org/10.1177/1477370816648993

Walters, G. D. (2019). Why are mediation effects so small? *International Journal of Social Research Methodology*, *22*(2), 219–232. https://doi.org/10.1080/13645579.2018.1517232

Whitson, J. A., & Galinsky, A. D. (2008). Lacking control increases illusory pattern perception. *Science*, *322*(5898), 115–117. https://doi.org/10.1126/science.1159845

Wilkinson, R. G. (1996). *Unhealthy societies: The afflictions of inequality*. Routledge.

Wilkinson, R. G., & Pickett, K. E. (2009). Income inequality and social dysfunction. *Annual Review of Sociology*, *35*(1), 493–511. https://doi.org/10.1146/annurev-soc-070308-115926

Wilkinson, R. G., & Pickett, K. E. (2017). The enemy between us: The psychological and social costs of inequality. *European Journal of Social Psychology*, *47*(1), 11–24. https://doi.org/10.1002/ejsp.2275

Wiltermuth, S. S., & Flynn, F. J. (2013). Power, moral clarity, and punishment in the workplace. *Academy of Management Journal*, *56*(4), 1002–1023. https://doi.org/10.5465/amj.2010.0960

Woolfolk, R. L., Doris, J. M., & Darley, J. M. (2006). Identification, situational constraint, and social cognition: Studies in the attribution of moral responsibility. *Cognition*, *100*(2), 283–301. https://doi.org/10.1016/j.cognition.2005.05.002

Ziskand, D. (1940). *One thousand strikes of government employees*. Harper and Row.

Received May 27, 2022
Revision received March 6, 2023
Accepted March 10, 2023 ■