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Income Inequality Depresses Support for Higher Minimum Wages

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The minimum wage can be an effective policy tool for mitigating economic inequality, but public demand for higher minimum wages has not kept up with rising levels of income disparities. In our first study using protest attendance data over a six-and-a-half-year period in the United States (N = 130,562), we find evidence that higher economic inequality was associated with fewer and less well-attended protests targeted at changing economic conditions and raising minimum wages. We corroborate this finding across eight laboratory experiments (N = 7,286)—including a U.S. nationally representative sample—finding causal evidence that higher levels of income inequality decrease support for higher minimum wages. We propose that this decreased support results from a psychological tendency to engage in "is-to-ought" reasoning, where individuals use information about how much people actually earn to determine how much they *should* earn. We conclude by introducing an intervention to mitigate the effects of this phenomenon and discuss implications for policy communication.

Public Significance Statement

The minimum wage can be an effective policy tool for addressing economic inequality, but public demand for higher minimum wages has not kept up with rising levels of income disparities. Our research suggests that higher levels of income inequality can weaken support for higher minimum wages as a result of "is-to-ought" reasoning, where individuals use information about how much people actually earn to determine how much they should earn. This tendency to infer what "ought to be" from what "is" contributes to psychological processes that maintain and widen inequalities over time. Our work also suggests a potential intervention for increasing support for policies that promote greater equality.

Keywords: inequality, minimum wages, protests, evaluation mode

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The minimum wage can be a potent policy for reducing income inequality. Six decades ago, American civil rights leaders identified the minimum wage as a critical tool in addressing racial economic inequality (Derenoncourt & Montialoux, 2021). For instance, economists found that increases in the minimum wage that were passed after the March for Jobs and Freedom in 1963 were responsible for a 20% decrease in the racial income gap in the following decades (Derenoncourt & Montialoux, 2020, 2021). Similarly, economists have documented how increases in the Brazilian minimum wage since 1994 were responsible for 30% of the total decline in earnings inequality in the following decades (Engbom & Moser, 2021). In sum, there is strong evidence that changes to the

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minimum wage are a key pathway to reducing economic inequality between racial and social groups.

Given that raising minimum wages can effectively reduce inequality, one might expect that when economic inequality reaches undesirably high levels, public opinion would demand higher minimum wages. However, we find that higher economic inequality is associated with lower minimum wages in both countries across the world and states across the United States (Supplemental Studies S1 and S2). While this relationship is likely bidirectional—as minimum wages are determined by many more factors than public opinion alone—discontent with the current level of inequality is a factor that one may expect to exert pressure on policymakers to make changes. And yet, rising inequality does not necessarily trigger public demand for higher minimum wages. In our work, we propose that this is partly due to income inequality shaping beliefs about how much the minimum wage ought to be. More specifically, we suggest that higher levels of income inequality weaken support for higher minimum wages.

Lay Beliefs About Inequality and Support for Redistributive Policies

Models of public opinion that are based on self-interest and economic rationality suggest that demand for inequality-reducing policies should increase as inequality increases (e.g., Meltzer & Richard, 1981; Monroe, 1991). But public opinion does not seem to respond to inequality this way. One reason for this lack of responsiveness in public demand for inequality-reducing policies is that inequality itself can shape perceptions and attitudes toward inequality.

As economic inequality has risen across developed countries, attitudes about it have remained relatively stable (Bartels, 2005; Finseraas, 2009; Lupu & Pontusson, 2023; Weisstanner, 2023). Studies suggest that this effect is due to people's tendency to justify the status quo. Researchers have documented this tendency across 41 countries, showing that residents' perceptions of the extent of inequality are strongly correlated with perceptions of how much inequality there should be (García-Sánchez et al., 2019). And, while such correlations leave open the question of causal direction, several experiments also suggest that inequality can cause people to justify the status quo. For example, participants who were told that economic inequality was higher supported higher ideal levels of inequality compared to participants who were told that inequality was lower (Trump, 2018).

These findings show that perceptions of what the status quo is can influence people's perception of how things ought to be. Since at least the writings of Hume (1738/2000), scholars have known that people tend to conflate descriptive norms (how things are) with prescriptive norms (how things should be) even though they are logically distinct. Such "is-to-ought" reasoning is a pervasive aspect of human thought: it has been documented with children and adults (for a review, see Roberts, 2022) and demonstrated on topics as varied as political attitudes, institutional policies, aesthetic judgments, judgments of taste (Eidelman et al., 2009), and many more (Lindström et al., 2018; Riggs & Long, 2020). This error is tempting because it is often informative or adaptive. For instance, since observed behaviors (the "is") have presumably survived for biological or cultural reasons, adopting them as a standard to be replicated (the "ought") comes naturally to many people (Cialdini & Goldstein, 2004; Hussak & Cimpian, 2015; Nielsen & Tomaselli, 2010; Schmidt & Rakoczy, 2018; Tomasello, 2016). Yet, this tendency is problematic in cases where structural or historical factors create a status quo that is inconsistent with the interests of present populations.

We argue that the pervasiveness of is-to-ought reasoning can cause public demand for raising the minimum wage to be constrained by the mere existence of higher levels of income inequality. When the poorest workers *are* paid less, we expect that people will also believe that they *should be* paid less. Moreover, we argue that such is-to-ought reasoning shapes normative judgments of minimum wage prescriptions via its influence on needs perceptions. That is, individuals infer how much people need to have a good life based on how much they actually earn and thus make a normative leap regarding how much people deserve and should earn (Hagerty & Barasz, 2020).[1] We thus propose and provide evidence that the level of inequality in society is an important contextual factor that influences perceptions surrounding human basic needs and beliefs about normative levels of minimum wages.

Inequality and Minimum Wage Prescriptions

This predicted pattern of is-to-ought reasoning concerning minimum wages is consistent with several theoretical accounts. One account is that such reasoning reflects an anchoring and adjustment process. Anchoring is a heuristic in which people try to estimate unknown quantities by starting with specific target values and then adjusting upward or downward to improve the accuracy of their judgments (Tversky & Kahneman, 1974). Because adjustments tend to be insufficient, this heuristic typically leads judgments to be biased in the direction of whatever anchor value is considered (Epley & Gilovich, 2006). Under this account, people use actual wages as an anchor to judge what wages ought to be, and they insufficiently adjust. The result is a prescriptive judgment that is biased by actual wage values: When inequality is higher, low wages are likely to be lower, biasing minimum wage prescriptions downwards.

While anchoring is a robust phenomenon, it is unlikely to be the sole explanation for our findings. First, we find that actual wages influence wage prescriptions even when such prescriptions are framed not in numerical terms but in terms of what goods and services minimum wage earners deserve to have. Since research suggests anchoring is unlikely to happen across different units and scales (S. Frederick et al., 2010; S. W. Frederick & Mochon, 2012), such an anchoring account cannot explain our results. Second, even when both "wages" and "wage prescriptions" are expressed in dollars, using what wages are as an anchor to estimate what wages ought to be is itself an instantiation of is-to-ought reasoning that demands an explanation.

A second account is that the effect of inequality on prescribed wages and needs reflects people's motivation to justify and rationalize the status quo. System justification theory argues that people are motivated to justify and defend systems to which they belong (Jost, 2019; Jost & Banaji, 1994). Since it is aversive to believe that one belongs to a system of laws, norms, and precedents that are illegitimate or immoral, people engage in a wide variety

[1] A corollary of this reasoning is that when the rich earn more, people may believe that they ought to earn more. We find evidence for this claim as well, although our focus in the present studies is on minimum wages.

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of rationalizations to justify the systems on which they depend. Under this account, people may be motivated to justify current wage inequality and hence support wage policies that reinforce the status quo.

System justification is a well-supported phenomenon that likely influences many aspects of public opinion (Jost, 2020). However, it is also unlikely to be the sole explanation for our findings because the motivation to justify a system primarily applies to individuals who are immersed in that system and depend on it. For instance, research has found that people tend to rationalize status quo levels of inequality only when they are made to feel dependent on the system or could not escape it (Kay et al., 2009; Trump, 2018). In contrast, we find that existing inequality influences minimum wage prescriptions even for hypothetical societies that participants are not a part of.

A third account is that people infer what the minimum wage ought to be from what the minimum wage is because mental representations of "ought" are naturally entangled with the understanding of what "is." Indeed, research suggests that people automatically associate what is with what ought to be. Moreover, they frequently confuse the two and mis-recall instances of one as instances of the other (Eriksson et al., 2015).

A strong version of this view is that the very concept of "ought" is composed of both prescriptive elements (what should be) and descriptive elements (what is, or what is common; Bear & Knobe, 2017). This explanation implies the broadest version of our predicted effect. Under this account, actual wages should bias prescribed wages even when wage prescriptions are not measured numerically. And the same should happen even when participants do not belong to the system being considered, thus having no particular motivation to justify that system. We test these hypotheses in nine primary studies, which we describe next.

Importantly, we argue that "is-to-ought" reasoning explains lower minimum wage prescriptions when inequality is higher through assessments of perceived needs (Hagerty & Barasz, 2020). Specifically, we argue that people use information regarding how much others earn to make inferences about how much they need and, based on these inferences of perceived needs, draw conclusions regarding how much they should earn.

Different Modes of Evaluation and Normative Reasoning

While we find a robust effect of inequality on lower minimum wage prescriptions, this appears to conflict with people's stated preferences: In a supplemental study, we find that participants consistently agree with the principle that minimum wages should be raised in societies where inequality is higher (Supplemental Study S3). Yet, when they have to make minimum wage prescriptions, they fail to apply a principle that they appear to endorse in the first place. Thus, we draw from a distinct literature on the effects of modes of evaluation on normative reasoning to explore a potential intervention that could help people align their preferences with their choices.

The negative relationship between economic inequality and minimum wage prescriptions documented in our studies occurs when people make decisions in what is called a separate evaluation mode. That is, people see the income distribution of one particular society and make decisions based on this distribution. However, research on different types of evaluation modes shows that normative features of decision-making can fail to stand out and influence people's decisions when they are faced with separate evaluations (e.g., Hsee et al., 1999). Normative aspects of decision-making, this research shows, are more likely to emerge when people have contrast cases to which they can compare alternatives. When people can compare different alternative scenarios in what is called joint evaluation mode, self-contradictions and normative features become more salient than when people evaluate one option at a time (e.g., Davidai & Shafir, 2020).

Given that minimum wage prescriptions are heavily influenced by normative judgments, we explore the use of joint evaluation as a potential intervention that would help people think about this decision in a way that triggers normative reasoning. Instead of having people evaluate just one society at a time in separate evaluation mode (with either lower or higher levels of inequality) and then asking them to come up with minimum wage prescriptions, we give people two societies side-by-side (one with lower and one with higher levels of inequality) in joint evaluation mode and let them decide the minimum wage for both societies. The idea is that seeing both societies at the same time makes the contrast between lower and higher inequality levels salient. This salience, in turn, makesnormative principles that individuals preemptively hold regarding the relationship between inequality and minimum wage prescriptions readily available to guide their decisions. Thus, if it is indeed the case that people believe that minimum wages should be higher in societies where inequality is higher, they should be able to draw from this principle more easily when making decisions in joint evaluation. In this way, this simple potential intervention would help people align their preferences with their choices.

Notably, this argument is distinct from the is-to-ought reasoning proposed to explain decisions under separate evaluation mode. There, the idea is that people use how much people actually earn to make inferences about how much they need and thus, how much they should earn. Here, the comparison case is separate versus joint evaluation mode. We are not hoping to shape perceptions of how much people need in different societies with this potential intervention; we are hoping to shift their reasoning mode from the more descriptive to more normative, making fairness concerns more salient—if people indeed do care about fairness in this particular case. Moral concerns that people do not have in the first place do not arise in joint evaluation. So, even if people do not change how much they think others need under different modes of evaluation, joint evaluation may ignite thoughts about whether higher or lower inequality matters for the fairness of minimum wage prescriptions (a contrast that is unavailable under separate evaluation).

Liberals Versus Conservatives: The Role of Political Orientation

Reactions to inequality and policy opinions are influenced by differences in political orientation (Gilens, 2005; Willis et al., 2022). Liberals are more likely to be concerned about inequality and to support policies that help decrease inequality (such as higher minimum wages), while conservatives tend to be less concerned about inequality and are less likely to support inequality-reducing policies. Importantly, conservatism has been associated with a cluster of beliefs and motivations such as system justification (e.g., Jost & Amodio, 2012; Jost et al., 2003, 2008) and social dominance orientation (SDO) (e.g., Ho et al., 2015; Kleppestø et al., 2019). As previously discussed,

system justification tendencies entail the motivation to construe the social, political, and economic systems that we belong to as fair and legitimate. Similarly, SDO tendencies are connected to the motivation to uphold existing social hierarchies. While system justification in isolation is unlikely to account for the effect of inequality on minimum wage prescriptions, it remains an open question whether general differences in political orientation and related tendencies to maintain the status quo and uphold hierarchies moderate this effect. Thus, across our studies, we explore the role of political orientation (from very liberal to very conservative) on moderating the documented effects.

Given the strong association between conservatism, system justification, and SDO, one could expect the effect of inequality on minimum wage prescriptions to be higher for conservatives and lower for liberals. Research has documented how conservative individuals who are highly motivated to justify the status quo and maintain social hierarchies are less likely to pay attention to, notice, and care about inequality in both real-world and fictitious contexts (Goya-Tocchetto et al., 2024; Kteily et al., 2017; Waldfogel et al., 2021). These findings are aligned with lower support for any policy that would reduce inequality, leading to the hypothesis that higher conservatism is associated with lower minimum wage recommendations in more inegalitarian societies, as this would serve the purpose of protecting the hierarchy. That is, one could expect larger effects for more conservative individuals, as they would be the most motivated to maintain existing hierarchies by keeping wages low.

That said, emerging work suggests that individuals who are low in SDO are especially likely to attend to and focus on inequality (relative to their higher SDO counterparts; Kteily et al., 2017; Waldfogel et al., 2021; see Jost et al., 2023). These findings suggest that individuals who are low in the motivation to maintain the social hierarchy (more liberal) are more attuned to inequality and, as a result, more sensitive to inequality manipulations. Ironically, because liberal individuals are particularly attuned to inequality, they may be most impacted by the inequality manipulation used in our studies. Accordingly, because liberal individuals pay more attention to inequality, they may be more susceptible to is-to-ought reasoning. If liberal individuals pay more attention to how much the poorest in society make, they become more likely to believe that is how much they should make. In this way, the effect of inequality on depressing minimum wages may ironically be stronger for liberals than conservatives. And this is precisely what we find in an internal meta-analysis of our results, as reported in the Results section.

Overview of Studies

One primary means by which public opinion influences policies is through protests. As such, in our first study, we analyzed a comprehensive data set of 130,562 protests from a six-and-a-half-year period across 823 unique counties in the United States. We found clear evidence that higher levels of income inequality were associated with both fewer and less well-attended protests, but only when these protests concerned economic issues, such as raising the minimum wage. Protests concerning other topics (e.g., racial justice) did not exhibit such negative relationships with income inequality. In eight additional experiments, we investigated the psychology underpinning this negative effect of economic inequality on support for higher minimum wages that we observed in these ecologically valid field data.

In Studies 2–4, we manipulated the level of income inequality in hypothetical societies and asked respondents to provide their prescriptions for minimum wages, finding a consistent negative effect of inequality on prescriptions across different measures and experimental designs. In Study 5, we manipulated whether respondents were asked about what minimum wages are versus what they should be, showing that our results did not result from a confusion between these questions. We built on this evidence in Study 6 by eliciting minimum wage prescriptions in terms of what goods and services those on minimum wage deserve to afford, ruling out alternative explanations such as inferences about the affordability of societies. Following, we analyzed the role of political ideology in these five experiments, testing whether our manipulations of income inequality had a greater effect on political liberals or conservatives. In Study 7 we gathered further evidence for the underlying mechanism, finding that, in line with the proposed is-to-ought reasoning process, participants disproportionately attended to information concerning the bottom of the income distribution when making judgments about minimum wages.

Last, in Studies 8 and 9, we tested whether the effect of inequality on minimum wage prescriptions is mitigated when participants make decisions under joint versus separate evaluation modes. In Study 8, we found that the effect of inequality on perscribed minimum wages was lower under joint evaluation (relative to when participants made prescriptions under separate evaluation), showing that this presentation format can help people distinguish normative and descriptive judgments. Building on this, in Study 9 we designed a scalable, interactive intervention that manipulates evaluative mode (separate vs. joint) to attenuate the gap in people's minimum wage prescriptions under different levels of inequality.

Study 1

In our first study, we analyzed a final sample of 130,562 protests that occurred across the United States (U.S.) between 2017 and 2023 to test the relationship between economic inequality and support for protests regarding economic and noneconomic issues. We were interested in whether protests that specifically focused on economic issues (e.g., raising minimum wages) would receive less support in regions where economic inequality was higher than protests concerning other, noneconomic issues (e.g., racial justice). We estimate models testing the relationship between economic inequality, protest content, and both the number of protests and their attendance using these extensive real-world data.

Method

Data Sources

We combined five sources of data to facilitate a comprehensive analysis of the relationship between economic inequality and protest attendance. At the heart of our analysis was a data set capturing the occurrence and attendance of protests across the United States, collected by the Crowd Counting Consortium (2022), an initiative maintained by the Nonviolent Action Lab at the Harvard Kennedy School. Using a team of volunteer faculty, graduate students, undergraduates, and the public, the Crowd Counting Consortium "collects publicly available data on political crowds reported in the United States, including marches, protests, strikes, demonstrations, riots, and other actions." These data are subsequently verified by a

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member of a fact-checking team to ensure reliable estimates of protest size and then further coded by a member of the research team to determine the claims made by the protest and the issues reflected by these claims. Each protest is identified by which U.S. County it occurred in, which we connected to additional sources of data, including economic inequality data from the American Community Survey (2017–2021). These data contain county-year-level Gini coefficients for the years 2017, 2018, 2019, and 2021. We further sought out three sources of data to control for relevant factors that could also influence protest attendance. First, data from the 2020 census capture both the total population of each county and their racial demographics (American Census Data, 2020). Second, we included data from the U.S. Department of Agriculture's Economic Research Service (2020) on both the median household income in counties and the levels of unemployment. Finally, we included the proportion of votes for Republicans in the 2020 presidential elections to control for variation in political preferences across counties (U.S. County-Level Election Results, 2020).

Data Processing

We imported the protest data on May 12, 2023. This version of the data set contained information regarding 147,829 protests, with topics ranging from gun control to health care to COVID-19. We first removed online protests (91) before coding each protest for whether it concerned economic issues or not. To eliminate potential researcher bias, one author of the research team randomly sampled 4,000 rows of the protest data and presented a nonoverlapping subset of 2,000 of these to two other members of the research team. With these, the two researchers independently compiled a list of terms that reflected themes related to the topic of interest (i.e., economic-related protests). Finally, these two lists were collated into one master list, and this master list was used to code the entire data set of protests according to whether they centered around economic issues, identifying 14,477 economic-related protests that fit into seven categories: *wages, unions, workers, affordability, homelessness, money*, and *layoffs*. The Supplemental Table S3 contains a complete list of the search terms used to code each subgroup that collectively constituted economic-centered protests in these data.

The total number of complete protest entries was 141,559. Given the unavailability of inequality data for certain U.S. countries, the size was reduced further to a final 130,562 (88.3% match) when merging these data with the inequality data. For these 130,562 protests, attendance data were available for 55,959 observations (42.9%).

Variable Construction

We conducted two sets of analyses at the county level: one of the number of protests that occurred and one of the attendance in protests. The former utilized the full data set of observations, whereas the latter was limited to protests for which attendance data were available. Given that inequality data were not collected by the American Community Survey in 2020 due to COVID-19, we computed the 2020 Gini coefficients as the average of the 2019 and 2021 values. We also used the 2021 Gini coefficients for protests that occurred in 2022 and 2023, as more recent data were not available. We calculated variables capturing the proportion of unemployed residents, the proportion of residents belonging to each of five racial groups, and the proportion of Republican votes in the 2020 presidential election. To account for variation over time, we dummy-coded each year established relative to 2017. We further calculated the total population and median household income for each county, standardizing them across the whole sample.

Analytical Approach

We used multilevel Poisson regression to analyze these data as (a) each of the dependent variables constituted count data, and Poisson regression is efficient in the class of consistent estimators with under- or overdispersion in such data (Wooldridge, 2019); and (b) each of the analyses entailed repeated observations of counties over time. For both analyses, we included random intercepts nested within counties. Finally, we further used quantile regression to predict the median attendance of protests. In each analysis, we controlled for population size, unemployment rate, median household incomes, racial demographics, political partisanship, and time. Throughout, inequality, as captured by the Gini coefficient, was left on its original scale (i.e., not standardized or mean-centered), and protests were dummy-coded as either economic (1) or not (0).

Results

In our first analysis, we tested how inequality and protest type affected the number of protests in each U.S. County. In a simple slope analysis, we found that counties with higher income inequality had more noneconomic protests ($b = 0.749$, $SE = 0.324$, $z = 2.31$, $p = .021$, 95% CI [0.113, 1.38]), but *fewer* economic protests ($b = -2.60$, $SE = 0.399$, $z = -6.52$, $p < .001$, 95% CI [−3.38, −1.82]). The regression model showed the difference between these two was statistically significant ($b = -3.35$, $SE = 0.248$, $z = -13.5$, $p < .001$). [2] We plot this interaction pattern in Figure 1A. This pattern provides initial support for our hypothesis: there were fewer economic-related protests in counties where income inequality was higher. Yet it could be the case that despite this negative relationship between income inequality and the number of economic protests, the protests that do occur might be better attended. We explore this question next.

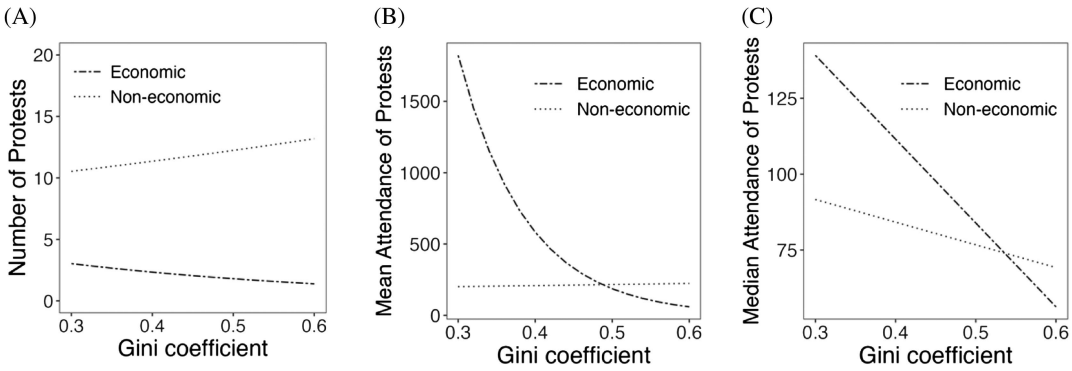
We again used simple slope analysis to understand the relationship between income inequality, protest type, and mean attendance of protests. We found that counties with higher income inequality had better attended noneconomic protests ($b = 0.354$, $SE = 0.020$, $z = 17.8$, $p < .001$, 95% CI [0.315, 0.393]) but dramatically *worse* attended economic protests ($b = -11.4$, $SE = 0.028$, $z = -414$, $p < .001$, 95% CI [−11.4, −11.3]). The difference between the two was again statistically significant ($b = -11.8$, $SE = 0.020$, $z = -596$, $p < .001$). In Figure 1B, we plot the predictions of this model to display this pattern. The resulting conclusions were robust across the three possible measures of protest attendance in the data (average estimate, low estimate, and high estimate; Supplemental Table S6).

To further unpack these data, we looked at the distribution of protest attendance. Across all protests, mean attendance was 571, median attendance was 70, and maximum attendance was 1.53 million. To test whether the results were driven by outliers, we identified the 20 counties that had the highest protest attendance and reestimated our

[2] For a full model output featuring IRRs, refer to Supplemental Table S4. For descriptive statistics regarding the number, mean, and median attendance across different levels of economic inequality, see Supplemental Table S5.

Figure 1

The Predicted Number (Panel A), Mean Attendance (Panel B), and Median Attendance (Panel C) of Economic and Noneconomic Protests in U.S. Counties Across Different Levels of Income Inequality



Note. For descriptive statistics of the number, mean, and median attendance of protests across levels of the Gini coefficient, refer to Supplemental Table S5.

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model, excluding them one at a time (Supplemental Table S7 and Supplemental Figure S2). Across all 20 iterations, there remained a negative interaction between economic inequality and protest type (all *p*s < .001), showing that the conclusions are not driven by a single geographic area or tail event.

We next used quantile regression to predict the median attendance of protests across counties.[3] As shown in Figure 1C, using this analytical technique, we found that higher economic inequality depressed attendance for noneconomic protests ($b = -74.8$, $SE = 16.7$, $t = -4.48$, $p < .001$, 95% CI [−107, −42.1]) but that this reduction was even more pronounced for economic protests ($b = -201$, $SE = 43.8$, $t = -4.60$, $p < .001$, 95% CI [−287, −116]), despite them being better attended in general as captured by a positive coefficient ($b = 108$, $SE = 21.7$, $t = 4.97$, $p < .001$, 95% CI [65.3, 150]).[4] To verify the generality of this result, we reestimated our quantile regression model, iterating across five possible quantiles (every 5% from the 40th to the 60th percentile), the three possible outcome measures (mean, low, and high), and three possible methods of estimating the standard errors (see Supplemental Table S9 for further details). Across the 45 iterations, all interactions were negative, with 43/45 achieving statistical significance (with *p*s varying from <.001 to .108; median $p < .001$, Supplemental Figure S3).

In sum, across measures, economic inequality was differentially associated with support for economic and noneconomic protests. To understand which specific economic issues drive this disparity, we broke out the relationship between economic inequality and the mean attendance of protests by specific economic issues. For both mean and median attendance, results show that protests relating to the *level of wages* play a key role in determining these results (Supplemental Tables S10 and S11 and Supplemental Figures S5 and S6), a finding that we build on further in the following experiments.

Discussion

In Study 1, we found that higher income inequality is differentially associated with the number of protests and protest attendance for events concerning economic and noneconomic issues. Specifically, we find that higher inequality is negatively associated with the number and both mean and median attendance of protests related to economic issues. Moreover, this effect appears to be driven by protests associated specifically with wages. That said, given the correlational nature of the evidence, inverse causality is a possibility. For example, it could be that the negative association between economic inequality and support for economic protests is explained by the fact that protests are effective, and thus in regions where protests are better supported, inequality is reduced. To distinguish between these two possible directions of causality, we conducted a series of experiments where we experimentally manipulated income inequality.

Study 2

In Study 2, we manipulated income inequality in a high-powered preregistered (https://aspredicted.org/XVC_KSV) experiment using a nationally representative U.S. sample to test whether inequality causally influences prescriptions of minimum wages. In addition, we sought initial evidence for our proposed mechanism: the tendency to engage in is-to-ought reasoning. We suggest that this tendency is so strong that people will end up believing that in societies where income inequality is higher, individuals at the bottom of the distribution not only earn less money but actually need fewer goods and services. As a result, people will prescribe lower minimum wages.

Method

Participants

Using the "pwr" package for R, we calculated that the detection of an effect size of Cohen's $f = 0.10$ with 80% power with a significance

[3] Simple slopes do not apply in this case: by refitting models separately for just noneconomic and economic protests, it is possible to estimate marginal effects. Here, there was a negative effect of income inequality for noneconomic protests ($b = -86.9$, $SE = 9.49$, $t = 16.0$, $p < .001$) and for economic protests ($b = -150$, $SE = 66.8$, $t = -2.24$, $p = .025$); the full regression model shows that the difference between these two was significant.

[4] Refer to Supplemental Table S8 for a full model output.

level of 5% required a minimum of 394 participants per cell. Accordingly, we recruited 1,002 participants in a panel that is nationally representative of the U.S. population from the survey programming service ROI Rocket.[5] We targeted age, gender, income, race, and ethnicity levels in line with the 2010 Census values. As such, we used questions in the format of the census: age was captured by discrete responses to the options, 18–34, 35–54, 55–64, and 65+, and participants were asked to select a gender from the options "Male" and "Female." The final sample matched the census data reasonably well across all dimensions: For full details, see Supplemental Table S12.

Procedure

Participants first responded to the following comprehension check question: "To let us know that you are paying attention, please type the letters of the word (not the numbers) you see in the following image into the response box below." The image contained the text "472 Printer 124." If participants indicated a response of "printer" or "Printer," they continued the survey; otherwise, they were not allowed to continue. We use this same comprehension check throughout unless otherwise indicated. Participants then provided informed consent before reading the study instructions.

Participants were randomly assigned to one of two conditions in a between-subjects design: *low inequality* or *high inequality*. In each condition, participants saw only one income distribution displaying the average income in each of the five quintiles of what they were told was a foreign society (either with low inequality or with high inequality), displayed in Figure 2. The average income was kept constant, and the largest bar took up the same proportion of the image across conditions: The only thing that varied was the level of inequality in the distribution of income. This information was also explained to participants in written form (e.g., "The top 20% earns on average $280 thousand dollars per year").

The minimum wage question elicited a response in dollars per hour, while the other four items were responded to in thousands of dollars per year. In each case, participants responded by entering a number in a text box with the appropriate units (e.g., ____ dollars per hour). The variables basic and luxury needs were simple averages of their two constituent items, respectively. Participants then indicated their level of agreement (7-point Likert scale) with the statements *I believe this is a fair society* and *I believe this is an unfair society* (reverse-coded; $r = .786$, $t = 38.0$, $p < .001$, 95% CI [0.742, 0.793]). Finally, participants were asked to recall how much people earned at the bottom, middle, and top of the income distribution they had just seen, before providing demographic information. In addition to the census demographics, we measured political ideology, political party identification, education, and the number of financial dependents.

Results

As per our preregistration, we removed observations that deviated by more than 3 *SD* from the mean on any of the five open-ended responses (minimum wage, basic needs 1 and 2, and luxury needs 1 and 2). This left us with a final sample of 888 observations. We found evidence consistent with our four hypotheses: higher economic inequality negatively predicted minimum wage prescriptions ($b = -2.04$, $SE = 0.451$, $t = -4.52$, $p < .001$, 95% CI [−2.92, −1.15], $\beta = -.150$) and perceptions of basic needs ($b = -13.0$, $SE = 3.07$, $t = -4.24$, $p < .001$, 95% CI [−19.0, −6.98], $\beta = -.141$), positively predicted perceptions of luxury needs ($b = 37.0$, $SE = 11.8$, $t = 3.15$, $p = .002$, 95% CI [13.9, 60.2], $\beta = .105$), and negatively predicted judgments of fairness ($b = -0.552$, $SE = 0.093$, $t = -5.02$, $p < .001$, 95% CI [−0.735, −0.369], $\beta = -.195$); see Figure 3 for a graphical representation of the effect of inequality on minimum wage prescriptions, and Supplemental Table S14 for full models including a replication with control variables. As noted in the Overview of Studies section, we jointly analyze the role of political ideology across Studies 2–6 in a later section.

Finally, we gathered initial evidence for our proposed mechanism that higher economic inequality depresses minimum wage prescriptions via reduced perceptions of how much money is required to cover basic needs. To do so, we estimated a mediation model with high inequality as the independent variable, minimum wage prescription as the dependent variable, and perception of basic needs as the mediator (Supplemental Table S18). We found a significant negative direct effect of high inequality ($b = -1.79$, $SE = 0.451$, $z = -3.98$, $p < .001$, 95% CI [−2.68, −0.910]) and a significant negative indirect effect via basic needs ($b = -0.244$, $SE = 0.086$, $z = -2.84$, $p = .004$, 95% CI [−0.411, −0.076]), supporting the idea that inequality can reduce people's perceptions of what those on minimum wage need.

Discussion

In a high-powered, U.S. nationally representative sample, we found evidence of a causal relationship between the level of income inequality and minimum wage prescriptions. One explanation for this could be that higher inequality depresses all types of numerical judgments. Yet, while higher inequality decreased minimum wage prescriptions, it actually increased people's perceptions of how much money would be needed to satisfy all of their wants (i.e., luxury needs). We also found that perceptions of the amount of money required to cover basic needs mediated the relationship between economic inequality and minimum wage prescriptions. That said, correlational mediation analysis is limited in its ability to establish causal associations (e.g., Bullock et al., 2010; Green et al., 2010; Imai et al., 2011; Rohrer, 2018), and so further data are needed to understand the mechanism. Specifically, given that all variables were assessed at a single time point, it is not possible to discern whether perceptions of needs caused prescriptions of minimum wages or the other way around. This problem is shared by the additional mediation analysis in Study 3. We pursue additional paths to understanding the mechanism behind these results in Studies 6–9 that do not share this shortcoming.

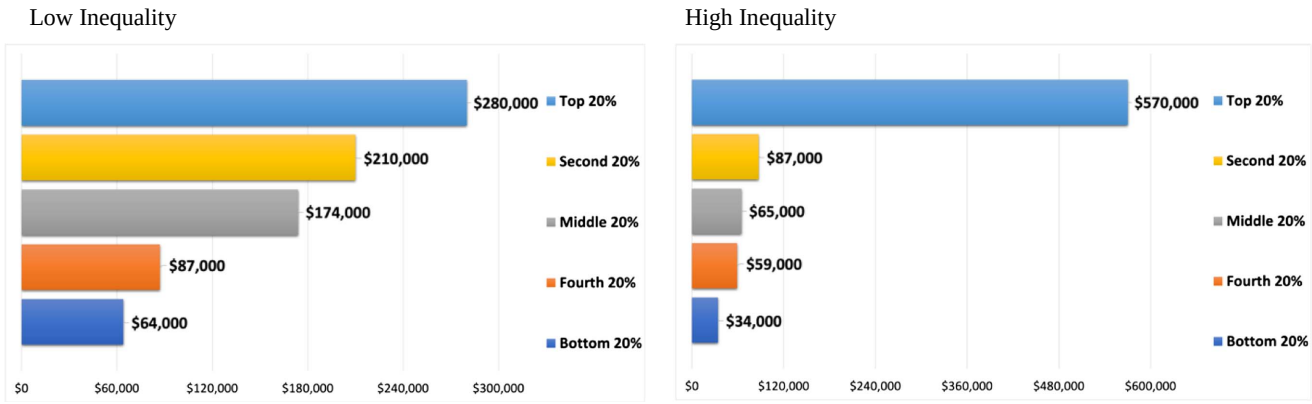
Despite prescribing a lower minimum wage for the high-inequality society, people perceived this society to be significantly less fair than its more egalitarian counterpart. These perceptions of the unfairness of a society where inequality is higher seem aligned with the general belief that the minimum wage should be higher when economic inequality is higher (as seen in Supplemental Study S3). Yet this sense of unfairness is not reflected in higher minimum wage prescriptions. We later explore (Studies 8 and 9) whether this can be harnessed to design an intervention to mitigate the observed pattern of effects.

[5] One hundred three additional participants started the survey but were removed before providing any data for failing a comprehension check item. This item is described in the procedure.

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Figure 2

Low- and High-Inequality Income Distribution Stimuli



Participants then provided the following five numeric estimates in open-ended text response form (using content validation to require numerical answers only):

Minimum wage	About how much do you believe should be the minimum wage (in dollars per hour) in this society?
Basic needs 1	About how much money do you believe would be enough to meet basic needs in this society?
Basic needs 2	About how much money do you believe would be sufficient to cover monthly expenses in this society?
Luxury needs 1	About how much money do you believe would be enough to be able to buy everything you could possibly want in this society?
Luxury needs 2	About how much money do you believe would be enough to be able to live a life of luxury in this society?

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

Study 3

In Study 2, we found that higher economic inequality causally depressed minimum wage prescriptions. In Study 3, we test the robustness of this relationship by replicating our results with a new sample population (Amazon's Mechanical Turk) and a different implementation of the outcome variable (measuring minimum wages annually in thousands of dollars per year, rather than dollars per hour).

Method

As per our preregistration (https://aspredicted.org/JPM_RRR), we recruited 300 participants from Amazon's Mechanical Turk (M_{age} = 41.6 years, 49.0% women, 50.3% men, 0.7% nonbinary). To enter the study, participants had to successfully answer a comprehension check item that asked them to identify the "soft" item from a list of items (e.g., wood, iron, pillow).[6] For our primary analyses, we excluded any participant who returned a numeric estimate that was greater than 3 *SD* above the mean for any of the seven numeric estimate items. This left a final sample of 262 participants. The procedure and materials were identical to Study 2. The only differences were as follows: Minimum wage was reported in thousands of dollars per year, two additional estimates were added to the measures (estimates of "comfort needs"—between basic and luxury needs), and the wording of some demographic items changed. In particular, age was collected as a continuous numeric estimate that was allowed to vary between 18 and 120, and participants were asked, "What gender are you?" with the three options "Male," "Female," and "Nonbinary." These questions were the wording we used to gather age and gender information for the rest of the experiments.[7]

Results

Here, higher economic inequality negatively predicted minimum wages ($b = -14.6$, $SE = 3.20$, $t = -4.57$, $p < .001$, 95% CI [−20.9,

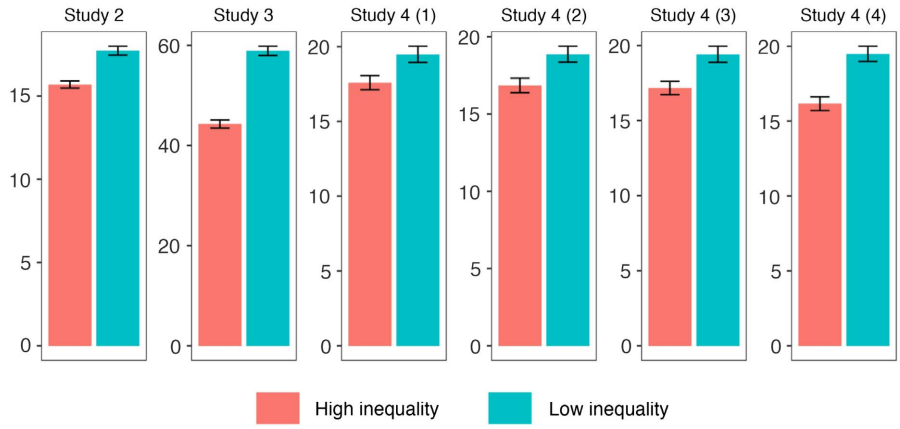
[6] A further 19 participants entered the survey and were not allowed to continue for failing this item.

[7] We report the exact wording of the questions to transparently represent our data but refer to the group who responded "Male" as "men" and "Female" as "women" to comply with American Psychological Association 7 style guidance.

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Figure 3

Average Minimum Wage in High- and Low-Inequality Societies Studies 2–4



Note. Study 2 measures minimum wage prescriptions in dollars per hour. Study 3 uses the same stimuli as Study 2 but measures minimum wage prescriptions in thousands of dollars per year. Study 4 contains four new sets of stimuli, also measuring minimum wage prescriptions in dollars per hour. All studies used different sample populations. Error bars indicate 95% confidence intervals. See the online article for the color version of this figure.

−8.32], β = −.273), basic needs ($b = -17.4$, $SE = 2.46$, $t = -7.08$, $p < .001$, 95% CI [−22.2, −12.5], β = −.402), and comfort needs ($b = -40.3$, $SE = 5.82$, $t = -6.93$, $p < .001$, 95% CI [−51.8, −28.9], β = −.395). The positive relationship between high inequality and luxury needs attained marginal significance ($b = 34.3$, $SE = 18.4$, $t = 1.86$, $p = .064$, 95% CI [−1.95, 70.4], β = .115), and higher inequality negatively predicted participants' perceptions of the fairness of the society ($b = -1.06$, $SE = 0.168$, $t = -6.30$, $p < .001$, 95% CI [−1.39, −0.728], β = −.364). See Supplemental Table S19 for full regression outputs. As before, we found that perceptions of basic needs fully mediated the relationship between high inequality and minimum wage prescriptions (indirect effect: $b = -12.6$, $SE = 2.12$, $z = -5.95$, $p < .001$, 95% CI [−16.8, −8.46]). Overall, we replicated our main results, with the caveat that the effect of inequality on luxury needs only attained marginal significance.

Discussion

In Studies 2 and 3, we found robust evidence across sample populations and methods of elicitation that economic inequality depressed minimum wage prescriptions. To test the robustness of our effects across alternative income distributions, in Study 4 we varied these distributions, including both cases where the inequality was bottom and top driven to rule out the possibility that our effects could be driven by poverty (i.e., solely by the bottom quintile's average income) or another idiosyncratic aspect of the income distributions we utilized in Studies 2 and 3.

Study 4

In Study 4, we sought to establish the robustness of the effect of inequality on minimum wage prescriptions across a range of different economic distributions. Although Studies 2 and 3 found consistent support for our hypothesis, they relied on a single pair of income distributions as stimuli. Given the idiosyncratic properties of any single distribution (e.g., in Studies 2 and 3, the high inequality condition's inequality was primarily top driven), any effects observed could partly result from factors other than inequality. To address this potential concern, we constructed four different pairs of stimuli (eight distributions total) where we varied the properties of these distributions and tested whether minimum wage prescriptions were lower in the high inequality condition for each pair. The average income was set at $70,000 within each of these sets, consistent with the U.S. median household income in 2022. This study also provided a replication of our main effect with a third sample population, Prolific Academic.

Method

We recruited 797 participants from Prolific ($M_{age} = 37.9$ years, 1.5% nonbinary, 49.4% women, 49.1% men). Respondents entered the study after passing our comprehension check, then viewed one of eight possible income distributions and answered how much they thought minimum wage should be. Finally, respondents answered an open-ended question regarding how they reached their response before providing their demographic information.

The distributions featured in Study 4 are included in Figure 4, where we plot the average income in each of the five quintiles. The distributions were presented to participants in the same format as Studies 2 and 3, as shown in Figure 2. Importantly, in Study 4 we varied the level of poverty in addition to inequality: In Examples 2 and 4 (Figure 4), the average income of the poorest 20% of society members was $16,000, whereas the equivalent figure was $31,000 in Examples 1 and 3. We further varied other aspects, such as the degree of inequality between the richest and second richest quintiles. See Supplemental Tables S24 and S25 for further details.

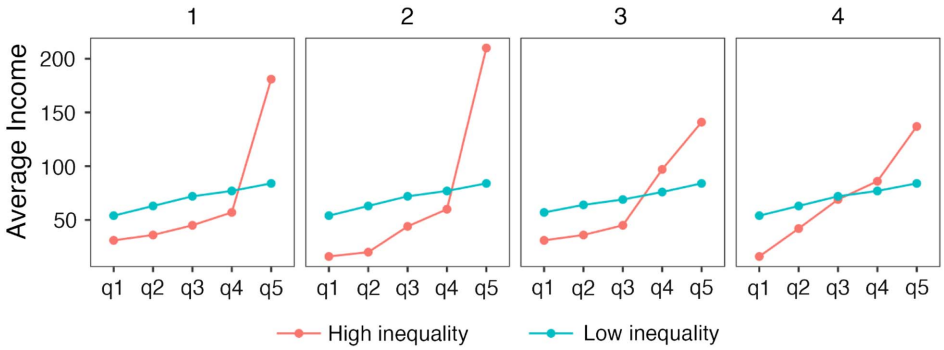
Results

As per our other studies, we excluded minimum wage prescriptions that were more than 3 *SD* from the mean value, leaving a final sample

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Figure 4

Average Incomes in Each Quintile in Each of the Four Stimuli Sets in Study 4



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

of 787 respondents. For each of the four groups of distributions (Figures 3 and 4)—including cases when the bottom quintile's income was lower ($16,000) and higher ($31,000)—high inequality significantly reduced minimum wage prescriptions ($t = -2.05$, $p = .041$, $d = -.289$; $t = -2.26$, $p = .024$, $d = -.313$; $t = -2.49$, $p = .013$, $d = -.355$; $t = -3.70$, $p < .001$, $d = -.551$). In short, across a variety of possible stimuli, we found strong support that higher income inequality led to reduced minimum wage prescriptions.

Study 4's inclusion of an open-ended question asking respondents about their decision-making processes allowed gathering initial evidence countering a potential concern: That respondents misunderstood the question as requesting information regarding what the minimum wage *is* rather than what it *should be*. Our theoretical account for why we observe a negative effect of higher economic inequality on minimum wage prescriptions proposes that respondents engage in is-to-ought reasoning, not that they do not understand the difference between the two. If participants are indeed engaging in is-to-ought reasoning, one indicator would be them mentioning normative concepts (e.g., "should") in their descriptions of their processes, showing that they have not misinterpreted the question. As an exploratory analysis, we examined these responses, finding that such mentions were common: For example, the prevalence of "should" (22.0% of responses), "need" (14.9% of responses), and "fair" (9.0% of responses) in respondents' descriptions suggests they understood their assigned task.

Discussion

In Study 4, we replicated the observed negative effect of higher economic inequality on minimum wage prescriptions with new stimuli of a different average level of income, different forms of economic inequality, and different sample population. We found a difference in minimum wage prescriptions across low- and high-inequality societies regardless of whether this inequality was top or bottom driven, supporting our assertion that this difference emerges as a result of inequality rather than an idiosyncrasy of Studies 2 and 3's stimuli. In sum, Studies 2–4 suggest that, across three sample populations, two response formats (dollars per hour and dollars per year) and five pairs of stimuli, higher income inequality depresses minimum wage prescriptions. In addition to seeking further evidence of the robustness of our core effect, we also found evidence suggesting that the effect does not result from people misunderstanding that the question asks what minimum wages should be, not what they are. However, this latter analysis was not definitive, so we conducted an additional experiment (Study 5) to provide further evidence.

Study 5

In Study 4, we highlighted a potential concern regarding the observed results: that they could represent a misunderstanding, with people interperting the question regarding the level of existing minimum wages as what they should be. Initial evidence suggested otherwise, as people's descriptions of their decision-making processes frequently referred to normative concepts, such as the word "should." In Study 5, we gathered further evidence on this question by manipulating whether respondents were asked what minimum wages are or what they should be. If participants were indeed confused regarding the difference between the two, responses should not vary across the two possible questions.

Method

We recruited 801 participants from Prolific ($M_{age} = 30.6$ years, 41.3% men, 58.7% women). The design was very similar to other studies: Participants entered and were faced with either a low or a high inequality society (the same societies as Studies 2 and 3), with the only difference being whether they were asked "About how much do you believe the minimum wage *should be* (in dollars per hour) in this society?" or "What do you think the minimum wage *is* (in dollars per hour) in this society?" in a full-factorial 2 × 2 design. After removing estimates more than 3 *SD* above the mean as in other studies, we were left with 776 observations to analyze.

Results

In the low inequality condition, responses regarding what minimum wage "is" ($M = 21.7$, $SD = 11.6$) and "should be" ($M = 22.0$, $SD = 10.8$) were similar. In the high inequality condition, there was a large disparity, with responses regarding "is" ($M = 15.2$, $SD = 11.1$) markedly lower than what they "should be" ($M = 20.7$, $SD = 11.1$). To test this formally, we predicted participants' estimates

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using linear regression, with two dummy variables indicating whether the condition was high (vs. low) inequality and whether the question asked was regarding "should" (vs. "is"), as well as their two-way interaction. We found a significant negative effect of high inequality ($b = -6.51$, $SE = 1.13$, $t = -5.77$, $p < .001$, 95% CI [−8.72, −4.30], $\beta = -.284$), an insignificant effect of "should" language ($b = 0.272$, $SE = 1.14$, $t = 0.239$, $p = .811$, 95% CI [−1.96, 2.51], $\beta = .012$), and a significant two-way interaction ($b = 5.16$, $SE = 1.60$, $t = 3.22$, $p = .001$, 95% CI [2.01, 8.31], $\beta = .225$). For low levels of inequality, estimates of what minimum wages are and what they should be were similar. In contrast, for higher levels of inequality there was a marked discrepancy between responses to the two questions, highlighting that respondents did not confuse the two questions, thus supporting our interpretation of the responses to Studies 2–4.

Discussion

Across both Studies 4 and 5, we found consistent evidence that when providing minimum wage prescriptions, respondents distinguished between the concepts of "is" and "should be," supporting our is-to-ought account of why income inequality influences such prescriptions over an alternative account based on misunderstanding of the question. Moreover, in Studies 2 and 3, we found preliminary evidence using mediation analysis for our proposed mechanism that perceptions of lower basic needs drive the effect of inequality on minimum wage prescriptions. Yet it is not clear whether people believe that low-income earners deserve to be able to buy fewer goods and services when inequality is higher, or whether these lower perceptions of needs derive from inferences about the cost of living in low- and high-inequality societies. We gather evidence to distinguish between these two possibilities in the next study.

Study 6

In Studies 2–5, we found that people prescribe lower minimum wages when economic inequality is higher, that this effect was mediated by perceptions of how much low-income people need to cover basic needs in different types of societies (Studies 2 and 3), and that people are able to distinguish between the concepts of "is" and "should be" when providing responses (Studies 4 and 5). This evidence is aligned with the idea that people engage in is-to-ought reasoning when prescribing minimum wages. When inequality is higher and the poorest in society earn less, people believe they also ought to earn less.

The evidence we presented thus far is compatible with two alternative explanations: that people anchor on the relatively lower numbers in the lower quintiles of the high-inequality income distributions (Tversky & Kahneman, 1974), leading them to prescribe lower minimum wages when asked to provide estimates on a similar scale, or that they infer that the society where inequality is higher has lower costs of living for low-income individuals. If either of these accounts were supported, one could observe a negative relationship between economic inequality and minimum wage prescriptions without respondents perceiving that people in high-inequality societies deserved less. To distinguish between these possibilities, Study 6 tested the effect of economic inequality on the actual basket of goods and services that people feel those on minimum wage deserve to be able to afford. If people are indeed engaging in is-to-ought reasoning, then when inequality is higher and those at the bottom earn less, people will believe that is what ought to be. If the effects found so far were associated with numeric anchoring or inferences about the cost of living, we would not expect to observe an effect in Study 6's design.

Method

As per our preregistration (https://aspredicted.org/CT5_Y3Z), we recruited 800 participants from the survey platform Prolific Academic (M_{age} = 40.7 years, 49.6% men, 1.3% nonbinary, 49.1% women). A further 24 entered the survey but were excluded prior to random assignment for failing our comprehension check item. We analyzed the full sample for whom data were collected.

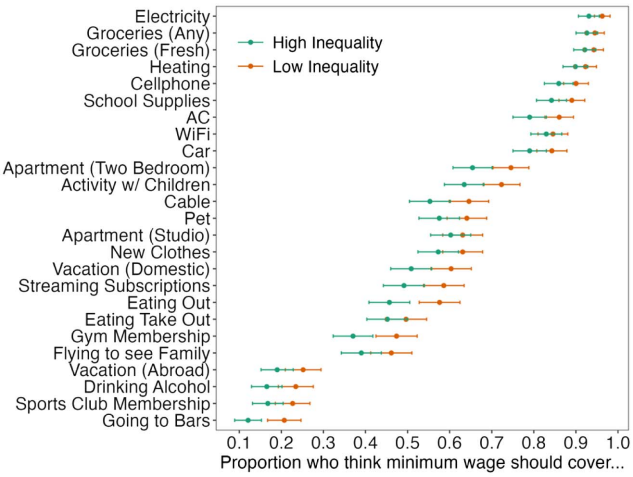
In a between-subjects design, participants learned about either a low- or a high-income inequality society (identical to Studies 2, 3, and 5) and were asked to complete the following measure: "I think people who earn the minimum wage in this society *deserve to be able to buy* … (Select all that apply)." Participants could select any number of items (without restrictions) they felt was appropriate from a list of 25 different goods and services, randomly presented—see Figure 5 for a list of the items. Then, participants responded to the same two items regarding the fairness of the society ($r = .929$, $p < .001$, 95% CI [0.919, 0.938]) and were asked to recall how much people earned in the society they learned about. Last, participants provided the same demographic information as in other studies.

Results

Our primary analysis predicted the number of items participants believed that people on minimum wage deserve to be able to buy. Participants indicated that minimum wage in the high-inequality society should be enough to cover 1.6 fewer items (Cohen's $d = -.270$, Supplemental Table S26). This difference was statistically

Figure 5

Proportion of Participants Who Indicated People on Minimum Wage Deserve to Be Able to Buy Each Good or Service in the Low- and High-Inequality Societies



Note. Error bars indicate 95% confidence intervals. AC = air conditioning. See the online article for the color version of this figure.

significant when using Poisson regression to predict the total number of items (Supplemental Table S27), both without ($b = -0.103$, $SE = 0.018$, $z = -5.73$, $p < .001$, 95% CI [−0.138, −0.068], Incident rate ratio [IRR] = .902) and with the inclusion of control variables ($b = -0.115$, $SE = 0.018$, $z = -6.37$, $p < .001$, 95% CI [−0.150, −0.079], IRR = .892). We also replicated our results for fairness—the high-inequality society was viewed as significantly less fair (no controls: $b = -1.34$, $SE = 0.092$, $t = -14.6$, $p < .001$, 95% CI [−1.52, −1.16], $\beta = -.459$; with controls: $b = -1.30$, $SE = 0.084$, $t = -15.4$, $p < .001$, 95% CI [−1.47, −1.13], $\beta = -.444$).

To interpret the main result of this study, we plotted the average proportion of participants who indicated that those on minimum wage deserve to be able to buy each of the 25 items (Figure 5). For essential (e.g., electricity) and highly discretionary (e.g., going on vacation abroad) goods and services, there was generally little difference between conditions. However, in the middle of the distribution, there were larger item-level differences. For example, participants believed that those on minimum wage were less deserving of gym membership and eating out when inequality was higher.

As an exploratory analysis that was not preregistered, we reanalyzed these data using multilevel logistic regression to predict respondents' decisions to share each individual item, including random intercepts for both respondents and individual items. With this approach, there was again a negative effect of higher economic inequality ($b = -0.626$, $SE = 0.167$, $z = -3.76$, $p < .001$, 95% CI [−0.954, −0.300], $OR = .535$). We further defined a dummy variable indicating whether the item was highly discretionary or not, finding under this specification that higher economic inequality had a particularly large negative effect for such goods (two-way interaction: $b = -0.188$, $SE = 0.090$, $z = -2.08$, $p = .037$, 95% CI [−0.857, −0.169], $OR = .829$).[8] On a probability scale, this pattern amounted to highly discretionary goods being 8 percentage points less likely to be seen as deserved by those on minimum wage when inequality was higher, relative to a 4.7 percentage point difference for more necessary goods.

Discussion

Study 6 rules out two possible explanations for the observed effect of economic inequality on minimum wage prescriptions: pure numerical anchoring and inferences about cost of living. In the high inequality condition, participants judged that people on minimum wage deserved a smaller number of goods and services relative to the low inequality condition. Importantly, this was true even though participants had no restrictions on the number of goods and services that they could have selected in each condition. This provides robust evidence for a psychological process that is much more involved than pure numerical anchoring and is not driven by inferences about cost.

The Role of Political Ideology

As per our preregistrations, we analyzed the role of political ideology separately for several studies (Study 2: Supplemental Tables S15–S17; Study 3: Supplemental Tables S20–S22; Study 6: Supplemental Tables S28–S30). However, given that the results varied somewhat, we determined to present the overall analyses together. This analysis was not preregistered. To do so, we combined the data for Studies 2–6 ($N = 3,283$ participants), standardized minimum wage prescriptions within each study, and excluded outliers with values more than 3 *SD* above or below mean levels (final $N = 3,232$). With these data, we estimated a linear regression model with standard errors clustered within study, predicting minimum wage prescriptions with high versus low inequality (dummy-coded), political ideology (left on its original scale from 1 to 7, where higher values indicated greater conservatism), and their two-way interaction. We observed a negative effect of high inequality ($b = -0.347$, $SE = 0.044$, $t = -7.92$, $p < .001$, 95% CI [−0.433, −0.261]), a negative effect of more conservative political ideology ($b = -0.139$, $SE = 0.026$, $t = -5.42$, $p < .001$, 95% CI [−0.189, −0.088]), and a positive two-way interaction ($b = 0.026$, $SE = 0.010$, $t = 2.56$, $p = .010$, 95% CI [0.006, 0.045]). When computing simple effects at 1 *SD* below and above mean levels of conservatism, this showed that the negative effect of high inequality on minimum wage prescriptions was greater ($b = 0.307$, $SE = 0.031$, $t = 9.83$, $p < .001$) for more liberal versus conservative respondents ($b = 0.209$, $SE = 0.027$, $t = 7.83$, $p < .001$). Since minimum wage prescriptions were standardized, these findings suggest that the effect of our inequality manipulations was about 1/3 weaker for conservatives versus liberals, shrinking from around $\beta = .30$ to .20.

In Figure 6, we plotted the standardized average minimum wage prescriptions at each level of political ideology by condition (high vs. low inequality). Essentially, more politically conservative respondents were less affected by the manipulation of economic inequality: their prescriptions for minimum wages were relatively invariant to the society that they were exposed to. On the other hand, more politically liberal respondents prescribed generally higher levels of minimum wages but were more sensitive to the inequality exhibited in the target society. This shows that the effect documented in our studies—whereby economic inequality influenced minimum wage prescriptions via a process of is-to-ought reasoning—was not driven by a group who might be ideologically aligned with lower minimum wages (e.g., political conservatives).

Study 7

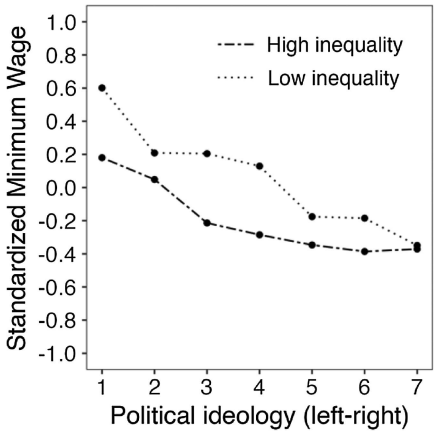
Studies 2–6 found robust evidence that higher economic inequality negatively affects prescriptions for minimum wages. To further explore this effect, we next turn to the information that participants integrate when forming their judgments. Our proposed mechanism is that people engage in is-to-ought reasoning, where they infer what ought to be from what is. If true, we should expect people to attend to different parts of the income distribution when reasoning about minimum wages versus luxury needs, paying closer attention to the bottom quintile of the income distribution when deciding how much the minimum wage should be. This appears to be a reasonable use of the information, but it is not the only possibility. Consider if a respondent determined what the minimum

[8] We classified the two vacation items (domestic and abroad), three nonessential eating items (eating out, takeout, and fresh groceries), two fitness related items (membership to a gym and a sports club), two drinking related items (going to bars, drinking alcohol), and others miscellaneous items (doing an activity with one's children, streaming subscriptions, and pet ownership) as more discretionary. In this model, the simple effect of higher economic inequality for nondiscretionary items was negative and significant ($b = -.513$, $SE = 0.175$, $p = .003$), and the simple effect of a good being discretionary in the low inequality condition was negative and significant ($b = -2.50$, $SE = 0.662$, $p < .001$).

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Figure 6

Average Minimum Wage Prescriptions in Low- and High-Inequality Societies Across the Left–Right Political Spectrum



Note. Studies 2, 4, and 5 used dollars per hour as the minimum wage measure, Study 3 used thousands of dollars per year, and Study 6 used a number between 0 and 25 based on how many items participants selected.

wage in a society should be from principles of fairness or from assessing the expected cost of living by computing the average income in the society. In such cases, the respondent would pay equal attention to each of the quintiles of the income distribution. To foreshadow our results, using a preregistered mouse-tracking design (https://aspredicted.org/RPY_77R), we show that when prescribing minimum wages, respondents disproportionately focus on the actual incomes of the lowest earners in society. This shows that respondents use the "is" information of how much low earners actually make to inform the "ought" question of what minimum wages should be, in line with our theorizing.

Method

Participants

We initially recruited 1,390 participants from the survey platform Prolific Academic but excluded 203 participants prior to random assignment for failing our comprehension check item. Our final sample of 1,187 participants ($M_{age} = 44$, 50.4% women, 48.9% men, .8% nonbinary) completed our study.

Materials

To measure how much time participants attended to each quintile of the income distribution, we created a graph where each of the five quintiles was covered by a black box (Figure 7). To learn how much the average income was for any particular quintile, participants had to hover over each bar's area, which allowed us to measure how long they spent looking at each of the individual bars while forming their judgment.

Procedure

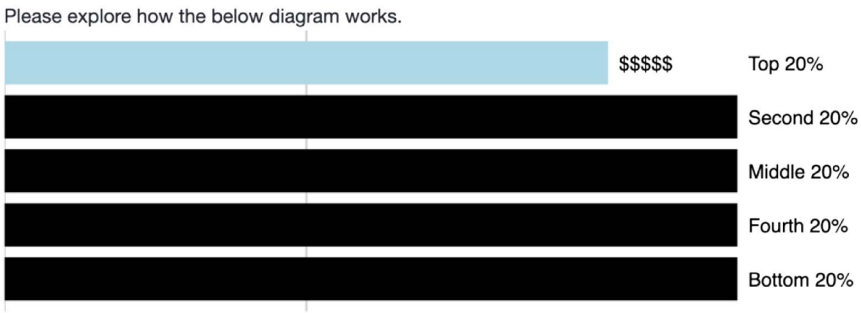
After providing informed consent, participants tried out the interface that would feature in the main study, with an example distribution of income. In this learning phase, we used dollar signs instead of monetary amounts for each quintile (Figure 7). We did this in order to avoid priming participants with a different income distribution. All participants saw the same training example. Participants were then assigned to one condition in a 3 × 2 full-factorial design, providing either a judgment on what the minimum wage should be, how much money was necessary to live a life of luxury in that society, or the overall fairness of the society, in either a low- or high-inequality society (manipulated as in Studies 2, 3, 5, and 6). Minimum wage and luxury needs were measured as single numeric estimates, whereas the fairness question required participants to respond to the same two Likert scale items used in earlier studies ($r = .92$, $t = 47.2$, $p < .001$, 95% CI [0.905, 0.935]). After answering their study question using the information from the bar chart, participants provided demographic information.

Results

Our primary analysis focused on the time participants spent looking at each part of the income distribution when forming their judgment. We hypothesized that participants would spend relatively more time looking at the bottom 20%, and relatively less time looking at the top 20%, when making judgments about minimum wages, relative to luxury needs. We also included the fairness condition without a priori predictions to see how participants attend

Figure 7

The Mouse-Tracking Interface



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

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to information to form their overall judgments (see Figure 8 for the distribution of time across quintiles for the three different items).

To test our hypothesis, we first entered each participant's observations for these two questions (minimum wage and luxury needs) into a 2 × 2 × 5 analysis of variance (with question and inequality level as between-subjects factors, and quintile as a within-subject factor). We found a significant interaction between the question and quintile, $F(1, 4) = 31.4$, $p < .001$, $\eta_p^2 = .031$, prompting us to test the difference between time spent looking at each quintile across these two questions (minimum wage and luxury needs). Using Welch two-sample t tests, we found that realtive to judging luxury needs, when judging minimum wages, participants spent relatively more time looking at the bottom and lower 20% bars ($t = 5.58$, $p < .001$, $d = .402$; $t = 3.35$, $p < .001$, $d = .241$), equal amounts of time looking at the middle 20% that did not statistically significantly differ ($t = 0.075$, $p = .940$, $d = .005$), and less time looking at the upper and top 20% ($t = -4.86$, $p < .001$, $d = -.345$; $t = 5.26$, $p < .001$, $d = -.372$). We further found that participants spent more time judging minimum wage than luxury needs ($t = 2.08$, $p = .038$, $d = .149$) and that participants do appear to form fairness judgments by considering the distribution as a whole, as can be seen in Figure 8.

As per our preregistration, we also replicated the effects of inequality on minimum wage, luxury needs, and fairness judgments. Using linear regression, we found that higher inequality was associated with lower perceived fairness ($b = -1.06$, $SE = 0.132$, $t = -8.02$, $p < .001$, 95% CI [−1.32, −0.802], $\beta = -.372$) and lower minimum wages ($b = -3.11$, $SE = 0.834$, $t = -3.73$, $p < .001$, 95% CI [−4.75, −1.47], $\beta = -.190$), but the effect on luxury needs though positive was not significant ($b = 29.1$, $SE = 19.1$, $t = 1.52$, $p = .129$, 95% CI [−8.48, 66.7], $\beta = .079$).[9]

Discussion

In Study 7, people spent the most time attending to the bottom quintile when deciding the minimum wage but focused on the top quintile when judging luxury needs. Overall, these results suggest that people judge different parts of the distribution as relevant when making different types of decisions: in the case of minimum wage decisions, they appear to focus on what the poorest members of society make. So far, we have shown that when economic inequality is higher, people prescribe lower minimum wages, despite saying that these societies are less fair (Studies 2–7). Taken together, these results suggest that people might not depress minimum wage prescriptions when inequality is higher if they were able to evaluate the presented income distribution more holistically. We investigate this possibility in Study 8.

Figure 8

Time Participants Spent Looking at Each Quintile for Each Item



Note. The first bar indicates the time spent looking at the bottom quintile in the income distribution; from left to right, the average level of income in the quintiles is increasing.

Study 8

In the previous studies, we identified a negative relationship between economic inequality and minimum wage prescriptions in separate evaluations (i.e., people see a single-income distribution and make decisions based on this distribution). Since normative features are more salient when comparing across different alternative scenarios (i.e., under joint evaluation mode) than one option at a time (i.e., under separate evaluation mode; Davidai & Shafir, 2020; Hsee et al., 1999), and given that minimum wage prescriptions are heavily influenced by normative judgments, we investigate in Study 8 prescriptions of minimum wages under joint evaluation. In line with previous findings suggesting that most people believe that the minimum wage should be higher in societies where inequality is higher (Supplemental Study S3), we expect people to emphasize different reasons when thinking about minimum wage prescriptions under these different modes of evaluation.

Method

Participants

We recruited 400 participants from Prolific Academic (M_{age} = 40.3 years, 50% men, 1.8% nonbinary, 48.3% women). A further 15 participants were not allowed to complete the survey for failing our comprehension check item. Our data collection and analytical procedures were preregistered (https://aspredicted.org/PCT_2VP).

Procedure

Participants were randomly assigned to one of three experimental conditions—separate evaluation (high inequality), separate evaluation (low inequality), or joint evaluation (high inequality and low inequality). A joint evaluation was doubly weighted in our sampling so that an equal number of unique participants saw the stimuli in separate versus joint evaluation.

Having provided informed consent, participants were shown distributional information about a hypothetical society. In the case of the separate evaluation conditions, this was a single distribution as in earlier studies. In the case of the joint evaluation condition, participants were shown both societies side-by-side, with the labels "Society A" and "Society B." Having viewed this

[9] We used our preregistered exclusion criterion of values more than 2 *SD* away from the mean value. When including control variables our results were unaffected. When using an exclusion criterion of more than 3 *SD* away from the mean value, our results replicated.

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information in graphical and written form, participants provided either one or two minimum wage prescriptions (depending on whether they learned about only one society or both at the same time) before proceeding to a page where they described in words how they reached their decision about how much the minimum wage(s) should be. For separate evaluation, the prompt asked for "your reasons for deciding how much the minimum wage should be in this society," whereas the joint evaluation asked the same question for "these two societies." Finally, people provided the same demographic information as in Studies 2–7.

In Study 8, we set out to test whether the process by which people determine their minimum wage prescriptions varies across evaluation mode. To do so, we used text analysis to identify the occurrence of preregistered specific words in their open-ended explanations for how they reached their decisions. Specifically, we counted the occurrence of two types of words—those related to needs (*need, expense, cover, enough, standard*) and those related to fairness and equality (*fair, equal, gap, unfair, unequal*). In Studies 2 and 3, we showed that perceptions of needs mediated the relationship between levels of economic inequality and minimum wage prescriptions, and we expected this to continue to be an important aspect of the mechanism by which people form such prescriptions, but, critically, we do not expect it to differ across evaluation mode, and so here we focus on differences in the use of words that indicated attention to the concepts of fairness and equality, which we expected to be more prevalent in joint versus separate evaluation.

Results

In both joint and separate evaluations, people used a similar number of words related to needs ($M_{joint} = 0.495$, $M_{separate} = 0.510$, $b = -0.030$, $SE = 0.141$, $z = -0.212$, $p = .832$, 95% CI [−0.307, 0.247], IRR = .971). However, the use of words relating to fairness and equality was almost twice as common under joint evaluation relative to separate ($M_{joint} = 0.620$, $M_{separate} = 0.330$, $b = 0.631$, $SE = 0.152$, $z = 4.14$, $p < .001$, 95% CI [0.336, 0.934], IRR = 1.88). As predicted, joint evaluation seemed to draw people's attention to the relevance of fairness and equality in determining minimum wage prescriptions more than similar judgments in separate evaluation.

This greater focus on fairness and equality in the joint evaluation condition translated into higher minimum wage prescriptions for the high-inequality society: In separate evaluation, we replicated our core result: minimum wage prescriptions were lower when inequality was higher ($18.6 vs. $22.9), but in joint evaluation, these prescriptions were $20.2 in both cases. This shrinking of the gap between minimum wage prescriptions in low and high-inequality societies was statistically significant (mixed effects model: $b = 4.41$, $SE = 1.35$, $t = 3.26$, $p = .001$, 95% CI [1.77, 7.05], $\beta = .229$; clustered standard errors model: $b = 4.41$, $SE = 1.28$, $t = 3.44$, $p = .001$, 95% CI [1.89, 6.93], $\beta = .229$; see Supplemental Table S32 for further details).[10]

Discussion

Study 8 shows that under joint evaluation, people's decisions rely more heavily on considerations of fairness and equality such that higher inequality no longer depresses their minimum wages prescriptions. It appears that providing people with an additional distribution helps to contextualize and clarify their evaluation of a focal distribution. However, in Study 8, we selected the additional distribution. For this potential intervention to be effectively scalable, it should ideally not require a third party to provide additional information to facilitate comparison. In Study 9, we explore this possibility, proposing a broadly applicable tool that can help decision makers evaluate income distributions contextually.

Study 9

While most people state that minimum wages should be higher when inequality is higher (Supplemental Study S3), the fairness and equality concerns that presumably drive this belief are rare in separate evaluation (Study 8). Thus, in Study 9, we explored how shifting the mode of evaluation of income inequality impacts people's perceptions of minimum wages.

Method

Participants

We recruited 2,089 participants from Prolific, excluding 90 prior to random assignment for failing our comprehension check item, leaving a final sample of 1,999 ($M_{age} = 37.3$ years, 48.8% women, 1.8% nonbinary, 49.5% men). This sample size was selected based on a power analysis conducted using the results of a pilot study (see the Supplemental Study S5 for further details): we targeted 80% power to detect our effect of interest at 5% α. Our sample, design, exclusions, and analyses were preregistered at https://aspredicted.org/MVD_KJK.

Procedure

Participants were assigned to one of four conditions in a 2 × 2 between-subjects design. Participants learned about either a low or high-inequality society and were assigned to a control or intervention condition. The control conditions were a direct replication of Study 2. In the intervention conditions, participants first faced the original distribution and then proceeded to a page where this income distribution was once again instantiated, but they were free to edit it as they pleased. A picture of this interface along with the instructions provided to participants is shown below in Figure 9A.

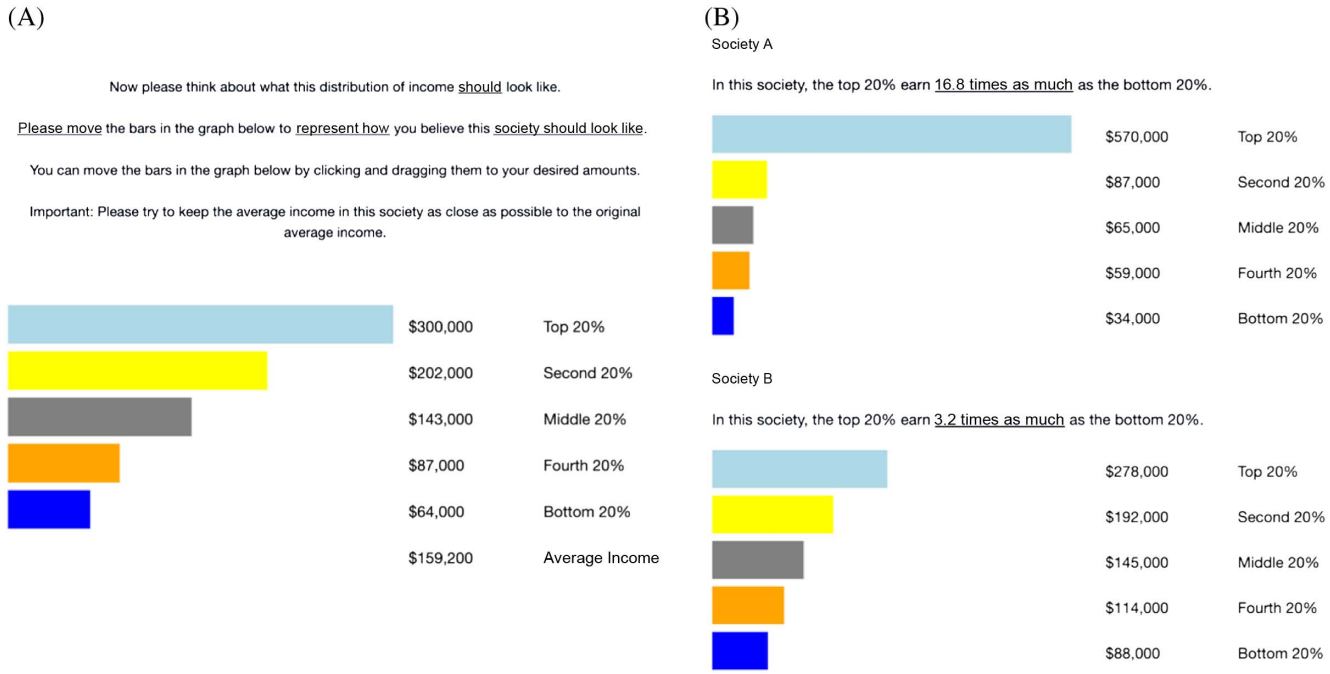
The JavaScript interface allowed participants to edit the income distribution by moving the bars to represent their desired income distribution in society. The only requirements we imposed were that participants had to move at least one of the bars to be able to proceed to the next screen, and the average income for all quintiles had to be weakly monotonic. After submitting their idealized distribution, participants saw the original distribution to which they were assigned (either low or high inequality) as well as the idealized distribution they subsequently designed. On this screen, we computed the ratio between the top and bottom 20% of each distribution's average income and presented it to participants (Figure 9B). For example, if someone submitted a more equal income distribution in their idealized society (Society B) than in the original society (Society A), the survey would say that income inequality was higher in Society A and ask them whether minimum wage should be higher when inequality is lower (Society B) or higher (Society A). After making this choice,

[10] We replicated this result in Supplemental Study S4.

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Figure 9

Interface for Editing Income Distribution Stimulus (A) and Display of Two Societies (B)



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

participants responded with their minimum wage prescriptions for each society. Last, participants completed demographic information as in other studies.

Results

We first excluded participants who indicated minimum wage prescriptions more than 3 *SD* above the mean, as per our preregistration. This excluded 41 participants, leaving a final sample of 1,958 observations.

As predicted, the intervention attenuated the effect of the inequality, increasing minimum wage prescriptions in the high inequality condition (from $18.80 in the control condition to $19.20 in the intervention condition) and reducing them in the low inequality conditions (from $21.30 in the control condition to $19.80 in the intervention condition). This amounted to a significant, negative simple effect of the high-inequality manipulation in the control condition ($b = -2.44$, $SE = 0.524$, $t = -4.65$, $p < .001$), but nonsignificant effect in the intervention condition ($b = -0.683$, $SE = 0.542$, $t = -1.26$, $p = .208$).

In the full linear regression model with dummy-coded variables, we found a negative coefficient for high inequality ($b = -2.44$, $SE = 0.370$, $t = -4.65$, $p < .001$, 95% CI [−3.46, −1.41]), a negative coefficient for the intervention ($b = -1.43$, $SE = 0.535$, $t = -2.68$, $p = .007$, 95% CI [−2.48, −0.385]), and a positive interaction coefficient between the two ($b = 1.75$, $SE = 0.755$, $t = 2.32$, $p = .020$, 95% CI [0.274, 3.23]). When including control variables, the interaction between the inequality manipulation and the intervention strengthened ($b = 2.11$, $SE = 0.717$, $t = 2.95$, $p = .003$, 95% CI [0.706, 3.52]). For further details, refer to the Supplemental Material.

Discussion

In Study 9, we designed a tool where respondents saw an income distribution and were then able to generate a new distribution they considered to be ideal. Following this, participants were asked to consider how much they believed the minimum wage should be under both income distributions, leading them to prescribe minimum wages under joint (rather than separate) evaluation. This intervention attenuated the gap between people's minimum wage prescriptions across inequality conditions without relying on a third party to provide decision makers with a comparison distribution. Here, we show that decision makers can be alerted to normative considerations when producing minimum wage prescriptions by self-generating alternative societies and comparing reality to such ideals. We next discuss the implications of these findings overall for research and practice concerning economic inequality.

Transparency and Openness

A repository for this project is available at https://osf.io/gz97n/?view_only=aac6444327264c38859208cc36cf5fe7, where we include full access to all data sets, including the archival data analyzed in Study 1, as well as our analysis scripts, implemented using R Version 4.2.2. In terms of research materials, we include survey files for each experiment both as Qualtrics files and converted into Word documents. We preregistered our designs and analyses for Studies 2, 3, 6, 7, 8, and 9, with links to each specific preregistration available in the write-up for each study. Sufficient details are provided to replicate any of our experiments or analyses, and we provide citations to any external data sources used in line.

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General Discussion

In nine studies, we found that higher economic inequality was associated with reduced support for higher minimum wages. Using archival U.S. protest data, we found that higher levels of economic inequality were associated with fewer protests in support of raising the minimum wage. Given that this archival data set is not suitable for testing the causal direction of this association, we manipulated income inequality in a series of controlled laboratory experiments. In Studies 2–7, we found that participants prescribed lower minimum wages when inequality was higher. Importantly, we documented this effect using both numerical and nonnumerical judgments and verified that it was not due to confusion regarding the question. When inequality was higher, participants reported that people who earn the lowest incomes in society deserve to be able to buy fewer goods and services. Together, our results point toward a strong tendency to engage in is-to-ought reasoning when thinking about how much people deserve to earn in society.

This tendency to endorse lower minimum wage prescriptions when inequality is higher seems to be in conflict with people's stated preferences. To enable people to better align their preferences with their minimum wage prescriptions, we developed a potential intervention by changing the mode of evaluation: when participants were prompted to consider a higher inequality society relative to a lower inequality one, they offered higher minimum wage prescriptions, and the gap across levels of inequality was attenuated. This pattern suggests that when people consider an economic distribution in isolation, the influence of actual incomes is powerful enough to override their normative principle. Placing high-inequality and low-inequality distributions side-by-side highlights this contradiction and helps people apply their own normative principles more consistently (Study 8). We built on this by having respondents produce these comparison societies themselves, which was also effective in attenuating the role of inequality in determining prescribed minimum wages (Study 9).

Theoretical Implications

Our research sheds light on how people think about inequality. Research found that people's attitudes about inequality remained stable even as inequality rose dramatically over the last several decades (Bartels, 2005; Finseraas, 2009; Lupu & Pontusson, 2023; Weisstanner, 2023). Moreover, perceived extremity of inequality is positively correlated with opinions about how much inequality there should be (García-Sánchez et al., 2019). These findings are puzzling from the perspective of economic rationality, which assumes that people have access to information and make logically coherent and self-interested decisions. Our findings instead suggest that people tend to make erroneous inferences from what is to what ought to be. This process may contribute to understanding why people in high-inequality contexts are more approving of inequality.

This is-to-ought error appears to be broad, applying to participants' own societies as well as to hypothetical societies to which they do not belong. Thus, it does not appear to be a defense against a threat to systems on which participants depend, as suggested by system justification theory (Jost, 2019). This broad pattern is consistent with theories of normative judgment that suggest that people have fundamental difficulty disentangling normative and descriptive claims (Bear & Knobe, 2017).

Our results also contribute to ongoing debates about the relative importance of inequality versus poverty. Some research finds that high levels of inequality are associated with poorer health and social outcomes for everyone, not only for the poor (Kawachi & Subramanian, 2014; Pickett & Wilkinson, 2015), suggesting that inequality is at least as important, or perhaps more so, than poverty. Other research, however, has found that poverty and scarcity are more important predictors of some outcomes than inequality (Kim et al., 2022; Sommet et al., 2018). These empirical debates also inform normative accounts of poverty and inequality. Philosopher Harry Frankfurt, for example, argued that there is a moral obligation to alleviate poverty but not to reduce inequality. The moral problem, he argued, is not that some people have more than others, but that some people do not have enough to meet their basic needs. The present research suggests that because of is-to-ought reasoning, having enough to meet one's needs cannot be fully separated from inequality. When inequality is high, the rich are perceived to need and deserve more, and the poor are perceived to need and deserve less. Our results suggest that inequality is a context that shapes perceptions of how much people need (see also Payne et al., 2017).

Practical Implications

Laypeople's judgments of what minimum wages should be affect support for wage-raising policies. The present research identifies a key determinant of these judgments: the evaluation mode in which information is considered. Our work suggests that making minimum wage prescriptions under separate evaluation can lead people to prescribe lower minimum wages when income inequality is high—despite openly endorsing the idea that minimum wages should increase with the level of inequality. This is due to focusing on particular features of one's own society (e.g., how much people on low incomes earn), rather than comparative judgments. In this way, our work points to one potential reason why minimum wages have not increased in line with rampant inequality. The corollary of this is that we display the benefit of inducing joint evaluation mode for increasing people's attention to the normative aspects of societies that can contribute to greater support for redistributive policies (Davidai & Shafir, 2020; Hsee et al., 1999).

Our potential intervention based is scalable in that it guides people to a process of evaluation without requiring additional specifications. Thus, any initial allocation of income could be substituted for the ones that we used, and its process would still apply, suggesting that the intervention could be scaled quickly and efficiently to all types of judgments where decision makers have to form judgments from distributional information. In our data, this intervention attenuates the gap between minimum wage prescriptions in low and high-inequality societies, thus leaving decision makers less susceptible to the sway of is-to-ought reasoning.

More generally, our data suggest that higher minimum wages may garner greater support in more unequal societies if these societies evaluate their own income distributions relative to other, more equal societies. This offers a simple policy prescription that could raise support for a plethora of policies that serve social justice. Finally, our data offer a note of caution when attempting to gather support for a solution by emphasizing the gravity of the problem. If is-to-ought reasoning occurs, emphasizing the gravity of a problem may implicitly legitimize it, thus reducing support for potential solutions.

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One limitation of the present research is that we focused on how people process income inequality when it is presented in a particular form: as numerical or graphical distributional information. This is just one pathway by which people process information about inequality. The socioeconomic diversity of people someone encounters in their daily lives, the presence of status signals that can induce social comparisons, and many other factors can contribute to perceptions of inequality. It could be that these different experiences of inequality will induce different reactions in terms of people's attitudes around minimum wage policies.

Constraints on Generality

Importantly, our studies are limited to a U.S. cultural context. In Study 1 we analyze a large data set capturing real protests that occurred across the entire United States, data which we augment with eight experiments, including a U.S. nationally representative sample and sampled from two additional participant pools (Prolific Academic and Amazon's Mechanical Turk). Combining real-world data and data sourced from multiple sources, we have analyzed a diverse range of U.S. residents, but populations with different ethnographic and cultural characteristics may display different patterns of behavior (Henrich et al., 2010). Cultural differences such as levels of individualism, belief in meritocracy, acceptance of power differences, and respect for the status quo may lead to different results. Moreover, inferences made from actual levels of inequality presuppose access to knowledge of how much inequality there is. This may be a less important factor in closed societies where people have less access to information.

Further, we have presented an extensive analysis of people's responses to inequality information presented numerically and graphically—with a specific focus on people's responses to average incomes across different quintiles of the income distribution. There are many different ways to communicate inequality (e.g., through visual stimuli that do not explicitly state a distribution), which may present distinct patterns of results to those emphasized here. We view these two primary constraints on the generality of our conclusions as promising paths for future research.

Conclusion

Our results suggest that higher inequality is associated with reduced support for economic protests and causes people to endorse lower minimum wage prescriptions. Our work reveals a psychological barrier to increases in minimum wage: when viewing unequal societies in separate evaluation, people end up inferring what ought to be from what is. Without shifting to joint evaluation mode or being able to address this is-to-ought reasoning, higher inequality may be unable to precipitate the social change that it necessitates.

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