



Why are higher-class individuals less supportive of redistribution? The mediating role of attributions for rich-poor gap

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Abstract

Regarding social class differences in redistributive preferences, previous research demonstrated the explanations of self-interest perspective were limited. From an ideology perspective, the present study uncovered that attributions for rich-poor gap could mediate the relation between social class and redistributive preferences. In study 1, we conducted a measurement-of-mediation design among adults ($N=448$) with the results showing that compared with those from lower social classes, higher-class individuals were more likely to make internal attributions for rich-poor gap, in turn, had lower redistributive preferences. And these associations held controlling for self-interest. In study 2, we conducted an experimental-causal-chain design with the results showing that the experimentally induced higher social class increased internal attributions for rich-poor gap (study 2A, $N=128$), and priming internal attributions for rich-poor gap lowered redistributive preferences (study 2B, $N=155$). These findings expand the understanding of the psychological mechanisms of class-based policy preferences and shed some light on how to reduce social inequality.

Keywords Social class · Attributions for rich-poor gap · Redistributive preferences · Social inequality

Introduction

Economic inequality has risen markedly around the world in recent decades. According to World Inequality Report 2018, between 1980 and 2016, the share of wealth held by the wealthiest 1% increased twice as much as the poorest 50% (Alvaredo et al., 2018). Increased economic inequality is associated with various negative consequences, including worse health, lower well-being, and higher crime rates (Buttrick & Oishi, 2017; Wilkinson & Pickett, 2017). To avoid these negative consequences, it's necessary to adopt redistributive policies to reduce economic inequality. However, in nearly all societies, there is little agreement on adopting redistributive policies. Typically, compared

with lower-class individuals, higher-class individuals are generally more opposed to redistribution.

Previous research has found that social class is negatively associated with redistributive preferences (Andersen & Curtis, 2015; Brown-Iannuzzi et al., 2015; Page et al., 2013). As to why this relationship exists, it has been proposed from the economic perspective that different social class individuals hold different redistributive preferences out of economic self-interest (Meltzer & Richard, 1981). Although aligned with our common sense, this perspective hasn't depicted the whole picture of social class differences in redistributive preferences. Sometimes even though there is no self-interest involved, higher-class individuals still prefer less redistribution than lower-class individuals. That is to say, self-interest may not be the sole mechanism. From an ideology perspective, more and more scholars suggest that social class differences in beliefs about social equality may also affect redistributive preferences, even though these beliefs are not necessarily based on self-interest (Alesina & Angeletos, 2005; Brown-Iannuzzi et al., 2017; Bullock, 2017). But what is the specific belief mechanism of social class differences in redistributive preferences? There is still a lack of empirical research to tackle this question. Grounded in a representative theory about ideology (Piff et al., 2018), we explored the specific belief mechanism

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in the relationship between social class and redistributive preferences.

Social Class and Redistributive Preferences

Social class refers to one's position in the social and economic hierarchy, which consists of objective social class and subjective social class. The former, objective social class, is often assessed by three indicators: wealth (or income), education, and occupation (Chen & Liu, 2021; Kraus et al., 2012). The latter, subjective social class, is often measured by one's perceptions of socioeconomic status relative to others in the hierarchy (Adler et al., 2000; Kraus et al., 2012). It has been shown that social class can affect many aspects of human's feelings, thoughts, and behaviours (Kraus et al., 2012). Undoubtedly, it is also an essential contributing factor to one's redistributive preferences.

With either objective or subjective social class indicators, some quantitative and qualitative researches have consistently found that social class is negatively associated with redistributive preferences. For example, in a study by Andersen and Curtis (2015) from 24 democratic countries, when asked whether the government should provide social welfare for everyone, professionals and managers were less likely than the working class to support it. Benefiting from collaboration with the National Opinion Research Center at the University of Chicago, Page et al. (2013) interviewed 83 top 1% wealthiest Americans. Interview results showed that these top 1% wealthiest Americans held more conservative attitudes toward taxes, economic regulation and social welfare programs than the general public.

In addition to objective social class, subjective social class can also predict one's redistributive preferences. By analyzing data from a national social survey or self-conducting small social survey, several studies have shown that subjective social class is an even stronger predictor of redistributive preferences than objective social class (Brown-Iannuzzi et al., 2015; Garcia-Sanchez et al., 2020; Jackson & Payne, 2020). Maybe because subjective social class refers to a "comprehensive" perception of one's socioeconomic condition (i.e., wealth, education, and occupation), its predictive power is obviously higher than any single indicator of objective social class (Brown-Iannuzzi et al., 2017). Thus, in our present research, we mainly examined the influence of subjective social class.

The Mediating Role of Attribution for Rich-Poor Gap

Although objective and subjective social classes have different predictive power, social class is negatively associated with redistributive preferences on the whole. Then why

does this relationship exist? The discussion on this issue can be traced back to the classical economic perspective (i.e., rational voter model), which emphasizes the role of self-interest. This economic perspective contends that individuals are motivated to stand up for their own interests. Therefore, redistribution is supported by those (e.g., lower-class individuals) who will benefit from these policies but opposed by those (e.g., higher-class individuals) who will not (Benabou & Ok, 2001; Melter & Richard, 1981).

However, some survey and experiment studies have demonstrated the explanatory limitations of self-interest (e.g., Brown-Iannuzzi et al., 2015; Langsæther & Evans, 2020). For example, in an experimental study, participants were assigned to lower or higher status in an economic game and then asked to suggest redistributive rules for future players. Results showed that even though no self-interest was involved, participants assigned to the higher-status condition still preferred less redistribution than participants assigned to the lower-status condition (Brown-Iannuzzi et al., 2015). Due to explanatory limitations of the perspective of self-interest, some scholars gradually adopt an ideology perspective to explore psychological mechanisms of one's redistributive preferences (Alesina & Angeletos, 2005; Brown-Iannuzzi et al., 2017; Bullock, 2017). This ideology perspective contends that one's redistributive preferences are not only motivated by self-interest but also, to a large extent, influenced by their beliefs or ideologies about social equality that do not necessarily involve self-interest. That is to say, people commonly held beliefs about whether (or why) current distribution is fair or not and what kind of distribution is fair (e.g., attributions for rich-poor gap, anti-egalitarianism). And these beliefs, though not necessarily related to self-interest, can also influence one's redistributive preferences (Brown-Iannuzzi et al., 2015; Kteily et al., 2017; Rodriguez-Bailon et al., 2017). But there is still a lack of empirical research to directly examine which belief may be an essential psychological mechanism in the relationship between social class and redistributive preferences.

Grounded in the representative theory about ideology (Piff et al., 2018) and related studies, we proposed that attributions for rich-poor gap could mediate this relationship. And it should be noted that, although attributions for rich-poor gap may be affected by self-interest, it does have its origins (e.g., social sampling process, sense of control) other than self-interest (Dawtry et al., 2015; Hussak & Cimpian, 2015; Kraus et al., 2009; Yang et al., 2016). According to the inequality maintenance model of social class by Piff et al. (2018), in the course of adapting to their living environment, higher-class individuals (relative to lower-class individuals) naturally tend to form merited-based ideologies of social and economic inequality. And these ideologies, such as attributions for rich-poor gap, may, in turn, reinforce inequality via one's policy preferences or other political behaviours.

Moreover, higher-class individuals are more likely to attribute rich-poor gap to individual characteristics (e.g., ability, hard work and ambition) and less likely to attribute rich-poor gap to external environments (e.g., unfair resource distribution, unequal education and job opportunities) (e.g., Kraus et al., 2009; Li, 2014). And this tendency of internal attributions could cause relatively lower redistributive preferences (e.g., Durante et al., 2014; Krawczyk, 2010; Rodriguez-Bailon et al., 2017). Thus, it is very likely that attributions for rich-poor gap do play a mediating role in the relationship between social class and redistributive preferences.

Current Research

Based on this vital view (Piff et al., 2018) and related studies, we proposed that attributions for rich-poor gap played a mediating role in the relationship between social class and redistributive preferences. That is to say, compared with lower-class individuals, higher-class individuals were more likely to attribute rich-poor gap to internal factors and then preferred less redistribution. To test this hypothesis, we conducted two studies using different designs. In study 1, we used a measurement-of-mediation design (Baron & Kenny, 1986) to test our hypothesis with cross-sectional data. However, measurement-of-mediation design can't establish causality. For example, it also makes sense that social class causes redistributive preferences, which in turn shape attributions for rich-poor gap. In other words, attributions for rich-poor gap may be post-justifications for different social classes' redistributive preferences. Thus, in study 2, we used an experimental-causal-chain design (Spencer et al., 2005) to confirm that attributions for rich-poor gap can be a causal link for the effects of social class on redistributive preferences. By using two different designs to examine the mediating role of attribution for rich-poor gap, our results would be more robust.

Study 1

Participants and Procedure

We recruited 500 participants through wj.qq.com. Wj.qq.com is an online participant recruitment platform in China, having functions similar to Amazon.com's Mechanical Turk. These participants were urban and rural residents from many provinces in China. Once entering the online platform, these participants were asked to complete a set of questionnaires. The questionnaires included measures of subjective social class, attributions for rich-poor gap, redistributive preferences, self-interest, and some demographic information. After completion, participants received a small monetary

compensation for participating. Excluding participants with obviously biased (e.g., all results were the same value) or too quick responses, we finally obtained 448 valid participants. Of the participants, 352 (78.6%) were females. The average age was 29.05 years ($SD = 6.75$).

Measures

Subjective Social Class We measured subjective social class using the MacArthur Ladder (Kraus et al., 2010; Piff et al., 2010). Specifically, participants were presented with a picture of a 10-rung ladder. The picture's description was as below: "imagine that the ladder represents people's social statuses in Chinese society. The bottom of the ladder represents the lowest social status: people have the least education, the least money, and the least respected jobs. The top of the ladder represents the highest social status: people have the most education, the most money, and the most respected jobs." Participants were asked to indicate their position on the ladder (1 = "the lowest", 10 = "the highest").

Attributions for Rich-Poor Gap We measured attributions for rich-poor gap using the rich-poor gap attribution questionnaire from Li (2014), which listed 16 possible causes of the rich-poor gap based on previous extensive investigations. Participants rated the 16-item on 7-point scale (1 = totally disagree, 7 = totally agree). The 8 internal attribution items were ability, diligence or effort, ambition, courage (and foresight), willpower, financial management skills, business senses and ability to seize opportunities. The 8 external attribution items were having pull or not, being an officer or not, disadvantages of the political and social system, unfair resource distribution, unequal education and job opportunities, regional differences, family background differences, industrial differences. According to previous research practices (Hussak & Cimpian, 2015; Li, 2014), we used the difference between the mean ratings given to internal attribution and external attribution items as the measure score; and higher scores reflect a higher tendency of internal attributions for rich-poor gap. The confirmatory factor analysis results showed that all factor loadings for the internal or external dimension were more than 0.40, $p < 0.001$, and the two-factor model fit was good: $\chi^2/df = 3.31$, RMSEA = 0.07, GFI = 0.92, CFI = 0.90, IFI = 0.90, NFI = 0.85. The Cronbach's α of two dimensions and total questionnaire were 0.79, 0.76, 0.80.

Redistributive Preferences We measured redistributive preferences using a 12-item scale from Bai (2019). Based on the fact that Chinese redistribution policies mainly included personal taxation, social welfare and equalization of public services (Li, 2012), the redistributive preferences scale also investigated people's attitudes towards these three

aspects (Bai, 2019). The example items of this scale were “the government should tax high-income group more”, “the government should increase social welfare such as health insurance and pension subsidies for low-income groups”, and “low-income groups in society should have the same access to public infrastructure as high-income groups”. To test the three-dimensional structure of the scale, we conducted a confirmatory factor analysis and found fairly good fit indices for the model, $\chi^2/df = 3.04$, RMSEA = 0.07, GFI = 0.95, CFI = 0.96, IFI = 0.96, NFI = 0.94. The Cronbach’s α of three dimensions and total scale were 0.82, 0.81, 0.86, 0.85. Responses to the 12 items (1 = totally disagree, 7 = totally agree) were averaged to form a score of redistributive preferences.

In addition, we measured people’s perceived self-interest in redistribution using 3-item ($\alpha = 0.61$; e.g., “to what extent do you feel that redistribution of wealth through tax and welfare is financially beneficial to you”; 1 = strongly disagree, 6 = strongly agree) from Dawtry et al. (2015). We translated these items using a back-translation procedure (Brislin, 1986): First, we translated the English version of the perceived self-interest scale into Chinese. Then, two other scholars, proficient in English, translated this Chinese version back into English and compared the back-translation version with the original English version. After discussion, we reached an agreement about the wording of the final Chinese version of the perceived self-interest scale. Finally, we collected participants’ demographic information of gender, age and political affiliation.

Results

Descriptive and Correlations Statistics

Table 1 presented the descriptive statistics and bivariate correlations of the key variables. Subjective social class negatively correlated with redistributive preferences, $r = -0.18$, $p < 0.001$, but positively correlated with internal attributions for rich-poor gap, $r = 0.16$, $p < 0.001$. Internal attributions for rich-poor gap negatively correlated with redistributive preferences, $r = -0.13$, $p < 0.001$, thus providing the basis for mediation analysis.

Mediation Effect of Attributions for Rich-Poor Gap

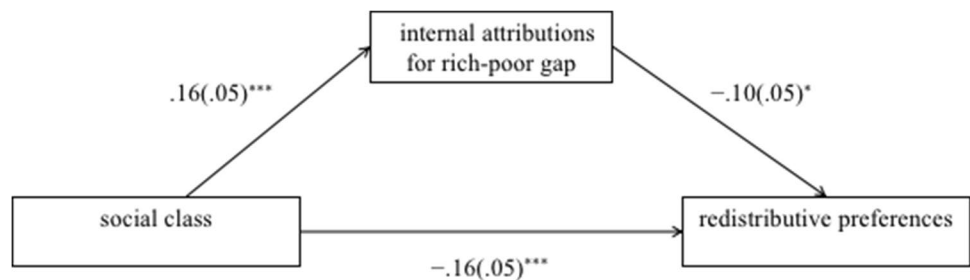
We used the PROCESS macro in SPSS to examine the mediating effect of attributions for rich-poor gap between social class and redistributive preferences (model 4; Hayes, 2013). Five-thousand bias-corrected bootstrap samples were used to create 95% confidence intervals. Gender and perceived self-interest in redistribution were included as covariates in analyses for data. The results showed that higher social class predicted lower redistributive preferences, total effect: $\beta = -0.18$, $SE = 0.04$, $p < 0.001$, 95%CI = [-0.27, -0.09]. As shown in Fig. 1, Social class positively predicted internal attributions for rich-poor gap, $\beta = 0.16$, $SE = 0.05$, $p < 0.001$, 95%CI = [0.07, 0.26], and internal attributions for rich-poor gap negatively predicted redistributive preferences, $\beta = -0.10$, $SE = 0.05$, $p = 0.03 < 0.05$, 95%CI = [-0.19, -0.01]. The residual direct effect was still significant, $\beta = -0.16$, $SE = 0.05$, $p < 0.001$, 95%CI = [-0.25, -0.08]. More importantly, the effect of social class on redistributive preferences was significantly

Table 1 Descriptive statistics and bivariate correlations of the key variables

	<i>M</i>	<i>SD</i>	1	2	3	4	5
1. Gender	1.79	0.41					
2. Self-interest in redistribution	3.86	0.74	-0.04				
3. Social class	4.68	1.68	-0.10*	-0.03			
4. Attributions for rich-poor gap	0.34	0.98	-0.08	-0.01	0.16***		
5. Redistributive preferences	5.45	0.80	-0.01	0.30***	-0.18***	-0.13**	

Note. * $p < .05$, ** $p < 0.01$, *** $p < 0.001$

Fig. 1 Mediation model. Gender and self-interest were controlled for in the analysis. Path values were the regression coefficients with SEs. * $p < 0.05$, *** $p < 0.001$



mediated by attributions for rich-poor gap controlling for gender and perceived self-interest in redistribution, indirect effect: $\beta = -0.02$, $SE = 0.01$, $95\%CI = [-0.04, -0.01]$.

Discussion

Using cross-sectional data collected from urban and rural residents, study 1 found that even though self-interest was statistically controlled, subjective social class was still negatively associated with redistributive preferences. These findings were consistent with some previous researches, which also found that when self-interest was statistically controlled or ruled out, higher-class individuals were still less supportive of redistribution than lower-class individuals (Brown-Iannuzzi et al., 2015; Dawtry et al., 2015).

Besides, our research further found that even though self-interest was statistically controlled, attributions for rich-poor gap still could play a mediating role in the relationship between social class and redistributive preferences. Specifically, higher-class individuals (relative to lower-class individuals) were more likely to make internal attributions for rich-poor gap, which in turn lead to lower redistributive preferences. On the whole, in addition to self-interest suggested by the classic economic perspective (Melter & Richard, 1981), our research uncovered a belief-based mechanism underlying social class differences in redistributive preferences.

Study 2

Although study 1 provided initial evidence for our hypothesis, it adopted a measurement-of-mediation design that could not give causal inferences. Therefore, to make causal inferences and validate the findings of study 1, we followed the principles of experimental-causal-chain design (Spencer et al., 2005) by conducting two experiments. In study 2A, we sought to establish the first link of the causal chain—from social class to attributions for rich-poor gap. Using the social class manipulation paradigm, we anticipated that participants in higher social class condition would show higher internal attributions for rich-poor gap than those in lower social class condition. And previous research found that selecting intermediate-class participants could reduce the possibility that participants' inherent high or low social class would disturb the manipulating effect (Xu et al., 2020). Hence, following some research practices (Dietze & Craig, 2020; Sands & de Kadt, 2020), study 2A was conducted in field to recruit intermediate-class participants. Then in study 2B, we sought to establish the second link of the causal chain—from attributions for rich-poor gap to redistributive preferences. Using an attribution priming paradigm, we expected to find that participants in the internal attributions

condition would be less supportive of redistribution than those in the external attribution condition. Because there was no specific requirement for participants, study 2B was conducted online on a crowdsourcing platform to access a relatively diverse sample.

Study 2A

Participants

By using occupation as an indicator of social class (Kraus et al., 2012), we selected 136 individuals of intermediate-class occupations as our participants. Specifically, benefiting from the cooperation with two schools, two hospitals, and one company in Ningxia province of China, we recruited some teachers, doctors, and clerks (i.e., those of typical intermediate-class occupations) from these institutions. All participants voluntarily participated in our experiments without receiving any pay.

Taking each institution as a unit, our research assistants distributed the experimental materials to these participants on the spot. Based on the materials they received, participants were randomly assigned to complete a task used to prime either higher social class or lower social class. Then they were asked to fill out measures of attributions for rich-poor gap and some demographic information. Excluding 8 participants who failed to finish all experimental tasks, we finally obtained 128 valid participants. Of the participants, 68 (53.1%) were females. The average age was 39.05 years ($SD = 3.68$).

Manipulation and Measures

Social Class Manipulation We adopted a manipulation paradigm frequently used in past research (e.g., Kraus et al., 2010; Piff et al., 2010). Specifically, we presented participants with a cartoon image of a person and descriptions of his occupation, work, and life. The cartoon images in the two experimental conditions were the same. The differences were descriptions of the cartoon image. In higher social class condition, the descriptions were of a person from a typical low social class: "Li Ming (pseudonym), male, born in the 1980s, has changed jobs for various reasons and is currently working as a delivery man. Although he has worked for many years, he still doesn't own a house or even has a fixed deposit. In the free time, he surfs the Internet for entertainment occasionally." In lower social class condition, the descriptions were of a person from a typical high social class: "Li Ming (pseudonym), male, born in the 1980s, is a director of a well-known enterprise. With great savings and several villas, he has no financial worries for the rest of his life. Now he is often active in major media and network platforms." All participants were asked to imagine talking

to Li Ming and write down possible topics and contents of the conversation. Subsequently, we used the MacArthur Ladder in study 1 as a manipulation check. The participants were asked where they would place themselves on the ladder relative to Li Ming (1 = lowest rung, 10 = highest rung). In addition, we controlled for participants' objective social class, which might still interfere with the manipulation (Xu et al., 2020).

Attributions for Rich-Poor Gap After manipulating participants' social class, we measured their attributions for rich-poor gap. Specifically, participants were told that just like the gap between Li Ming and you, there was always a big or small gap between the rich and the poor in our society. Then, they completed 2-item on 7-point (1 = totally disagree, 7 = totally agree) to report their attributions for rich-poor gap. The one item for measuring internal attributions was that "to what extent do you think this gap is caused by internal factors, such as effort, ability, courage, foresight." The other item for measuring external attribution was that "to what extent do you think this gap is caused by external factors, such as family background, industrial differences, having a pull or not." Similar to the scoring method in study 1, we used the difference between the mean ratings given to internal attribution and external attribution items as the measure score. Higher scores reflect a higher tendency of internal attributions for rich-poor gap. Finally, we collected participants' demographic information of gender, age, and objective social class. In the measure of objective social class, participants were asked to choose or fill out their occupations. And according to the recoding rule (Liu, 2018), we recoded what participants chose or filled out into seven categories from lowest to highest (i.e., 1 = "unemployed or semi-unemployed", 2 = "of unskilled or manual workers", 3 = "of skilled workers", 4 = "of small or self-employed proprietors", 5 = "of lower-middle-class occupations", 6 = "of upper-middle-class occupations", 7 = "of upper-class occupations").

Results

Manipulation Check

To validate our manipulation of social class, we performed an ANCOVA with social class manipulation as the main effect, while controlling for gender and objective social class. The results showed that neither the effect of gender nor of objective social class was significant, $F(1, 124) = 1.80$, $p = 0.18$, $\eta^2_p = 0.02$; $F(1, 124) = 2.03$, $p = 0.16$, $\eta^2_p = 0.02$. Participants in higher social class condition ($M = 4.91$, $SE = 1.32$) reported higher position on the ladder than participants in lower social class condition ($M = 3.92$, $SE = 1.43$),

$F(1, 124) = 18.65$, $p < 0.001$, $\eta^2_p = 0.13$, suggesting that our manipulation of social class was effective.

Hypothesis Testing

Using ANCOVA again, we examined the main effect of social class manipulation on attributions for rich-poor gap. Gender and objective social class were also controlled as covariates in the analysis, $F(1, 124) = 0.12$, $p = 0.73$, $\eta^2_p = 0.00$; $F(1, 124) = 0.02$, $p = 0.90$, $\eta^2_p = 0.00$. As expected, participants in higher social class condition ($M = 0.59$, $SE = 1.63$) showed higher internal attributions for rich-poor gap than participants in lower social class condition ($M = -0.08$, $SD = 1.90$), $F(1, 124) = 4.41$, $p = 0.038$, $\eta^2_p = 0.034$.

Study 2B

Participants and Procedure

We recruited 170 participants through a similar crowdsourcing platform as Amazon.com's Mechanical Turk. Once entering the online platform, participants were randomly assigned to different experimental conditions to complete two tasks. First, they read a short passage used to prime their (internal or external) attributions for rich-poor gap and completed a relevant comprehension check. Second, they filled out measures of redistributive preferences and some demographic information. After finishing all experimental tasks, each participant received a small monetary compensation for participating. Excluding 5 participants who answered the same value in our dependent measure and 10 participants who failed the comprehension check, we finally obtained 155 valid participants. Of the participants, 110 (71%) were females. The average age was 22.74 ($SD = 5.82$).

Manipulation and Measure

Attributions for Rich-Poor Gap Priming To prime attributions for rich-poor gap, we used an adapted priming paradigm used in past research (Piff et al., 2020). Participants were asked to read a short passage specifically designed to explain the causes of rich-poor gap in China. The two passages both started by highlighting the fact that rich-poor gap in China was too large. In external attributions condition, participants were exposed to the passage in which the subsequent narrative attributed rich-poor gap to external environments, such as national unbalanced development strategies, industrial differences, and unequal education opportunities. In contrast, participants in internal attributions condition were exposed to the passage in which the subsequent narrative attributed rich-poor gap to individual characteristics, such as the idea of fate, differences in enjoyment and effort

for work, financial management skills. To ensure the authority of contents, the end of both passages noted that they were from an analysis of an authoritative organization or person. The examples of the short passages were as follows:

In the early stage of China's reform and opening up, to achieve rapid economic development, the government implemented a series of regional unbalanced development strategies, including preferential and encouraging strategies for the eastern coastal areas and the administrative management system of urban–rural division. These unbalanced development strategies make economic activities highly uneven in geographical distribution, resulting in considerable differences in wage levels and job opportunities between urban and rural areas and between regions, and ultimately lead to the rich areas becoming richer and the poor areas becoming poorer...(in external attributions condition).

In addition, the rich enjoy working more and work harder than the poor. The study revealed that up to 85 percent of the rich enjoy working, compared with just 2 percent of the poor. 86 percent of the rich worked an average of 50 h a week, compared with 43 percent of the poor. In addition to liking their jobs more and working harder, the rich also value creativity more than the poor. Many of the rich are not smart or high-achieving students in college, but they focus on creativity rather than studying mechanically so that they can display their abilities after stepping into society...(in internal attribution condition).

Following previous research practices (Black & Davidai, 2020; Piff et al., 2020), we set a comprehension check to examine whether participants had read the passage carefully. Specifically, after the participants finished reading the passage, they were asked to complete three relevant questions (e.g., which factors that contribute to the gap between rich and poor are listed in the passage above?). The participants who gave one or more incorrect answers were deemed to fail in the comprehension check and were excluded from the final sample.

Redistributive Preferences After priming participants' attributions for rich-poor gap, we measured their redistributive preferences using the same scale as in study 1. In study 2B, the Cronbach's α of three dimensions and total questionnaire were 0.79, 0.81, 0.84 and 0.76. Finally, we collected participants' demographic information of gender and age.

Results

Prime Check

To validate our manipulation of attributions for rich-poor gap without arousing biased responses or suspicion (Wakslak et al., 2007), we recruited an independent sample ($N=93$; 54.8% females) to read either internal attributions

or external attributions priming passage. Then, participants were asked to complete 2-item, similar to items used in study 2A. We performed an ANCOVA with social class manipulation as the main effect while controlling for gender. The results showed that the effect of gender was not significant, $F(1, 90)=0.12, p=0.73, \eta^2_p=0.00$. Participants in internal attributions condition ($M=0.90, SD=1.78$) reported higher internal attributions than participants in external attributions condition ($M=-1.75, SD=2.24$), $F(1, 90)=39.35, p<0.001, \eta^2_p=0.30$, suggesting that our manipulation was effective in shifting participants' attributions for rich-poor gap.

Hypothesis Testing

Using ANCOVA again, we examined the effect of attributions for rich-poor gap on redistributive preferences. Gender was also controlled as a covariate in the analysis, $F(1, 152)=1.42, p=0.25, \eta^2_p=0.00$. Consistent with our predictions, the results showed that participants in internal attributions condition were less supportive of redistribution ($M=5.31, SD=0.61$) than those in external attributions condition ($M=5.54, SD=0.66$), $F(1, 152)=4.42, p=0.037<0.05, \eta^2_p=0.04$. When three dimensions of redistributive preferences were regarded as separate dependent variables, the results further showed that participants in internal attribution condition ($M=4.60, SD=1.08$) were especially less supportive of personal taxation than participants in external attribution condition ($M=5.13, SD=0.82, F(1, 152)=11.02, p<0.001, \eta^2_p=0.07$) and also less supportive of social welfare ($M=5.61, SD=0.84$) than participants in external attribution condition ($M=6.08, SD=0.79, F(1, 152)=12.58, p<0.001, \eta^2_p=0.08$). But participants in the internal attributions ($M=5.71, SD=1.00$) and external attributions conditions ($M=5.54, SD=1.07$) did not differ on attitude towards equalization of public services, $F(1, 152)=1.13, p=0.30$.

Discussion

Using two separate but sequential experiments, Study 2 provided evidence for the causal role of attributions for rich-poor gap in the proposed mediation model. It implied that although attributions for rich-poor gap were sometimes also seen as system-justifying beliefs (Jost & Hunyady, 2005), they were not necessarily different social classes' post-justifications of redistributive preferences. As seen from causal links of study 2, attributions were not the results (or post-justifications) but the causes of different social classes' redistributive preferences.

Unexpectedly, we also found that attributions for rich-poor gap had different effects on different dimensions of redistributive preferences (as shown in study 2B). Maybe

because personal taxation and social welfare are strategies that more focus on reducing fairness (Garcia-Sanchez et al., 2020), attitudes towards these two aspects are more likely to be influenced by whether the current distribution is fair (i.e., in internal attribution condition) or not (i.e., in external attribution condition). In contrast, equalization of public services is more of an ideal about equality that can meet human's universal needs for equality (Dawes et al., 2007); therefore, its variations across different situations were smaller. Some researchers also distinguished different dimensions of redistributive preferences (Garcia-Sanchez et al., 2020; Rodriguez-Bailon et al., 2017). These suggest that it's worthwhile to explore the role of different dimensions of redistributive preferences in future research.

General Discussion

Overall, we conducted two studies to explore the specific belief mechanism in the relationship between social class and redistributive preferences. By adopting measurement-of-mediation design and experimental-causal-chain design (Baron & Kenny, 1986; Spencer et al., 2005), two studies demonstrated that attributions for rich-poor gap were an important belief mechanism in this relationship. These present findings have advanced our understanding of the psychological mechanisms of class-based policy preferences.

Psychological mechanisms of Class-based Policy Preferences

Although self-interest was often seen as the psychological mechanism of class-based policy preferences (Jackson & Payne, 2020; Meltzer & Richard, 1981), this self-interest perspective had limitations (Brown-Iannuzzi et al., 2015; Langsæther & Evans, 2020). Thus, from an ideology perspective (Alesina & Angeletos, 2005; Piff et al., 2018), we uncovered that beliefs about economic inequality (e.g., attributions for rich-poor gap) could play a mediating role in the relationship between social class and redistributive preferences.

These results suggested that higher-class and lower-class individuals held different attitudes towards redistribution because of attributions for rich-poor gap. Possibly, as their social circles (e.g., family, neighbours, colleagues) are segregated along social class lines, different social class individuals would form different beliefs about social inequality. Specifically, researchers have found that social circles of higher-class individuals (relative to lower-class individuals) are also those from higher classes with relatively fewer social experiences of inequality (Cruces et al., 2013; Dawtry et al., 2015). This inequality blindness may lead them to assume that social hierarchy is mainly determined by individual

characteristics (e.g., ability, hard work and ambition) rather than unequal structural forces (e.g., unfair resource distribution, unequal education and job opportunities). Thus, they tend to think that redistribution is less needed.

Implications

There are some theoretical and practical implications from our research findings. Theoretically, we found that attributions for rich-poor gap played a mediating role in the relationship between social class and redistributive preferences. It provided direct evidence for the views of the inequality maintenance model of social class (Piff et al., 2018). This theory seeks to uncover the psychological processes by which individuals create and perpetuate inequality. One proposition of this theory is that higher social class elicits its merit-based ideologies of economic inequality, which in turn enhance economic inequality via political participation. Our results confirmed this important proposition by demonstrating that higher-class individuals (relative to lower-class individuals) tend more to make internal attributions for rich-poor gap and more oppose wealth redistribution. In addition, previous studies have found that higher-class individuals possess more political influences (e.g., vote, political campaign) to fulfill their policy preferences (Gilens & Page, 2014; Laurison, 2016). Hence, this psychological process would perpetuate or exacerbate inequality, as suggested by the inequality maintenance model of social class (Piff et al., 2018; Rodriguez-Bailon et al., 2020).

Practically, we found that external attributions priming could heighten individuals' positive attitude toward redistribution. It implies that inequality may be alleviated to some extent by shifting individuals' attributions for rich-poor gap; that is, transforming more internal attributions into more external attributions. Specifically, as some scholars have suggested, the government and mass media can use interventions (e.g., classroom courses, documentaries, virtual simulations) to cultivate individuals' more structural understanding of poverty, wealth, and economic inequality (Bullock, 2017; Piff et al., 2020). If so, those advantaged individuals would feel less entitled and may be more supportive of redistributive policies that reduce economic inequality (Piff et al., 2020; Xu et al., 2020). Meanwhile, those disadvantaged individuals may accept assistance of redistributive policies more openly and do not need to worry about being labelled incompetent, lazy and undeserving (Brown-Iannuzzi et al., 2016; Brown-Iannuzzi et al., 2019; Sainz et al., 2020).

Limitations and Future Direction

Our research has several limitations. First, redistributive preferences were measured by a self-report questionnaire so that self-interest in redistribution was only statistically controlled

(e.g., Dawtry et al., 2015). Thus, future research can use other ways (e.g., economic game) to assess one's redistributive preferences, which can rule out the influence of self-interest more effectively (Brown-Iannuzzi et al., 2015; Xie et al., 2017). Second, in our survey, we recruited participants of different social classes by crowdsourcing platform. Hence, there might be a lack of adequate higher-class participants in our sample. Although it's relatively certain that our results are convincing, future research may adopt diverse methods (e.g., interviews and field investigations) to access more representative samples of social class (Dietze & Craig, 2020; Page et al., 2013). In this way, it may provide more convincing evidence for our proposed mediation model.

Third, our research only examined the mediating role of attributions for rich-poor gap. It is reasonable to infer that self-interest and some other ideologies or beliefs that either involve self-interest or not (e.g., system-justifying belief; Jost, 2019) may also mediate the relationship between social class and redistributive preferences. Moreover, self-interest and ideologies (e.g., attributions for rich-poor gap) may sometimes be cooperative such that they lead to the same social class differences in redistributive preferences (Brown-Iannuzzi et al., 2017). However, at other times, they may be competing. For example, researchers have found that when being exposed to inequality or perceiving inequality in everyday life, higher-class individuals ideologically hope that government can provide welfare for those in need as lower-class individuals do (Garcia-Castro et al., 2020; Sands & de Kadt, 2020). But they are also unwilling to be taxed more (Page et al., 2013). Thus, future research can explore different psychological mechanisms and boundary conditions for these relationships.

Conclusions

Using two studies, we explored the mediating role of attributions for rich-poor gap in the relationship between social class and redistributive preferences. By adopting measurement-of-mediation design and experimental-causal-chain design, two studies correlatively and casually demonstrated that higher-class individuals (relative to lower-class individuals) were more likely to make internal attributions for rich-poor gap and then had lower redistributive preferences. In summary, in addition to self-interest suggested by the classic economic perspective, attributions for rich-poor gap may be another essential psychological mechanism underlying social class differences in redistributive preferences.

Data Availability Statement

The data that support the findings of this study are available from the corresponding author upon reasonable request.

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Declarations

Conflicts of Interest On behalf of all authors, the corresponding author states that there is no conflict of interest.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

Informed Consent Informed consent was obtained from all individual participants included in the study.

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