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RESEARCH ARTICLE

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A 32-society investigation of the influence of perceived economic inequality on social class stereotyping

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Abstract

There is a growing body of work suggesting that social class stereotypes are amplified when people perceive higher levels of economic inequality—that is, the wealthy are perceived as more competent and assertive and the poor as more incompetent and unassertive. The present study tested this prediction in 32 societies and also examines the role of wealth-based categorization in explaining this relationship. We found that people who perceived higher economic inequality were indeed more likely to consider wealth as a meaningful basis for categorization. Unexpectedly, however, higher levels of perceived inequality were associated with perceiving the wealthy as less competent and assertive and the poor as more competent and assertive. Unpacking this further, exploratory analyses showed that the observed tendency to stereotype the wealthy negatively only emerged in societies with lower social mobility and democracy and higher corruption. This points to the importance of understanding how socio-structural features that co-occur with economic inequality may shape perceptions of the wealthy and the poor.

KEYWORDS
cross-culture, economic inequality, social class, stereotyping

1 | INTRODUCTION

> Any city, however small, is in fact divided into two, one the city of the poor, the other of the rich; these are at war with one another.
>
> Plato (1943 BCE)

Two thousand years ago Plato theorized that economic inequality would divide societies along social class lines. A visionary of his time, there is now growing support for his claim. For instance, existing evidence suggests that higher levels of economic inequality may reinforce the existing social class divide by making "wealth" a fitting basis for social categorization. In other words, when people perceive higher levels of economic inequality, they are more likely to *categorize* self and others into social class categories such as "the wealthy" and "the poor" (Connor et al., 2021; Peters et al., 2021; for a theoretical overview see, Jetten et al., 2017; Turner et al., 1987). Such categorization can, in turn, enhance social class stereotyping—that is, it increases the tendency for people to attribute traits to the wealthy and the poor, which further essentializes and maximizes the differences between them (Tanjitpiyanond et al., 2022). In other words, Plato's social class divide may be a result of perceptions of higher economic inequality driving people to categorize and make meaning of their social worlds based on social class categories.

Consistent with this reasoning, a growing body of work shows that when people perceive higher levels of inequality, they tend to stereotype the wealthy as more *competent* (e.g., capable, intelligent, talented) and *assertive* (e.g., ambitious, purposeful, driven). At the same time, they stereotype the poor as more *incompetent* and *unassertive* (Connor et al., 2021; Heiserman & Simpson, 2017; Moreno-Bella et al., 2019; Tanjitpiyanond et al., 2022). To the extent that perceptions of inequality amplify social class stereotypes in this way, societal levels of economic inequality may be further perpetuated. For instance, the stereotype of the poor as more lazy has been found to reduce public support for wealth policies to provide social welfare (Jetten et al., 2021; Piff et al., 2020).

Although claims that perceived inequality enhances wealth stereotyping are consistent with theoretical expectations, their generality is limited by their reliance on lab-based studies in Western educated industrialized rich and democratic countries (WEIRD). Note, however, that Durante et al. (2013) examined the effect of inequality on social class stereotypes beyond WEIRD countries. However, their study used an objective inequality measure (the Gini coefficient) while we focus here on people's subjective experiences of economic inequality (Jetten & Peters, 2019). In these countries, existing socio-structural features, such as higher levels of permeability (e.g., more opportunities for upward social mobility) and legitimacy (e.g., higher levels of democracy and lower levels of corruption) may make it more likely that people attribute economic outcomes to individual merit (e.g., ambition; Henrich et al., 2010; Kunovich & Slomczynski, 2007; Markovits, 2019). In such contexts, it makes sense for the wealthy to be seen as possessing (and the poor as lacking) traits that allow them to pursue greater wealth and status. However, the impact of perceived inequality on stereotyping may be less likely to generalize to non-WEIRD contexts with different socio-structural features.

In this paper, we test the generalizability of the observed relationship of perceived economic inequality on wealth-based categorization and social-class stereotyping across a sample of 32 diverse societies. First, as a pre-registered investigation, we examine whether perceptions of higher economic inequality are positively associated with the tendency for people to use wealth as a basis for categorization (Turner et al., 1987), and subsequently to stereotype the wealthy as more assertive and competent than the poor (Jetten et al., 2017). As a follow-up exploratory analysis we also examine whether other socio-structural features, such as a society's permeability (i.e., levels of social mobility) and legitimacy (i.e., levels of corruption and democracy) interact with inequality to shape perceptions of the social classes. Below, we provide a further rationale for our arguments.

1.1 | Perceived economic inequality, wealth categorization and social class stereotyping

Previous work has relied on self-categorization theory to explain why greater wealth-based categorization (which results from perceptions of higher economic inequality) may further differentiate social class stereotypes on traits relating to assertiveness and competence (Jetten et al., 2017; Peters et al., 2021; Tanjitpiyanond et al., 2022). A core claim of this theorizing is that stereotype content is likely to vary as a function of basic social categorization processes (i.e., the process of grouping self and others based on shared attributes; Brown & Turner, 2002; Haslam et al., 1992). For instance, Jetten et al. (2017) proposed that higher levels of perceived economic inequality can be expected to enhance social class cues in the environment (e.g., differences in the way the wealthy and poor dress, speak, and behave), making it more likely that categories related to wealth fall along social class lines and would thus be used for categorization (see also, Kraus et al., 2017). Put differently, perceiving higher levels of inequality should increase the comparative fit of social class categories because the existing environment (e.g., the prevalence of differences in social class cues) would lead to the perception of greater *intra-class similarities* (a similar concept to social class *entitativity* or the perceive "groupiness" of the wealthy and poor; i.e., all wealthy people are perceived as more similar, and vice versa for the poor) but greater perceived *inter-class differences* between the wealthy and the poor (Peters et al., 2021). Such theorizing suggests that social class categories should become more salient and meaningful social groups in a more unequal environment.

There is empirical evidence supporting this theorizing and suggesting that greater inequality encourages wealth-based categorization. For instance, there is evidence that higher objective inequality in the United States is associated with an increased tendency for people to search for (on Google) and discuss (on Twitter) wealth differences between the wealthy and the poor (Sánchez-Rodríguez & Moreno-Bella, 2021). Further confirming this possibility, Peters et al. (2021) found, in a series of archival and experimental studies, that perceiving higher economic inequality in English-speaking countries (e.g., the

United Kingdom, Canada, Singapore) was associated with an increased tendency for people to use more words relating to wealth and poverty.

Jetten et al. (2017) further theorized that the salience of social class categories should increase the tendency for people to infer characteristics or draw on relevant stereotypes of the wealthy and the poor (i.e., the normative fit principle as articulated in self-categorization theory; Haslam et al., 1992; Turner et al., 1987). This is because these stereotypes should help people to make sense of their (economically unequal) social world. This expectation is especially likely to apply to assertiveness and competence traits, as, in Western societies at least, these "agentic" aspects of person perception are often used to legitimize socio-economic status differentials between the wealthy and poor. For example, the wealthy are often perceived as more competent and assertive than the poor because of their ability to secure higher wealth and status (Abele et al., 2020; Connor et al., 2021; Durante et al., 2013).

In line with this, there is evidence that perceiving higher economic inequality both increases people's tendency to categorize people causally on the basis of wealth and enhances their stereotyping of the wealthy and the poor in terms of assertiveness and competence. In two experiments, Tanjitpiyanond et al. (2022) randomly assigned Australian participants to imagine living in a fictional society with either a high or low level of economic inequality. They found that participants in the high (vs. low) inequality condition perceived greater intra-class similarities (or higher entitativity) and inter-class differences between the wealthy and the poor categories in that society. In other words, perceptions of greater economic inequality increased wealth-based categorization. This categorization was, in turn, partially associated with enhanced stereotyping of the social classes. Specifically, there is evidence to suggest that stereotyping of assertiveness (but not competence) was enhanced when perceived intra-class similarities and inter-class differences were exacerbated in the high (vs. low) inequality condition. This evidence, therefore, suggested that greater wealth-based categorization may underlie the effect of higher perceived inequality on enhanced stereotyping of the wealthy as more assertive and the poor as less assertive.

Nevertheless, as we mentioned before, existing research on the effect of economic inequality on social class stereotyping has largely been conducted in WEIRD societies. Thus, to test our theorizing, this paper reports a pre-registered examination of the relationships between perceived inequality, wealth-based categorization and social class stereotyping in 32 cross-national samples.[1] First, we hypothesized that perceptions of higher inequality would be positively associated with the stereotyping of the wealthy as more assertive and competent, and the poor as less assertive and competent (H1). Second, we predicted that the relationship between higher perceived inequality and enhanced social class stereotyping would be mediated by greater wealth-based categorization (H2), measured in terms of comparative fit (i.e., the ratio of intra-class similarity to inter-class difference) and entitativity (the degree of similarity or "groupiness" within each of the social classes; Blanchard et al., 2020).

1.2 | Socio-structural features: Permeability and legitimacy of status relations

We also explore how other socio-structural features may interact with perceptions of inequality to shape perceptions of the social classes. According to social identity theorizing (Tajfel & Turner, 1979), structural features such as permeability and legitimacy of status relations are important determinants how people construe existing intergroup inequality (Laurin et al., 2013; Oldmeadow & Fiske, 2012). For instance, whether people perceive the wealthy as competent or assertive—in securing their higher socioeconomic status—may be contingent on whether upward social mobility is possible (i.e., high in permeability) and whether the current state of society is fair and just (i.e., high in legitimacy).

Permeability refers to the ease with which people can move up (or down) the economic ladder. In societies that have high levels of permeability, people may be especially likely to perceive the wealthy as assertive and competent (and the poor as unassertive and incompetent). This is because in a more permeable society, with many opportunities for upward social mobility, economic success is the result of skills, ambition, and making the most of opportunities rather than of the social class in which one is born (e.g., Day & Fiske, 2017; Shariff et al., 2016). In support of this reasoning, Day and Fiske (2017) found that American participants who perceived high (vs. low) social mobility in society were more likely to legitimize inequality by believing that merit equates to wealth and success (i.e., meritocratic belief). In contrast, in societies with lower levels of permeability, the wealthy may not necessarily be perceived as more assertive or competent because limited social mobility may lead people to assume that there is a structural explanation (not an individual explanation) for wealth and poverty (McCall et al., 2017). Specifically, they may believe that an individual's ambition and capability (i.e., assertiveness and competence) may not be sufficient to overcome structural barriers that limit people's ability to improve their own economic position.

Along the same lines, the legitimacy of the social class hierarchy may also be associated with social class stereotyping. Legitimacy relates to how fair status relations, including wealth accumulation, are perceived to be. Spears et al. (2010, p.5) described legitimacy as "whether (respectively) outcomes are seen to be a fair reflection of group inputs and abilities or are arrived at through fair means." In societies in which social class hierarchies are more legitimate, the wealthy may be stereotyped as more assertive and competent because their higher socio-economic position may be assumed to reflect their greater merit (Markovits, 2019). On the other hand, societies where the social class hierarchy has less legitimacy may reflect that the wealthy accumulate wealth via questionable means (e.g., nepotism, tax evasion) and here the wealthy may not be perceived as more competent or assertive (or the poor as less competent or assertive). From this reasoning, it can be predicted that societal legitimacy should matter in

[1] Our pre-registration also includes other hypotheses which are reported in the supplementary material.

determining whether people stereotype those at the top (or bottom) of the socio-economic ladder as having enough ambition for their successes.

The present research explored support for these predictions by assessing the impact of country-level permeability (i.e., with a social mobility index) and legitimacy of the social class hierarchy (i.e., with a democracy and corruption index) in moderating the relationship between perceptions of economic inequality and stereotyping of the social classes.

2 | METHOD

2.1 | Participants

We distributed a survey measuring perceptions of economic inequality, wealth categorization and social class stereotypes to 11,626 participants from 32 countries who responded either through university participant pools (via each author's respective institution) or social media sampling between 13 January 2020 and 22 April 2021. We achieved our pre-registered target of recruiting a minimum of 150 participants per sample in all but three countries: Portugal, Chile and Ukraine. Under-recruitment in these countries was attributed to local challenges associated with the COVID-19 pandemic. We excluded 6,122 participants because they met at least one of the three exclusion criteria as outlined in the pre-registration: having incomplete responses on the key variables ($N = 4,419$), failing all or any of the four main attention checks in the survey ($N = 5,890$), and not being a permanent resident or citizen of the country in question ($N = 285$). The greatest number of exclusions occurred in Senegal ($N = 1,077$) and Italy ($N = 802$), where a very large number of participants started but did not complete the survey (see supplementary material for the *N* of each country and reasons for exclusion). This study was pre-registered on the Open Science Framework (https://osf.io/jqhsy/cross-cultural).

Our final sample for analysis purposes included 5,504 participants ($M_{age} = 22.64$; female $N = 3,855$). Over 86.8% had completed, or were in the process of completing, a bachelor's degree. Countries that recruited students included: Australia ($N = 160$), Belgium ($N = 125$), Canada ($N = 333$), Chile ($N = 75$), China ($N = 154$), England ($N = 148$), France ($N = 190$), Germany ($N = 184$), Indonesia ($N = 254$), Italy ($N = 186$), Japan ($N = 161$), Korea ($N = 201$), Latvia ($N = 164$), Malaysia ($N = 93$), Netherlands ($N = 176$), United States ($N = 489$), Northern Ireland ($N = 141$), Scotland ($N = 150$), Thailand ($N = 163$), Singapore ($N = 164$), South Africa ($N = 151$), Turkey ($N = 186$), Ukraine ($N = 118$). Samples recruited via convenience sampling included those from Kenya ($N = 73$), Nigeria ($N = 42$), Pakistan ($N = 214$), Peru ($N = 168$), Portugal ($N = 108$), Senegal ($N = 243$), Slovakia ($N = 167$), Spain ($N = 177$). In Hong Kong, participants were recruited via convenience sampling as well as on campus ($N = 146$). The original survey was in English; however, some surveys were translated into the country's native language by the authors from that country. Participants completed the survey via hard copy or online through Qualtrics or Survey Monkey.

2.2 | Procedure and measures

2.2.1 | Perceived inequality

In the first section of the survey, we assessed participants' perceptions of economic inequality using Sprong et al.'s (2019) subjective Gini coefficient. This measure asked participants to think of 100 citizens in their countries and to classify them into five wealth categories: "very poor", "poor", "average in wealth", "wealthy", and "very wealthy". Participants provided an estimate of the number of people in each category and estimates had to add up to 100. To compute the subjective Gini coefficient, we replicated how the objective Gini is calculated. Specifically, we used estimates of the five wealth categories to plot a Lorenz curve and calculate it against the line of equality (see supplementary material for more detail of calculation method). The Gini coefficient can range from 0 (very equal) to 1 (very unequal). In our sample, values ranged from .00 to .36, which is rather similar to previous work with this measure (Sprong et al., 2019).[2]

2.2.2 | Stereotype ratings

In the next section, participants were asked to imagine two target individuals from their country: one very wealthy individual from the top 5% of their country's wealth distribution and one poor individual from the bottom 5% of the distribution. Both targets were male. The order in which the targets were presented was randomized. First, to encourage participants to engage with the task, they were asked to describe freely what they thought each target was like (e.g., traits, mood, and temperament).

Next, participants completed the main stereotype measure which asked them to rate the extent to which each target possesses a range of 24 traits (adapted from Abele et al., 2016). Half of these traits measured assertiveness (i.e., ambitious, assertive, someone who feels superior, confident, and purposeful; wealthy $M_\alpha = 0.75$; poor $M_\alpha = 0.78$) and competence (i.e., intelligent, competent, efficient, skilful and capable; wealthy $M_\alpha = 0.90$; poor $M_\alpha = 0.90$). Note that, in the final analysis, the assertiveness item "someone who feels superior" was dropped because, in some countries, including this item reduced the scale reliability to below 0.70. Participants were also presented with 12 traits that measured morality (i.e., sincere, honest, righteous, trustworthy, and respectful; wealthy $M_\alpha = 0.85$; poor $M_\alpha = 0.87$) and friendliness (i.e., friendly, warm, likeable, helpful, and kind; wealthy $M_\alpha = 0.86$; poor $M_\alpha = 0.89$). Responses were measured on seven-point Likert scales (1 = strongly no, 7 = strongly yes).[3,4]

[2] The subjective Gini measure has been shown to correlate positively with the objective Gini measure (see Sprong et al., 2019).

[3] For each scale, alphas (for each trait scale for the wealthy and poor) were calculated separately for each country. Note that alphas for the assertiveness scale were less than .70 in Senegal, Latvia, the Netherlands, Pakistan, Peru, and Spain (even after removing the item "I feel superior to others"). Excluding these countries from the analysis did not change the findings and, for this reason, we report the analysis including all countries. Alphas for the other scales (e.g., morality, friendliness, and competence) were higher than .70 for all countries.

[4] Results for moral and friendly traits are reported in the supplementary material.

2.2.3 | Wealth categorization

After participants rated stereotype traits of the wealthy and the poor targets, they completed measures of comparative fit and entitativity, which assessed their tendency to use wealth as a basis for categorization.

Comparative fit

Participants were asked to evaluate inter-class similarity of the top and bottom 5% (i.e., "Thinking about people in the top and bottom 5%: how similar do you think that people in the top 5% are to people in the bottom 5%?") as well as intra-class similarity: that is, "Thinking only about people within the top (or bottom) 5%: how similar do you think that people within the top (or bottom) 5% are to one another?" Responses were measured on seven-point Likert scales (1 = very different, 7 = very similar). We calculated comparative fit by averaging the two ratings of intra-class similarity for the top and bottom 5% and dividing it by the rating of inter-class similarity. Higher values reflect greater comparative fit as intra-class similarity needs to be higher than inter-class similarity (Tanjitpiyanond et al., 2022).

Entitativity

Entitativity measures one aspect of wealth categorization—that is, it measures the intra-class similarities within the wealthy and the poor groups. Perceptions of the entitativity of the top and bottom 5% were measured using an adapted version of the Blanchard et al. (2018) 10-item scale (2018). For each social class in turn (the top 5% and the bottom 5%), participants were asked to rate the extent to which they see people within the social class as an entity (i.e., "I see people within the top 5% as a unit"; "I see people within the top 5% as a group"; "People within the top 5% feel like a group to me"; "People within the top 5% are alike"; "People within the top 5% have similar attitudes"; "People within the top 5% have similar values"; "People within the top 5% see things in much the same way"; "People within the top 5% share a common goal"; "People within the top 5% strive for the same things"; "People within the top 5% want to achieve the same goals"; top 5% entitativity $M_{\alpha} = 0.91$; bottom 5% entitativity $M_{\alpha} = 0.89$). Response was measured on seven-point scales (1 = strongly disagree, 7 = strongly agree). Higher scores on each scale mean that each wealth group was seen as a more cohesive entity.

2.3 | Permeability and legitimacy

We used archival measures as proxies for country-level permeability and legitimacy.

Permeability. The degree of permeability was captured using the Social Mobility Index taken from the World Economic Forum (2020) database. The index assesses whether each country has policies and practices in place to promote upward social mobility across its population. The index was calculated based on 10 pillars relating to social mobility (e.g., access to health, education) which was scored from 0 to 100. The final index is the average score across the 10 pillars. Higher score on the index means the country is moving towards greater social mobility whereby more equal opportunities are available for people in the country. Scores in our sample range from 36.00 to 82.40 (please refer to World Economic Forum, 2020, for a list of indices for individual country).

Legitimacy. The degree of status legitimacy in each society was measured using two indexes: (a) the Corruption Perception Index, and (b) the Democracy Index.

(a) Corruption. The corruption perception index was calculated by Transparency International (2020) based on 13 reputable data sources regarding level of corruption in the public sector. The index ranges from a score of 0 to 100 whereby 0 indicates a country with the highest level of corruption and 100 indicates a country with the lowest level. The scores of countries in our sample range from 31 to 85 (please refer to Transparency International, 2020, for a list of indices for individual country).

(b) Democracy. The democracy index was compiled by the Economist Intelligence Unit (2020) and was calculated based on 60 indicators related to the level of democratic practices in each country (e.g., whether the national election is fair). The index ranges from 1 to 10 whereby a country with a score of 1 is considered fully authoritarian, while a country with a score of 10 has achieved full democracy. The scores of countries in our sample range from 2.27 to 9.24 (please refer to The Economist Intelligence Unit, 2020, for a list of indices for individual country).

2.4 | Controls

We also added other variables as covariates in the analyses, such as participants' age, gender (1 = male, 2 = female, 3 = others), political orientation (on a scale from 1 = very conservative to 7 = very liberal),[5] objective Gini coefficient (we used the most recent economic inequality index by Solt (2020), which is sensitive for cross-cultural comparison) and wealth of the country (as indexed by gross domestic product, GDP per capita; World Bank, 2020).[6] We also included participant's subjective social status using the MacArthur's scale (Adler, 2008; 1 = worst off, 10 = best off). Furthermore, to control for the impact of COVID-19 during data collection in each country, we also included a measure of the prevalence of infections within a country over the country's data collection period (Our World in Data, 2020; the total number of COVID-19 cases reported between the data collection start and end

[5] To clarify political orientation for participants in some countries, which might not be familiar with liberal-conservative or left-right political orientation, we included the following note: "Left-wing or liberal refers to a position that generally wants an equal distribution of wealth based on government regulations regarding economic-related issues (e.g. social welfare, government spending, tax cuts, etc.), and social issues (e.g. immigration, same-sex marriage, human rights, etc.). It generally refers to a position that emphasizes reform rather than maintaining the status quo and aims to improve the status of vulnerable people. Right-wing or conservative refers to a position that generally wants free economic activity based on the principle of competition for economic-related issues (e.g., social welfare, government spending, tax cuts, etc.). Regarding social issues (e.g. immigration, same-sex marriage, human rights, etc.), it emphasises traditional values and desires stability rather than radical changes."

[6] We also ran our analyses using another measure of inequality from the World Bank (n.d.) and the results remain the same.

TABLE 1 Multilevel model of perceived inequality and social class predicting assertiveness and competence stereotype traits (without covariates)

	Assertiveness				Competence			
Predictor	B	SE	95%CI	*P*	B	SE	95%CI	*P*
Intercept	3.69	.03	3.62 to 3.75	<.001	4.23	.04	4.16 to 4.31	<.001
High social class dummy	2.03	.02	2.00 to 2.07	<.001	1.19	.02	1.15 to 1.23	<.001
Perceived inequality	0.38	.04	0.30 to 0.45	<.001	0.42	.04	.034 to 0.49	<.001
Perceived inequality x high social class dummy	−0.60	.05	−0.69 to −0.50	<.001	−0.65	.05	−0.75 to −0.55	<.001
σ^2	1.00				1.16			
$\tau_{00\ \text{country-level}}$	0.03				0.04			
$\tau_{00\ \text{participant-level}}$	0.00				0.00			
$ICC_{\text{country-level}}$	0.03				0.04			
$ICC_{\text{participant-level}}$	0.00				0.00			
N_{country}	32				32			
$N_{\text{participant}}$	5,504				5,504			
Observation	11,008				11,008			
Marginal R^2/conditional R^2	0.520/NA				0.253/NA			

Note: Perceived inequality was rescaled to z-scores. High social class was dummy coded to 0 = poor target and 1 = wealthy target.
Abbreviations: B, standardized coefficient; ICC, intraclass correlation; SE, standard error; σ^2, total variance; τ_{00}, variance.

date, divided by population size). Note that the control variables were not included in the pre-registration.

3 | RESULTS

Analysis with or without the covariates produced the same results; thus we report the results without including the covariates (see supplementary material, for full results with covariates). Prior to the analysis, we rescaled our continuous predictor variables to standardized scores for ease of interpretation (i.e., perceived inequality, objective inequality as indicated by the Gini coefficient, corruption, democracy, social mobility). We conducted multi-level analysis using the lme4 (Bates et al., 2015) and lmerTest packages in *R*. To account for the fact that participants were nested within country and that ratings of each social class target were nested within participants (i.e., each participant rated both a wealthy and a poor target), we controlled for country-level and participant-level differences (i.e., random intercepts). In all models, following theoretical predictions, the slopes between perceptions of inequality and stereotypes were fixed. For regression coefficients and intra-class correlations (ICCs) see Table 1–3 (for a full correlation table see the supplementary material, SM).

3.1 | Pre-registered analyses

3.1.1 | Perceived and objective inequality

First, we examine the relationship between perceived and objective inequality. Research shows that inequality perceptions are often based on observed economic inequality in one's environment (Schmalor & Heine, 2022). As such, we expect participants' perceptions of economic inequality to reflect actual levels of inequality in their own countries. To test this, we conducted a linear regression using the objective inequality measure (Gini coefficient) to predict perceived inequality. In line with our pre-registered expectation (H1 in the pre-registration document), our results revealed that higher objective Gini was significantly positively associated with higher perceived inequality (B = 0.29, SE = .09, *P* = .002), suggesting that living in a more economically unequal society was associated with people recognizing and reporting higher levels of inequality in their societies.

3.1.2 | Perceived inequality and social class stereotyping

The following analyses focus on perceived inequality as the predictor in line with our pre-registered plan.[7] We did, however, replicate our analysis with objective inequality (Gini coefficient) as the predictor and obtained similar results (these can be found in the supplementary material).

To examine the relationship between perceived inequality and assertiveness and competence stereotyping of the wealthy and the poor targets (H1), we regressed ratings of assertiveness and competence in turn onto perceived inequality, a dummy code for the wealthy target (coded as 0 = poor, 1 = wealthy) and the two-way interaction

[7] We ran our main analyses using both objective and perceived inequality as predictors. Although results with the objective inequality measure showed similar trends to the analyses with the perceived inequality measure, some analyses were non-significant (see the supplementary material for analyses with objective inequality).

TABLE 2 Perceived inequality, high social class dummy, each country-level indicator predicting assertiveness ratings

	Assertiveness								
	Social mobility			Corruption			Democracy		
Predictors	B	95%CI	*P*	B	95%CI	*P*	B	95%CI	*P*
(Intercept)	3.73	3.66 to 3.80	<.001	3.69	3.62 to 3.76	<.001	3.69	3.62 to 3.76	<.001
Perceived inequality	0.24	0.16 to 0.32	<.001	0.31	0.24 to 0.38	<.001	0.33	0.25 to 0.40	<.001
High social class dummy	2.00	1.96 to 2.05	<.001	2.04	2.00 to 2.08	<.001	2.05	2.01 to 2.08	<.001
Country-level indicator	−0.19	−0.27 to −0.11	<.001	−0.06	−0.13 to 0.00	.065	−0.06	−0.13 to 0.00	.061
Perceived inequality × high social class dummy	−0.36	−0.47 to −0.26	<.001	−0.48	−0.58 to −0.38	<.001	−0.51	−0.60 to −0.41	<.001
Perceived inequality × country-level Indicator	−0.02	−0.11 to 0.06	.581	−0.07	−0.14 to 0.01	.072	−0.10	−0.16 to −0.03	.005
High social class dummy × country-level indicator	0.28	0.23 to 0.33	<.001	0.15	0.11 to 0.19	<.001	0.15	0.11 to 0.18	<.001
Perceived inequality x high social class dummy × country-level indicator	0.19	0.08 to 0.31	.001	0.23	0.13 to 0.32	<.001	0.30	0.22to 0.39	<.001
σ^2	0.98			0.99			0.99		
$\tau_{00\ country}$	0.03			0.03			0.03		
ICC	0.03			0.03			0.03		
$N_{country}$	30			32			32		
Observations	10,632			11,008			11,008		
Marginal R^2/ conditional R^2	0.519/0.533			0.516/0.531			0.516/0.531		

Note: Social mobility data from Hong Kong and Nigeria were unavailable and thus, these countries were excluded from this analysis. Perceived inequality and social mobility were rescaled to z-scores. High social class was dummy coded to 0 = poor target and 1 = wealthy target.
Abbreviations: B, standardized coefficient; ICC, intraclass correlation; SE, standard error; σ^2, total variance; τ_{00}, variance.

between these variables. As Table 1 shows, there were significant main effects of social class and perceived inequality as well as significant two-way interactions for both stereotype traits. The wealthy dummy shows positive coefficients for assertiveness (B = 2.03, $P < .001$) and competence (B = 1.19, $P < .001$) which shows that, in line with previous findings, the wealthy target was stereotyped as more assertive and competent than the poor target.

The coefficient for perceived inequality represents the slope for the poor target while the coefficient for perceived inequality × high social class dummy represents the difference between the slope for the poor target and the slope for the wealthy target. Unexpectedly, simple effect analyses show that perceptions of higher inequality were associated with stereotyping of the poor target as more assertive (B = 0.38, $P < .001$) and competent (B = 0.42, $P < .001$) and of the wealthy target as less assertive (B = -0.22, $P < .001$) and competent (B = −0.23, $P < .001$). These findings are inconsistent with H1 and run counter to our expectation that higher perceptions of inequality would amplify the stereotyping that the wealthy are more assertive and competent while the poor are less assertive and competent (see Figure 1 and 2).

3.1.3 | Perceived inequality and wealth categorization

We proceeded to examine whether perceiving greater inequality would increase the tendency for participants to use wealth as a basis for categorization. To do this, we regressed measures of comparative fit and entitativity of the wealthy and the poor, in turn, onto perceived inequality. Unexpectedly, the relationship between inequality and comparative fit was not significant (B = −0.03, SE = 0.05, $P = .614$). However, in line with expectations, higher inequality was positively associated with higher entitativity of the wealthy (B = 0.21, SE = 0.03,

TABLE 3 Perceived inequality, high social class dummy, each country-level indicator predicting competence ratings

	Competence								
	Social Mobility			Corruption			Democracy		
Predictors	B	95%CI	*P*	B	95%CI	*P*	B	95%CI	*P*
(Intercept)	4.29	4.20 to 4.38	<.001	4.23	4.15 to 4.32	<.001	4.23	4.15 to 4.31	<.001
Perceived inequality	0.33	0.25 to 0.42	<.001	0.40	0.33 to 0.48	<.001	0.41	0.34 to 0.49	<.001
High social class dummy	1.15	1.10 to 1.20	<.001	1.20	1.15 to 1.24	<.001	1.21	1.17 to 1.25	<.001
Country-level indicator	−0.09	−0.19 to 0.00	.062	0.02	−0.05 to 0.10	.548	0.05	−0.02 to 0.13	.172
Perceived inequality x high social class dummy	−0.52	−0.64 to −0.41	<.001	−0.63	−0.74 to −0.53	<.001	−0.65	−0.76 to −0.55	<.001
Perceived inequality x country-level Indicator	0.12	0.02 to 0.21	.018	0.02	−0.06 to 0.10	.639	−0.01	−0.08 to 0.06	.758
High social class dummy x country-level Indicator	0.14	0.08 to 0.19	<.001	0.03	−0.01 to 0.07	.156	−0.00	−0.04 to 0.04	.983
Perceived inequality x high social class dummy x country-level Indicator	0.03	−0.10 to 0.15	.688	0.09	−0.01 to 0.20	.074	0.19	0.09 to 0.28	<.001
σ^2	1.16			1.16			1.16		
$\tau_{00\ country}$	0.05			0.05			0.04		
ICC	0.04			0.04			0.04		
$N_{country}$	30			32			32		
Observations	10,632			11,008			11,008		
Marginal R^2/ conditional R^2	0.244/0.276			0.246/0.275			0.248/0.275		

Abbreviations: B, standardized coefficient; ICC, intraclass correlation; SE, standard error; σ^2, total variance; τ_{00}, variance.

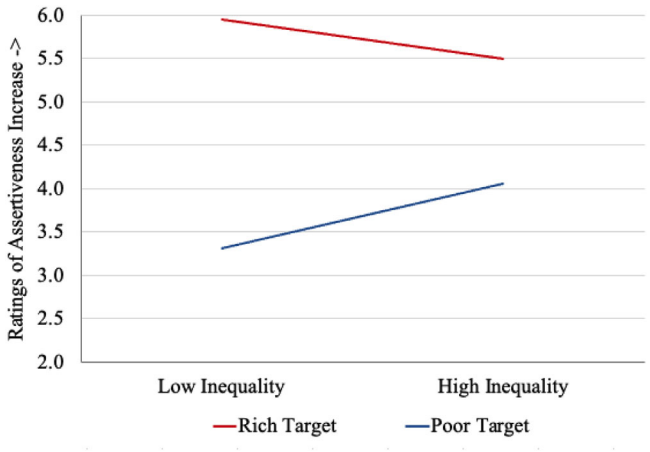

FIGURE 1 Perceived inequality and social class target dummy predicting assertiveness ratings

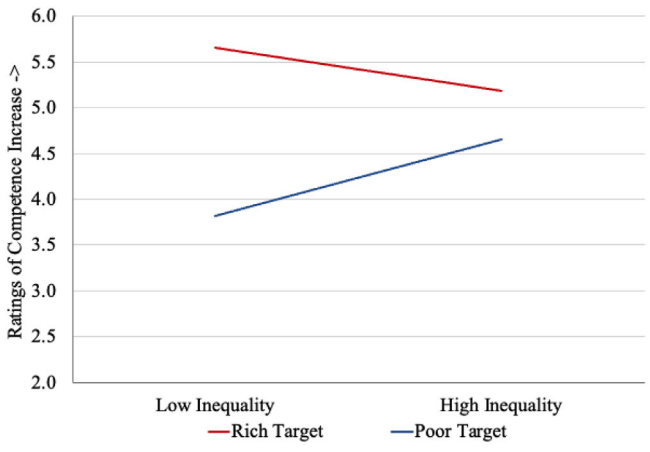

FIGURE 2 Perceived inequality and social class target dummy predicting competence ratings

P < .001) and the poor (B = 0.16, SE = 0.04, *P* < .001). In other words, we found partial support for our expectation that higher inequality increases the extent to which wealth is a fitting basis for categorization. Specifically, it may create perceptions of greater intra-class similarity—that is, seeing all wealthy people as similar to one another and all poor people as similar to each other.

We also regressed stereotype ratings of the wealthy and poor onto the entitativity of each social class and also found that higher entitativity was associated with stronger social class stereotyping in the expected direction. Perceiving the wealthy as more entitative was associated with perceptions of them as more assertive and competent (assertiveness: B = 0.13, SE = .01, *P* < .001; competence: B = 0.04, SE = 0.01, *P* < .001). Similarly, perceiving the poor as more entitative

was associated with perceptions of them as less competent but not less assertive (assertiveness: B = −0.01, SE = 0.01, P = .400; competence: B = −0.05, SE = 0.01, P < .001). This pattern of results lends partial support to our prediction that greater class-based categorization should contribute to stronger stereotyping of members of each of these groups.

Next, to test our second hypothesis (H2), we examined whether higher entitativity may underlie the relationship between perceptions of inequality and social class stereotyping (we did not conduct this analysis for comparative fit as we did not find a significant association with perceived inequality). To do this, we tested the mediating role of perceptions of the entitativity of the wealthy and the poor on the relationship between perceived inequality and stereotype ratings using the "lavaan" package on *R* (95% bias corrected confidence interval based on 5,000 bootstrap samples). We did not find any evidence of a significant indirect effect—a finding that was inconsistent with the possibility that the entitativity of each social class could explain the relationship between perceptions of inequality and stereotyping. We report the full results in the supplementary material.

3.2 | Exploratory analyses: Permeability and legitimacy of status relations

We initially expected perceptions of higher inequality to boost perceptions of assertiveness and competence for the wealthy but reduce them for the poor. However, we found a different pattern whereby inequality perceptions increased the alignment between the stereotypes (in particular for competence) such that the poor were stereotyped as more assertive and competent, and the wealthy were stereotyped as less assertive and competent. In an effort to understand our unexpected findings, we examined whether societal-level permeability (i.e., social mobility) and legitimacy (i.e., corruption and democracy) may moderate the relationship between perceptions of inequality and stereotyping of the wealthy and the poor. To examine this, we regressed ratings of competence and assertiveness, in turn, onto perceived inequality, a high social class dummy, and each of the country-level indicators (social mobility, corruption and democracy) as well as their three-way interactions. In the exploratory models, we also allowed for the slopes between perceptions of inequality and stereotypes to vary depending on country-level moderators (these analyses were exploratory and thus not included in the pre-registration).

3.2.1 | Assertiveness

See Table 2 for unstandardized coefficients, standard errors and confidence intervals.

Social mobility

There were significant main effects of inequality, high social class dummy, social mobility, as well as two-way and three-way interactions. Simple slope analysis showed that the tendency to stereotype the wealthy as less assertive with higher levels of inequality only emerged in countries with lower levels of social mobility (i.e., −1 SD; B = −0.22, SE = 0.05, P < .001); there was no association in countries with higher levels of social mobility (i.e., +1 SD; B = 0.05, SE = 0.05, P = .350; see Figure 3a). For the poor target, social mobility did not change the tendency to stereotype the poor as more assertive when inequality perceptions were higher: lower social mobility (−1 SD) B = 0.25, SE = 0.05, P < .001; higher social mobility (+1 SD) B = 0.21, SE = 0.05, P < .001.

Corruption

There were significant main effects of inequality, high social class dummy, corruption (marginal), as well as their two-way and three-way interactions. Simple slope analysis again showed that perceiving higher inequality was only associated with perceptions of the wealthy target as less assertive in countries with higher levels of corruption (i.e., +1 SD, B = −0.30, SE = 0.05, P < .001; see Figure 3b). This relationship was non-significant in countries with lower levels of corruption (−1 SD, B = 0.03, SE = 0.06, P = 0.58). For the poor target, we found that perceptions of higher inequality were associated with a tendency to stereotype the poor as more assertive in societies that were more corrupt (B = 0.36, SE = 0.05, P < .001) as well as less corrupt (B = 0.23, SE = 0.06, P < .001).

Democracy

There were significant main effects of inequality, high social class dummy, democracy (marginal), and their two-way and three-way interactions. Again, simple slope analysis showed that higher perceived inequality was only associated with lower assertiveness ratings of the wealthy target in countries with lower levels of democracy (B = −0.36, SE = 0.05, P < .001; see Figure 3c); the association was not significant in countries with higher levels of democracy (B = 0.06, SE = 0.05, P = 0.26). For the poor target, we found that perceptions of higher inequality were associated with a tendency to stereotype the poor as more assertive in societies that were less democratic (B = 0.41, SE = 0.05, P < .001) as well as more democratic (B = 0.21, SE = 0.05, P < .001).

So far, our results show that social class stereotypes of the poor and wealthy targets aligned and became more similar in societies with lower levels of permeability (i.e., lower social mobility) and legitimacy (i.e., higher corruption, lower democracy). In these societies, people perceive the wealthy and poor to have similar levels of assertiveness, although this effect was mostly driven by the tendency to perceive the wealthy as less assertive. For the poor, higher perceived inequality was related to positive stereotyping regardless of societal level permeability and legitimacy.

3.2.2 | Competence

See Table 3 for unstandardized coefficients, standard errors, and confidence intervals.

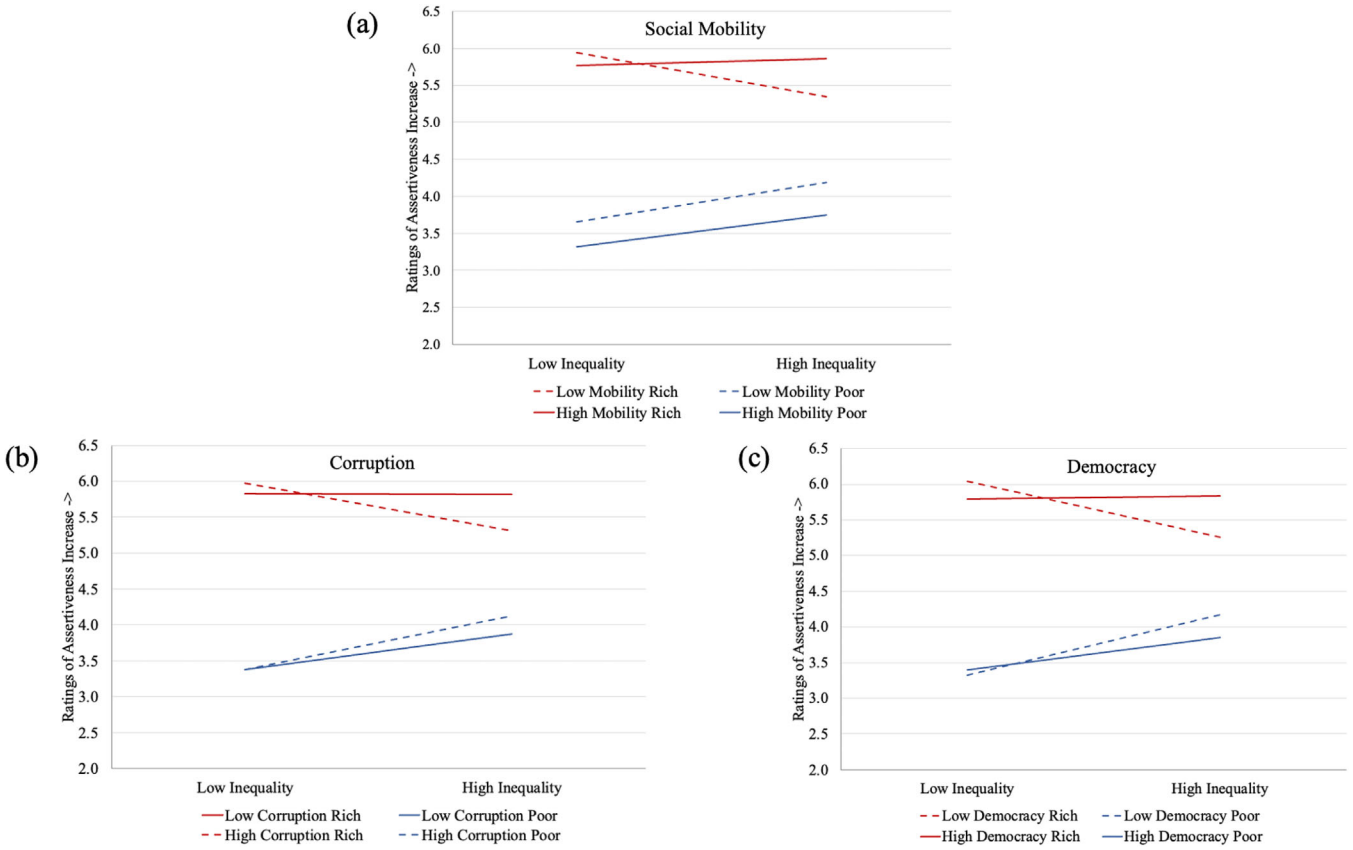

FIGURE 3 Perceived inequality and assertiveness ratings of the wealthy and poor moderated by country-level indicators

Social mobility

There were significant main effects of perceived inequality, high social class dummy, social mobility, and two-way interactions. However, the three-way interaction was non-significant. Unpacking this further, simple analyses showed, again, that perceiving higher inequality was associated with perceptions of the wealthy target as less competent only in countries with lower levels (B = −0.27, SE = 0.06, $P < .001$; see Figure 4a) but not higher levels of social mobility (B = −0.04, SE = 0.06, $P = .460$). For the poor target, social mobility did not change the tendency to stereotype the poor as more competent with higher perceived inequality: lower social mobility, B = 0.27, SE = 0.06, $P < .001$; higher social mobility, B = 0.45, SE = 0.06, $P < .001$.

Corruption

There were significant main effects of inequality, high social class dummy, social mobility, as well as two-way and (marginally) three-way interactions. Similar to our earlier findings, simple slope analysis showed that perceiving higher inequality was associated with perceptions of the wealthy target as less competent only in countries with higher levels (B = −0.32, SE = 0.05, $P < .001$; see Figure 4b) but not lower levels of corruption (B = −0.09, SE = 0.06, $P = .120$). For the poor target, again, corruption did not change the tendency to stereotype the poor as more competent with higher perceived inequality: higher corruption, B = 0.39, SE = 0.05, $P < .001$; lower corruption, B = 0.43, SE = 0.06, $P < .001$.

Democracy

There were significant main effects of inequality and high social class dummy but not democracy. There were also significant two-way and three-way interactions. Similar to our previous analyses, simple analyses revealed that perceiving higher inequality was associated with perceptions of the wealthy target as less competent in countries with lower levels of democracy (B = −0.39, SE = 0.05, $P < .001$; see Figure 4c) but not higher levels of democracy (B = −0.03, SE = 0.06, $P = .560$). For the poor target, perceiving higher inequality was associated with higher ratings of competence both in countries with higher (B = 0.40, SE = 0.06, $P < .001$) and lower levels of democracy (B = 0.42, SE = 0.05, $P < .001$).

Taken together, our exploratory results are in line with the social identity perspective (Tajfel & Turner, 1979), which posits that the permeability and legitimacy of status relations may matter in how people construe existing inequality. Here, we identified permeability and legitimacy as socio-structural features that could explain why perceptions of higher inequality increased the alignment of social class stereotypes (in particular for the assertiveness stereotype) whereby the wealthy target was perceived as less assertive and competent and the poor target as more assertive and competent. Specifically, the wealthy target was perceived negatively with higher inequality (less assertive and competent) only in societies with lower permeability (i.e., social mobility) and legitimacy (i.e., corruption and democracy). For the poor, higher perceived inequality was generally associated with positive

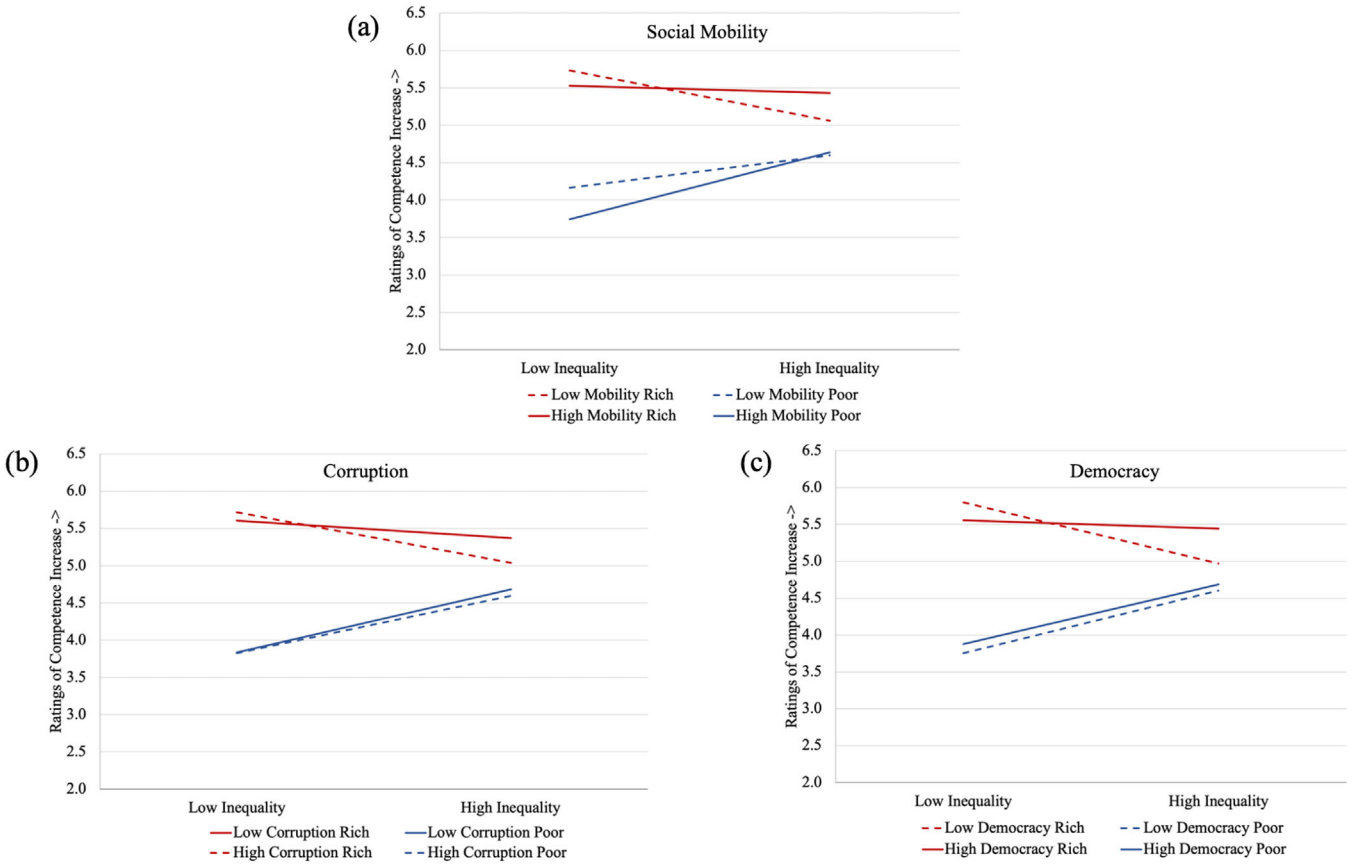

FIGURE 4 Perceived inequality and competences ratings of the wealthy and poor moderated by country-level indicators

stereotyping, and this effect was stronger in less permeable and legitimate social systems for assertiveness. Thus, the alignment of social class stereotypes occurred most strongly in societies with low social mobility, democracy, and high corruption. This suggests that socio-structural barriers to economic progression may make it less likely for people to use meritocratic traits (e.g., assertiveness and competence) to justify the economic gap between the wealthy and the poor.

4 | DISCUSSION

The current study set out to examine whether perceptions of higher economic inequality, across 32 diverse societies, are associated with wealth-based categorization and thus social-class stereotyping. In line with Jetten et al.'s (2017) theorizing, we found partial evidence that perceiving higher economic inequality positively correlates with wealth-based categorization—that is, perceived inequality was associated with higher perceived entitativity or intra-class similarity of the wealthy and the poor. However, surprisingly, we did not find that perceiving higher inequality was associated with amplified social-class stereotyping in the expected direction (Tanjitpiyanond et al., 2022). Specifically, social class stereotypes were more aligned with higher perceptions of inequality—that is, the wealthy were perceived as *less* assertive and competent and the poor were perceived as *more* assertive and competent the more unequal society was perceived to be. These results contradict previous findings, which found that perceiving higher inequality amplifies existing stereotypes that the wealthy are more competent and assertive in comparison to the poor—a pattern of stereotyping often used to explain the former's ability and ambition in securing a higher socio-economic position in society (e.g., Heiserman & Simpson, 2017).

Unpacking these results further, we found that socio-structural features, such as country-level permeability and legitimacy, mattered in how perceived inequality influenced stereotypes. Specifically, we found that perceiving higher inequality was only associated with more negative stereotypes of the wealthy as less assertive and competent in countries with lower levels of permeability (i.e., lower levels of social mobility) and legitimacy (i.e., lower levels of democracy and higher levels of corruption). In these societies, it is plausible that the public does not perceive that the wealth of the target was due to meritocracy. Rather, existing socio-structural barriers may create perceptions that the social system is "rigged favouring the wealthy" (McCall et al., 2017). For the poor, regardless of levels of permeability and legitimacy, perceiving higher inequality had an overall positive relationship with stereotyping (i.e., the poor target was perceived as more competent and assertive).

Overall, our findings differ from previous research, which found that perceptions of higher inequality enhance social class stereotyping—that is, the wealthy are perceived more positively as more capable and ambitious whilst the poor are perceived as less so (Heiserman & Simpson, 2017). On the contrary, we found that perceptions of higher inequality were positively associated with perceptions of the poor as more ambitious. Although an ad hoc explanation, it is plausible that such positive perceptions may be due to processes whereby rising economic inequality increases public sympathy towards people in poorer groups. This reasoning is supported by Sánchez-Rodríguez et al.'s (2019) research which found that participants who were assigned to imagine living in a more economically unequal society reported feeling less well off than those who were assigned to live in a more equal society. Thus, it is possible that perceiving higher inequality makes people feel less wealthy, which, in turn, drives them to sympathize with others in lower economic strata (in our study we also found that this positive stereotyping of the poor was stronger in wealthier countries—see the supplementary material). Future research should further explore this prediction by measuring participants' identification with social class groups. It is also plausible that differences are due to the fact that, unlike in the present study, past studies were mostly conducted in WEIRD countries or examined perceptions of inequality in a laboratory or fictitious society. As a result, the complex web of factors (e.g., social status, country wealth) that we were able to study here was not captured in previous research, which may have affected past results regarding the ways in which inequality affects stereotyping (see Peters et al., 2021 for differences between laboratory-based and field studies). Although we tried to control for these factors, it is plausible that our control measures may not capture the nuances, which vary across countries (e.g., political orientation may not be a suitable measure for non-WEIRD societies with different political structures). Future studies should keep this in mind and include control measures that are more sensitive for cross-cultural comparison.

4.1 | Implications and future directions

The current research lends partial support for the relevance of self-categorization theory (Jetten et al., 2017; Peters et al., 2021; Tanjitpiyanond et al., 2022; Turner et al., 1987) in explaining how perceptions of higher economic inequality may contribute psychologically to the perceived social class divide in society. Here, we found that it may do this by enhancing the perceived entitativity, "groupiness" or intra-class similarity within each social class category, creating perceptions that all wealthy people as well as all poor people are similar (Newheiser et al., 2012). Although such enhanced intra-class similarity did not underlie the relationship between inequality and social class stereotyping as expected, we found that it was still linked to stronger stereotyping. That is, seeing wealthier (or poorer) people as more similar to one another was linked to greater essentializing of them as more (or less) assertive and competent. Given the link between social class stereotypes and people's wealth policy endorsements, such findings may have implications in efforts to reduce growing economic inequality (McCall et al., 2017). For instance, it emphasizes the need for leaders and policymakers to be mindful of not further reinforcing category distinction and certain stereotypes of the wealthy and poor. This is because, as past research suggests, doing so may impact whether people are willing to support wealth redistributive policies, which can help reduce societal-level inequality (e.g., providing social welfare support to the poor—Piff et al., 2020; Tanjitpiyanond et al., 2022).

Our findings also raise some important questions in regard to previous research, which found that perceptions of higher inequality led people to stereotype the wealthy as more ambitious and capable than the poor (research mostly conducted in WEIRD societies, e.g., Connor et al., 2021; Tanjiypiyanond et al., 2022). In particular, our cross-national sample suggests that such a pattern of stereotypes may not emerge in every society (e.g., wealthy people may be stereotyped as less assertive only in more impermeable and illegitimate societal systems). Although exploratory, our findings support social identity theorizing (Tajfel & Turner, 1979) and highlight how other socio-structural features (i.e., status permeability and legitimacy), which may give meaning to unequal status relations between the wealthy and poor, may also contribute to shaping perceptions of the social classes (Grigoryan et al., 2020). Indeed, our study highlights the need for future research, to not only collect data from diverse samples beyond WEIRD societies but also to be mindful of how a complex web of factors, such as pre-existing socio-structural features, individual beliefs (e.g., social mobility beliefs) and attitudes, which vary across cultures, can contribute to the development of stereotyping of the wealthy and poor. Although we have unpacked part of this complexity by identifying the role of system permeability and legitimacy in interacting with perceived inequality to produce stereotypes, future studies might benefit by further examining how these factors are reflected in people's psychological experiences. For instance, how does country-level social mobility (i.e., a social mobility index) actually translate to people's social mobility beliefs and do these beliefs influence their stereotypes of the wealthy and poor?

4.2 | Limitations

The main strength of the current study is our wide range of cross-national samples, which allow us to examine the relationship between inequality perceptions and social-class stereotyping. Nevertheless, our study is not without limitations. Due to funding constraints, the majority of our samples consisted of undergraduate students. It is plausible that perceptions of mobility (which we argued earlier would matter for how inequality influences stereotyping) may be overestimated in this younger population due to limited experiences (e.g., mobility attempts for financial or career progression). To ensure the generalizability of our findings, future research should test our research questions in older adult samples who are more likely to be exposed to social mobility barriers as well as opportunities. To simplify our study design, we only tested stereotypes based on male targets. However, doing so

may limit the generalizability of our findings to wealthy or poor male targets. Future research should manipulate the target gender as it would be interesting to know whether wealthy (or poor) male and female targets would elicit a similar pattern of stereotyping. Knowing this is particularly important given that inequality tends to encompass the intersectionality of gender and social class (i.e., women are more likely to be in lower social class positions than men). Along similar lines, we chose to represent the wealthiest and poorest individuals (i.e., targets) from participants' countries using the label "the top 5%" and "the bottom 5%" to avoid evoking existing stereotypes of wealth groups. However, it is plausible that wealth perceptions of the top and bottom 5% change depending on the wealth distribution of participants' own countries. For instance, in some countries where wealth is positively skewed (most of the population have low income), the bottom 5% may have similar wealth to those who may be in the middle-income bracket of the country. Although research (Evans & Kelly, 2004) suggests that people usually perceive themselves as being in the middle-class category (middle-class anchor may allow participants to perceive the top and bottom 5% as reflecting the wealthiest and poorest in society), our findings need to be interpreted with caution: wealth distribution within a given context may still impact participants' perceptions of where they are in the social class hierarchy and thus their perceptions of who is the top and bottom 5%.

The correlational design of the study means that alternative explanations to those hypothesized here are possible. For instance, it could be that stronger class-based stereotyping decreases perceptions of inequality. Indeed, perceiving the wealthy as more assertive may attenuate inequality perceptions and enhance the belief that the wealthy are deserving of their wealth, dampening perceptions that society is unequal. To rule out this possibility, future experiments should manipulate assertiveness stereotypes of the social classes and examine their impacts on inequality perceptions.

Due to the correlational nature of the study, we cannot rule out the possibility that another third variable is affecting the observed relationships. Other factors, such as political orientation or ideologies (e.g., belief in meritocracy, Protestant work ethic), may determine how people perceive inequality and/or stereotype the wealthy and poor. For instance, it is plausible that a higher belief in meritocracy (i.e., the belief that more ambitious people are more likely to become wealthy, McCoy & Major, 2007) affects stereotypes directly, or moderates the relationship between inequality and stereotypes. Although we controlled for some of these factors in the current study (e.g., political orientation), as mentioned earlier, given the wide range of factors that may play a unique role in the many countries that we examined, future research should focus more specifically on the role of some of these ideologies in the relationship between perceived inequality and social-class stereotypes.

In sum, the current research extends the literature on how perceptions of higher economic inequality influence wealth-based categorization and stereotyping of the wealthy and poor. By demonstrating the importance of socio-structural features in the endorsement of these stereotypes, the present work calls for, and opens the door to, new research questions, which may lead to an understanding of different societal conditions under which perceiving higher economic inequality may affect social class stereotypes.

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CONFLICT OF INTEREST

The authors declare no conflict of interest.

DATA AVAILABILITY STATEMENT

Data are available on the Open Science Framework (https://osf.io/jqhsy/?view_only=ddea34ecf95a49e48c89de94b3b0a58e).

ETHICS STATEMENT

This study has been approved by the first author's human research ethics committee, protocol number #2017000288. Informed consent was acquired from participants prior to the study.

TRANSPARENCY STATEMENT

The data that support the findings of this study are openly available on Open Science Framework. Link is provided in the Method section.

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REFERENCES

Abele, S., Ellemers, N., Fiske, S., Koch, A., & Yzerbyt, V. (2020). Navigating the social world: Shared horizontal and vertical evaluative dimensions. *Psychological Review*.

Abele, A. E., Ellemers, N., Fiske, S. T., Koch, A., & Yzerbyt, V. (2021). Navigating the social world: Toward an integrated framework for evaluating self, individuals, and groups. *Psychological Review*, *128*(2), 290. https://doi.org/10.1037/rev0000262

Abele, A. E., Hauke, N., Peters, K., Louvet, E., Szymkow, A., & Duan, Y. (2016). Facets of the fundamental content dimensions: Agency with competence and assertiveness—Communion with warmth and morality. *Frontiers in Psychology*, *7*, 1810. https://doi.org/10.3389/fpsyg.2016.01810

Adler, N., & Stewart, J. (2007). The MacArthur scale of subjective social status. *MacArthur Research Network on SES & Health*.

Bates, D., Kliegl, R., Vasishth, S., & Baayen, H. (2015). *Parsimonious mixed models*. arXiv preprint arXiv:1506.04967.

Blanchard, A. L., Caudill, L. E., & Walker, L. S. (2020). Developing an entitativity measure and distinguishing it from antecedents and outcomes within online and face-to-face groups. *Group Processes & Intergroup Relations*, *23*(1), 91–108. https://doi.org/10.1177/1368430217743577

Blanchard, A. L., Caudill, L. E., & Walker, L. S. (2018). Developing an entitativity measure and distinguishing it from antecedents and outcomes within online and face-to-face groups. *Group Processes & Intergroup Relations*, *23*(1), 91–108. https://doi.org/10.1177/1368430217743577

Brown, P. M., & Turner, J. C. (2002). The role of theories in the formation of stereotype content. In C. McGarty, V. Y. Yzerbyt, & R. Spears (Eds.), *Stereotypes as explanations: The formation of meaningful beliefs about social groups* (pp. 67–89). Cambridge University Press.

Connor, P., Varney, J., Keltner, D., & Chen, S. (2021). Social class competence stereotypes are amplified by socially signaled economic inequality. *Personality and Social Psychology Bulletin*, *47*(1), 89–105. https://doi.org/10.1177/0146167220916640

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

Durante, F., Fiske, S. T., Kervyn, N., Cuddy, A. J., Akande, A., Adetoun, B. E., Adewuyi, M. F., Tserere, M. M., Al Ramiah, A., Mastor, K. A., Barlow, F. K., Bonn, G., Tafarodi, R. W., Bosak, J., Cairns, E., Doherty, C., Capozza, D., Chandran, A., Chryssochoou, X., & Storari, C. C. (2013). Nations' income inequality predicts ambivalence in stereotype content: How societies mind the gap. *British Journal of Social Psychology*, *52*(4), 726–746. https://doi.org/10.1111/bjso.12005

Evans, M. D., & Kelley, J. (2004). Subjective social location: Data from 21 nations. *International Journal of Public Opinion Research*, *16*(1), 3–38.

Grigoryan, L., Bai, X., Durante, F., Fiske, S. T., Fabrykant, M., Hakobjanyan, A., Javakhisvili, N., Kadirov, K., Kotova, M., Makashvili, A., Maloku, E., Morozova-Larina, O., Mullabaeva, N., Samekin, A., Verbilovich, V., & Yahiiaiev, I. (2020). Stereotypes as historical accidents: Images of social class in postcommunist versus capitalist societies. *Personality and Social Psychology Bulletin*, *46*(6), 927–943. https://doi.org/10.1177/0146167219881434

Haslam, S. A., Turner, J. C., Oakes, P. J., McGarty, C., & Hayes, B. K. (1992). Context-dependent variation in social stereotyping 1: The effects of intergroup relations as mediated by social change and frame of reference. *European Journal of Social Psychology*, *22*(1), 3–20. https://doi.org/10.1002/ejsp.2420220104

Henrich, J., Heine, S. J., & Norenzayan, A. (2010). Beyond WEIRD: Towards a broad-based behavioral science. *Behavioral and Brain Sciences*, *33*(2-3), 111. https://doi.org/10.1017/S0140525X10000725

Heiserman, N., & Simpson, B. (2017). Higher inequality increases the gap in the perceived merit of the rich and poor. *Social Psychology Quarterly*, *80*(3), 243–253. https://doi.org/10.1177/0190272517711919

Jetten, J., & Peters, K. (2019). *The social psychology of inequality*. Springer.

Jetten, J., Peters, K., Álvarez, B., Casara, B. G. S., Dare, M., Kirkland, K., Sánchez-Rodríguez, Á., Selvanathan, H. P., Sprong, S., Tanjitpiyanond, P., Wang, Z., & Mols, F. (2021). *Consequences of economic inequality for societies' social and political vitality: A social identity analysis [Manuscript submitted for publication]*. School of Psychology, The University of Queensland.

Jetten, J., Wang, Z., Steffens, N. K., Mols, F., Peters, K., & Verkuyten, M. (2017). A social identity analysis of responses to economic inequality. *Current Opinion in Psychology*, *18*, 1–5. https://doi.org/10.1016/j.copsyc.2017.05.011

Kraus, M. W., Park, J. W., & Tan, J. J. (2017). Signs of social class: The experience of economic inequality in everyday life. *Perspectives on Psychological Science*, *12*(3), 422–435. https://doi.org/10.1177/1745691616673192

Kunovich, S., & Slomczynski, K. M. (2007). Systems of distribution and a sense of equity: A multilevel analysis of meritocratic attitudes in post-industrial societies. *European Sociological Review*, *23*(5), 649–663. https://doi.org/10.1093/esr/jcm026

Laurin, K., Gaucher, D., & Kay, A. (2013). Stability and the justification of social inequality. *European Journal of Social Psychology*, *43*(4), 246–254. https://doi.org/10.1002/ejsp.1949

Markovits, D. (2019). *The meritocracy trap*. Penguin.

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

McCoy, S. K., & Major, B. (2007). Priming meritocracy and the psychological justification of inequality. *Journal of Experimental Social Psychology*, *43*(3), 341–351. https://doi.org/10.1016/j.jesp.2006.04.009

Moreno-Bella, E., Willis, G. B., & Moya, M. (2019). Economic inequality and masculinity–femininity: The prevailing perceived traits in higher unequal contexts are masculine. *Frontiers in Psychology*, *10*, 1590. https://doi.org/10.3389/fpsyg.2019.01590

Newheiser, A. K., Sawaoka, T., & Dovidio, J. F. (2012). Why do we punish groups? High entitativity promotes moral suspicion. *Journal of Experimental Social Psychology*, *48*(4), 931–936. https://doi.org/10.1016/j.jesp.2012.02.013

Oldmeadow, J. A., & Fiske, S. T. (2012). Contentment to resentment: Variation in stereotype content across status systems. *Analyses of Social Issues and Public Policy*, *12*(1), 324. https://doi.org/10.1111/j.1530-2415.2011.01277.x

Our World in Data. (2020). Corona virus pandemic (COVID-19). Retrieved from https://ourworldindata.org/coronavirus

Peters, K., Jetten, J., Tanjitpiyanond, P., Wang, Z., Mols, F., & Verkuyten, M. (2021). The language of inequality: evidence economic inequality increases wealth category salience. *Personality and Social Psychology Bulletin*, *48*(8), 1204–1219. https://doi.org/10.1177/01461672211036627

Piff, P. K., Wiwad, D., Robinson, A. R., Aknin, L. B., Mercier, B., & Shariff, A. (2020). Shifting attributions for poverty motivates opposition to inequality and enhances egalitarianism. *Nature Human Behaviour*, *4*(5), 496–505. https://doi.org/10.1038/s41562-020-0835-8

Plato. (1943). *Plato's The Republic*. Books, Inc.

Sánchez Rodríguez, Á., Jetten, J., Willis Sánchez, G. B., & Rodríguez Bailón, R. M. (2019). High economic inequality makes us feel less wealthy. *International Review of Social Psychology*, *32*(1), 1–11. https://doi.org/10.5334/irsp.333

Sánchez-Rodríguez, Á., & Moreno-Bella, E. (2021). Are you interested in economic inequality? Depends on where you live. *Asian Journal of Social Psychology*, *25*(1), 7–19. https://doi.org/10.1111/ajsp.12458

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

Shariff, A. F., Wiwad, D., & Aknin, L. B. (2016). Income mobility breeds tolerance for income inequality: Cross-national and experimental evidence. *Perspectives on Psychological Science*, *11*(3), 373–380. https://doi.org/10.1177/1745691616635596

Solt, F. (2020). Measuring income inequality across countries and over time: The standardized world income inequality database. *Social Science Quarterly*, *101*(3), 1183–1199. https://doi.org/10.1111/ssqu.12795

Spears, R., Greenwood, R., de Lemus, S., & Sweetman, J. (2010). Legitimacy, social identity and power. In A. Guinote, & T. K. Vescio (Eds.), *The social psychology of power* (pp.251–283). The Guildford Press.

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

Tanjitpiyanond, P., Jetten, J., & Peters, K. (2022). How economic inequality shapes social class stereotyping. *Journal of Experimental Social Psychology*, *98*, 104248. https://doi.org/10.1016/j.jesp.2021.104248

Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin, & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–37). Brooks/Cole.

The Economist Intelligence Unit. (2020). *Democracy index 2020: In sickness and in health?*.

Transparency International. (2020). *Corruption perception index 2020*.
Turner, J. C., Hogg, M. A., Oakes, P. J., Reicher, S. D., & Wetherell, M. S. (1987). *Rediscovering the social group: A self-categorization theory*. Basil Blackwell.
World Economic Forum. (2020). *The global social mobility report 2020: Equality, opportunity and a new economic imperative*.
World Bank, World Development Indicators. (n.d.). *Gini coefficient* [Data File]. Retrieved from https://data.worldbank.org/indicator/SI.POV.GINI

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