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Household wealth is associated with perceived trustworthiness in a diverse set of countries

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Abstract

Interpersonal trust impacts societal and individual outcomes, affecting economic growth, democracy, and well-being. Trust levels vary both within and across countries, raising the question of what factors influence interpersonal trust. Existing research indicates that an individual's socioeconomic status influences their level of trust, with wealthier individuals tending to be more trusting. This paper examines a further effect of wealth on interpersonal trust, namely whether people perceive wealthier individuals as more trustworthy. Using a novel method for uncovering stereotypes while avoiding social desirability bias, we investigate whether wealth cues are associated with the perceived trustworthiness of targets. Our study, conducted with diverse participants across different cultures (Brazil, Colombia, Democratic Republic of Congo, India, France, Nigeria, Philippines, and the United Kingdom), consistently demonstrates that wealthier targets are seen as more trustworthy. This culturally widespread negative stereotyping of poorer individuals may contribute to observed patterns of interpersonal trust.

Keywords: Stereotypes, wealth, social status, interpersonal trust, trustworthiness, open data, open materials, preregistered

Household wealth is associated with perceived trustworthiness in a set of diverse countries

Interpersonal trust, which can be defined as “a person’s belief that another person will act consistently with their expectations of positive behavior” (Organisation for Economic Co-operation and Development [OECD], 2017), shapes almost all human relationships. It affects family relations, friendships, interactions between strangers, and economic and political life. In modern societies, people often trust strangers with many responsibilities, such as sellers trusting buyers with the payment of bills, parents trusting caretakers with their children, and taxpayers trusting the honesty of welfare recipients. Trust has attracted significant scholarly attention probably for the reason stated by Fukuyama (1995): “Widespread distrust in a society, in other words, imposes a kind of tax on all forms of economic activity, a tax that high-trust societies do not have to pay.”

Recent decades of research have repeatedly emphasized the importance of trust for numerous societal and individual outcomes, such as democratic institutions (Uslaner, 2004). Empirical research has confirmed what Fukuyama posited: higher interpersonal trust leads to higher economic growth rates (Algan & Cahuc, 2010) and is associated with a higher probability of becoming an entrepreneur, even after controlling for education, age, and individual income (Guiso et al., 2006). Countries that enjoy high levels of interpersonal trust are also more peaceful, stable, transparent, and democratic (Almond & Verba, 1963; Fukuyama, 1995; Putnam et al., 1994; Uslaner, 2004; World Bank, 2012). At the individual level, higher interpersonal trust is associated with higher levels of well-being (Helliwell & Wang, 2010; Poulin & Haase, 2015) and improved health status and health-related behaviors (Lindström, 2005; Lochner et al., 2003).

Global assessments of interpersonal trust attitudes reveal significant and enduring differences across countries. On one end of the spectrum, nations like Norway and Sweden have over 60% of respondents in the World Value Survey agreeing with the statement "most people can be trusted." On the opposite end, countries such as Colombia, Brazil, Ecuador, and Peru have fewer than 10% of respondents

holding this belief (Haerpfer et al., 2020). Similar patterns can also be observed within countries with wealthier individuals reporting higher trust (Helliwell & Wang, 2010). Which factors can explain disparities in interpersonal trust across and within nations? Studies have investigated the determinants of trust, from personal characteristics to an individual's institutional and societal context. Individuals with higher income or access to more resources, higher educational attainment, and stronger religious beliefs and practice also report higher levels of interpersonal trust (Carl & Billari, 2014; Guiso et al., 2006; Helliwell & Wang, 2010; OECD, 2015; Petersen & Aarøe, 2015; Stolle et al., 2008; although see Alesina & La Ferrara, 2000 on religion). Social interactions and contextual factors also shape interpersonal trust. Informal ties and positive past interactions increase trust, while strong family ties decrease interpersonal trust (Ermisch & Gambetta, 2010; Glanville et al., 2013; Glanville & Paxton, 2007). A causal study combining historical data and contemporary individual-level surveys shows that individuals whose ancestors experienced raids during the slave trade are less trusting today (Nunn & Wantchekon, 2011). A considerable amount of research on interpersonal trust has emphasized the role of community diversity, encompassing factors like inequality and ethnic fractionalization, in the establishment of trust (Alesina & La Ferrara, 2000; Algan & Cahuc, 2013; Bjørnskov, 2007; Helliwell & Wang, 2010; Putnam, 2000; Rothstein & Uslaner, 2005).

Interpersonal trust depends not only on the characteristics of the focal individual but also on the characteristics of the target individual. The latter has been comparatively less studied in the literature even though we intuitively know that personal characteristics, such as personality traits or behavioral history, matter for trusting others. In the absence of specific information about an individual, people may rely on stereotypes to assess the trustworthiness of others. For example, people's trustworthiness appraisals are influenced by ethnicity (Birkás et al., 2014) and the age of the target (Pehlivanoglu et al., 2023). In this study, we are interested in investigating the role of the target's material wealth on trustworthiness appraisals.

For such stereotypes to emerge, people must assess the material wealth of others based on limited information. Evidence shows that this is indeed the case, with people being good at evaluating material wealth based on pictures or short videos of targets interacting with others (Kraus & Keltner, 2009; Mast & Hall, 2004), the acoustic properties of the voice of targets (Ko et al., 2015), subtle facial cues linked to emotions and health (Bjornsdottir & Rule, 2017, 2020), online behaviors such as Facebook pictures (Becker et al., 2017) and material possessions such as shoes (Gillath et al., 2012), clothing (Kraus & Mendes, 2014), and room decor (Davis, 1956). Material wealth and more broadly socio-economic status are in turn associated with several stereotypes. Fiske and colleagues have extensively shown that people perceive the rich as competent and tend to admire them while they perceive the poor as incompetent but warm and feel pity for them (Durante et al., 2017; Xu, 2018). Although richer individuals can sometimes be perceived as having “bad morality” (Tao et al., 2016), some studies have found that implicit attitudes about the rich tend to be positive (Horwitz & Dovidio, 2017), even in cultural contexts as different as the United States and China (Wu et al., 2018). In this study, we add to this literature by assessing stereotypes about trustworthiness. Based on previous research showing that individuals living in more adverse conditions tend to be perceived to have less self-control and act in a more socially opportunistic way (Neuberg & Sng, 2013; Sng et al., 2017; Williams et al., 2016), we hypothesized that people tend to deem wealthier individuals as more trustworthy.

When measuring stereotypes, an important limitation is self-reporting or social desirability bias. Especially in matters of discrimination, participants are likely to consciously or unconsciously modify their answers to avoid appearing biased against certain groups. For example, evidence shows that people implicitly, but not explicitly, favored the rich over the middle class in an experiment (Horwitz & Dovidio, 2017). To address such concerns, we developed a novel task to measure wealth-based stereotypes about trustworthiness without explicitly asking about the effect of wealth. In our study, each participant was shown a single image of a target individual’s material possessions. They were then asked to answer several questions about the target’s trustworthiness. We varied the objective material wealth of the target

across participants and measured the correlation between the objective wealth of the target and the participant's appraisal of trustworthiness. By using a between-participant method and pictures rather than a description, we ensured that participants were unaware of our variable of interest (wealth); indeed, participants were unlikely to know they were being asked to make a judgment about someone based on their wealth, as they were presented a single image with no context. We measured self-reported trust rather than behavioral outcomes such as a trust game because evidence shows that self-reported measures capture an inherent belief about others' trustworthiness rather than the participant's predisposition to cooperate (Murtin et al., 2018).

Methods Validation

Overview

We validated our study protocol by testing whether pictures of material possessions would convey accurate information about a target's wealth. Based on previous research, we predicted that participants are good at inferring wealth based on images of material possessions. We collected pictures of households (specifically, pictures of living rooms) across the world from the Dollar Street Database, created by Anna Rosling Rönnlund at Gapminder (<https://www.gapminder.org/dollar-street>). The advantage of the Dollar Street Database is that it contains high-quality pictures of households across the world with different (known) wealth levels. For each household in the database, we have information about the total monthly consumption of the household in dollars, adjusted for purchasing power parity (\$PPP). For simplicity, we will refer to the household's monthly consumption in \$PPP as the household's wealth. Participants had to rank pictures of households based on wealth. We varied the country of origin of images and participants to test whether people can detect wealth from a geographically diverse set of images and whether this ability cuts across countries. We nevertheless predicted that participants would detect wealth more accurately in targets from their own country than in targets from foreign countries.

Methods

Pre-registration

The design and predictions for this study were pre-registered prior to data collection. The pre-registrations for the studies conducted in different countries are available at

https://drive.google.com/file/d/1VB2Uo9vDsQ_nL8c6iLVlb1tFp_qTYQEx/view?usp=sharing (France and India),

<https://drive.google.com/file/d/10WD1SZwsFSpsLIPA3ihFDAXdFW1SrPgl/view?usp=sharing> (Colombia), and

<https://drive.google.com/file/d/1YUR1CwEgqgRTVzozNOEbFz0IayhJjR70/view?usp=sharing> (Brazil, Nigeria, Philippines).¹

Participants

Our pre-registered sample size was determined by a priori power analysis using G*Power 3 and a pilot study. To compute the necessary number of participants, we decided that the minimal effect size of interest would correspond to a coefficient of 0.2 for standardized variables with a power of 90% and a two-sided t-test. Using this value in the power analysis, we calculated that we needed 255 participants. We first recruited a total of 607 participants from Colombia (225), India (206), and France (176) using Besample, MTurk, and Crowdpanel. We recruited a larger sample than needed because of data quality concerns when recruiting participants with MTurk (Chmielewski & Kucker, 2020). We excluded a total of 167 participants (69 from Colombia, 73 from India, and 25 from France) who failed one or more of four attention checks designed according to best practices in the literature: a Captcha score of less than .5 (2 from India, 1 from France, and 5 from Colombia), a response time lower than 10 sec per question (73 from India, 24 from France, and 65 from Colombia), a more traditional screening question on the number of cars seen in a picture (28 from India, 15 from France, and 8 from Colombia), and an open-ended

¹ All pre-registration have been uploaded to OSF. However, given the pre-registration files were not anonymous, we replaced the pre-registration files with anonymous PDF links for the purpose of the review process.

question on the strategy used (50 from India, 18 from France, and 14 from Colombia) (Boas et al., 2020). Our final sample size was 440 participants, 156 from Colombia (75 males, 79 females, and 2 people who preferred not to say, with age $M = 28.8$, $SD = 9.2$), 133 from India (81 males, 44 females, and 8 unknown, with age $M = 38.9$, $SD = 8.1$) and 151 from France (68 males, 83 females, with age $M = 46.5$, $SD = 12.9$).

We then replicated this study with participants from Brazil, Nigeria, and the Philippines. We recruited a total of 643 participants from Brazil (184), Nigeria (265), and the Philippines (194) using Besample. We recruited a larger sample than needed because of data quality concerns. We excluded a total of 167 participants (43 from Brazil, 70 from Nigeria, and 54 from the Philippines) who failed one or more attention checks (a response time lower than 10 seconds per question – 7 from Brazil, 8 from Nigeria, and 13 from the Philippines– and an open-ended question on the strategy used to answer questions – 33 from Brazil, 61 from Nigeria, and 38 from the Philippines) or had incomplete answers (5 from Brazil, 1 from Nigeria and 3 from the Philippines). Our final sample size was 476 participants, 141 from Brazil, 195 from Nigeria, and 140 from the Philippines. We did not ask for information about the gender or age of these participants as we had no specific hypothesis about their effect on performance.

Procedure

We recruited participants online to complete a study called “a house ranking game”. For the first group of participants (from Colombia, France, and India), participants were shown six groups of five randomly selected pictures of households (living rooms) from a given country: two groups from France, two groups from India, and two groups from Colombia. We selected these countries so that participants would each rank pictures of households from foreign countries and their own country. Participants were asked to rank the household pictures from the poorest to the richest for each group of five pictures. The order of groups of pictures to rank was randomized. Participants were then asked to select from a list of six countries (China, Colombia, France, India, Nigeria, Serbia) the country of origin of each group of five pictures. The order of the groups was again randomized. Finally, participants were asked to explain what information they used to rank the pictures. Similarly, the second group of participants (from Brazil,

Nigeria, and the Philippines) were shown three groups of five randomly selected pictures of households (living rooms): one from Brazil, one from Nigeria, and one from the Philippines. Again, we selected these countries so that participants would each rank pictures of households from foreign countries and their own country. Participants were asked to rank the household pictures from the poorest to the richest for each group of five pictures. The order of groups of pictures to rank was randomized. Participants were then asked to select from a list of six countries (France, Colombia, Brazil, India, Philippines, Nigeria) the country of origin of each group of five pictures presented in a random order. The order of the groups was again randomized. Finally, participants were asked to explain what information they used to rank the pictures in a free-text box.

Materials

Pictures of households (see Figure 1 for an example), were downloaded from the Dollar Street database (<https://www.gapminder.org/dollar-street>). We restricted our sample to six countries (Brazil, Colombia, India, France, Nigeria, and the Philippines). We excluded from our sample pictures in which inhabitants were visible.

Analysis

We computed the correlation between the actual wealth ranking of the households depicted and the ranking given by the participant for each group of pictures (ranking score). We tested whether the ranking score of participants was significantly different from zero to assess whether these pictures conveyed accurate information about wealth. We also tested whether participants were better at ranking groups of images taken in their own country, whether participants were able to identify the country of origin of the pictures, and whether they were better at guessing the country of origin when it was their own country. For all of these analyses, we include a random effect for the country of origin of the participant and for the country of the stimuli.

Results

Participants were good at ranking pictures of households according to their wealth. The average ranking score, as measured by the correlation between the actual ranking and the reporting ranking of pictures, was significantly superior to zero ($\mu = 0.60$, $SE = 0.06$, $t = 10.26$, $p < .001$, 95% CI [0.48, 0.72]), see Table 1 for results by country of participants and Supplementary Information Figure SI.A2 for a detail of the correlations. This means that these pictures conveyed accurate information about material wealth. We then tested whether there was a home country advantage in ranking pictures. To do this, we regressed participants' ranking scores on a dummy indicating whether the stimuli were from the participant's own country. Participants were slightly better at ranking pictures taken in their own country compared to pictures taken in foreign countries ($\beta = 0.037$, $SE = 0.013$, $t = 2.90$, $p = .004$, 95% CI [0.012, 0.063]). We also asked participants to identify the country of origin of each group of five pictures. There were six possible responses, so participants had a .17 chance of finding the right answer randomly. On average participants were significantly better than chance at identifying the country of origin ($M = 0.46$, $SE = .04$, $t = 11.65$, $p < .001$, 95% CI [0.38, 0.54]). Participants were better at identifying the country of origin of the groups of pictures when they came from their own country compared to foreign countries ($\beta = 0.45$, $SE = 0.01$, $t = 30.98$, $p < .001$, 95% CI [0.43, 0.48]), see Supplementary Information Figure SI.A2 for details. From these results, we conclude that these images accurately convey information about wealth to local and foreign participants. We asked participants which elements they used to rank the household wealth in an open-ended question. We found that participants mostly relied on elements such as the size of the room, or the type of furniture present (see Supplementary Information B).

We conceptually replicated this study in a sample of participants from the United Kingdom and the Democratic Republic of Congo ($n = 246$). In this study, participants were presented with a triplet of pictures of living rooms: one target picture and a pair of other pictures. Participants had to match the target picture with one of the pictures in the pair based on household wealth. We found that participants were on average good at matching pictures based on wealth, as their average score was significantly larger

than the chance level (50%) ($M = .75$, $SE = 0.09$, $t = 8.76$, $p < .001$, 95% CI [0.56, 0.93]) in a mixed-model including the country of origin of participants and the stimuli. This suggests that we find similar abilities to detect the wealth of households based on images of participants from the United Kingdom and DRC (for more details about this study, see Supplementary Information B). Interestingly, participants were no better than random at matching pictures based on country of origin.

Main Study

In this pre-registered study, we investigated whether a target's material wealth influences perceived trustworthiness. To avoid any social desirability bias in the study, we used a between-participant design by presenting participants with a single picture of a household and asking them to imagine an individual living in the household. We measured stereotypes by asking participants to rate targets on three characteristics: cooperative character, cooperative behavior, and self-control—three concepts closely related to trustworthiness. We replicated our study in a total of 8 countries from different regions of the world (see Figure 2 for an overview) and performed an internal meta-analysis. Although individuals from a low socio-economic background are perceived to be warmer (Durante et al., 2017), we predicted that wealthier targets would be perceived as having a more cooperative character, more cooperative behavior, and more self-control. These predictions are in line with research on implicit stereotypes (Horwitz & Dovidio, 2017), and the behavioral ecology literature (Williams et al., 2016). Our prediction was also based on research showing that individuals with access to fewer resources tend to be less trusting, suggesting that individuals may also perceive them as less trustworthy (Petersen & Aarøe, 2015).

Methods

Pre-registration

The design and predictions for this study were pre-registered prior to data collection. The pre-registration is available at

<https://drive.google.com/file/d/1EBW8ZVrH2ss4I4M2B3CLw9iZIJR1Oxpn/view?usp=sharing> (UK) and <https://drive.google.com/file/d/1dhYv7ILmjinJVwhdGi1v4V8BYJk4geD06/view?usp=sharing> (all other countries).

Participants

We performed an a priori power analysis with G*Power3. To compute the necessary number of participants, we decided that the minimal effect size of interest would correspond to a coefficient of 0.2 for standardized variables with a power of 90% and a two-sided t-test, meaning that one standard deviation increase in wealth would lead to a 0.2 standard deviation increase in the score of a cooperation trait. Using this value in the power analysis, we saw that we needed 255 participants in total. We first recruited 255 participants in the United Kingdom (“UK”) via Prolific. We excluded three participants who had not completed the study or completed the study in less than one minute. Based on these results, it appeared that 150 participants were sufficient to detect a correlation between wealth and perceived trustworthiness. We then replicated this study in seven additional countries: DRC (237 participants recruited via a local non-profit in the city of Goma), France (183 participants recruited via Crowdpanel), Brazil, Colombia, India, Nigeria, and Philippines (191, 209, 196, 213 and 204 participants respectively, all recruited via Besample). After excluding participants who failed one or more attention checks, we had the following sample sizes: 179 (Brazil), 194 (Colombia), 147 (DRC), 180 (France), 182 (India), 201 (Nigeria), and 168 (Philippines). We did not ask for information about the gender or age of these participants as we had no specific hypothesis about the effect of gender or age on stereotype formation and previous studies on stereotypes do not report an effect of age or gender (Durante et al., 2017; Williams et al., 2016).

Procedure

Participants were each shown one picture of a living room from a sample of households from different countries and with different levels of wealth. Participants were then asked to imagine an individual living in this household and to rate them on three traits: cooperative character (five items:

trustworthy, reliable, responsible, honest, and loyal), cooperative behavior (four items: likely to return a significant amount of money lent to them, likely to cheat their partner if they had a chance, likely to refuse to help a friend if they had better to do, likely to slack off and let coworkers do their part of the work) and self-control (six items: able to resist temptations, self-disciplined, impulsive, likely to lose control often, able to stop themselves from doing things they know is wrong, able to work themselves effectively towards long-term goals). These items were drawn from a study on perceived changes in cooperativeness (Fitouchi et al., 2024).

Materials

We downloaded pictures of different households from the Dollar Street database (<https://www.gapminder.org/dollar-street>). We restricted our sample of pictures to six countries (China, Colombia, India, France, Nigeria, and Serbia). We selected these countries as there were many households sampled from them with a high level of wealth variance, and these six countries came from different regions of the world. We excluded from our sample pictures in which household members were visible. For an overview of the households included in this study, see Figure 3. Each participant was shown a single picture of a household randomly selected from our sample. Pictures from Colombia, India, France, and Nigeria were the same as in the methodological validation. We added images from China and Serbia to have more geographic diversity.

Analysis

We first pooled all participants to measure the Cronbach Alpha of our scales. For each of the 30 pictures of households, we computed the average perceived cooperative character, cooperative behavior, and self-control across participants. We then regressed perceived trustworthiness on the log of the household's actual wealth, and conducted a separate analysis for each country of participants as we were interested in knowing whether the relationship existed in each country. We then conducted a meta-analysis of the studies in each country by using a random effect model as the effect size may differ for each country.

For a subsample of participants, we had access to their income data. This allowed us to investigate whether the participant's own income also affected perceived trustworthiness. We anticipate three lines of reasoning. Lower-income participants may judge lower-income individuals more positively than high-income participants do (similarity), low and high-income participants judge lower-income individuals in the same way (status), and high-income participants judge lower-income individuals more positively than lower-income participants do (tolerance). We had income data for a subsample of participants from Brazil, Colombia, India, Nigeria, and the Philippines ($n = 782$). Participants had to select a monthly income bracket on the Besample platform when registering (income brackets are "<50", "50-100", "100-250", "250-500", "500-1000", "1000-2500", "2500-5000", ">5000" in dollars, see Supplementary Information Figure SI.C2 for the income distribution in our sample). We identified the average GDP per capita in dollars for each country using World Bank data. We split participants into two income groups: low income for those below the mean GDP per capita of their country and high income for those equal to or higher than the mean GDP per capita. We regressed perceived trustworthiness on the wealth of the target individual, the income group of the participants, and the interaction between the two terms.

Results

We first assessed the reliability of our different scales. The cooperative character scale had a high degree of reliability as measured by Cronbach's alpha ($\alpha = .9$). Cooperative behavior was less reliable ($\alpha = .55$). We ran the analysis both using the cooperative behavior scale and treating each of the four items separately (see below). Self-control had a satisfactory reliability ($\alpha = .72$).

As predicted, we found that inhabitants of wealthier households were perceived as having more cooperative character ($\beta = 0.22$, $SE = 0.03$, $z = 7.95$, $p < .0001$, 95% CI [0.16, 0.27]; figure 4(a)), more cooperative behaviors ($\beta = 0.06$, $SE = 0.02$, $z = 2.91$, $p = .004$, 95% CI [0.02, 0.10]; figure 4(b)) and more self-control ($\beta = 0.14$, $SE = 0.02$, $z = 5.98$, $p < .0001$, 95% CI [0.10, 0.19]; figure 4(c)) than inhabitants of

poorer households. For cooperative behavior, when looking at each item separately, the effect was entirely driven by one item “Likely to return a significant amount of money lent to them” ($\beta = 0.23$, $SE = 0.03$, $z = 7.00$, $p < .0001$, 95% CI [0.17, 0.29]), while no other items were significantly correlated to the wealth of the household. We replicated our results using a mixed-model approach, with a stimuli random effect and a participant country random effect. We found similar results for cooperative character and self-control, however, in the mixed-model approach, the relationship between perceived cooperative behavior and wealth was not significant (see Supplementary Information Table SI.C2).

We found no significant effect of either the income group of the participants (β_1) or the interactions of the target’s wealth and the income group of the participant (β_2) on cooperative character ($\beta_1 = -0.06$, $SE = 0.47$, $z = -0.12$, $p = .90$, 95% CI [-0.97, 0.86], $\beta_2 = -0.01$, $SE = 0.08$, $z = -0.10$, $p = .92$, 95% CI [-0.16, 0.14]), cooperative behavior ($\beta_1 = -0.12$, $SE = 0.49$, $z = -.23$, $p = .82$, 95% CI [-1.09, 0.85], $\beta_2 = 0.04$, $SE = 0.08$, $z = 0.47$, $p = .64$, 95% CI [-0.11, 0.18]) and self-control ($\beta_1 = 0.09$, $SE = 0.43$, $z = 0.22$, $p = .83$, 95% CI [-0.74, 0.93], $\beta_2 = -0.01$, $SE = 0.06$, $z = -0.19$, $p = .85$, 95% CI [-0.13, 0.10]). We replicated these findings using the median income in our sample to split participants into two groups and again found no effect of the income of participants on their judgment of trustworthiness (see Supplementary Information Figures SI.C3-SI.C8 for details). These results suggest that such stereotypes are not influenced by an individual’s economic standing, providing further evidence that these stereotypes are consistent not only across countries but also across income groups.

Discussion

We found evidence that people’s appraisal of trustworthiness is related to the target’s wealth. Results from our main study demonstrated that people in a diverse set of countries perceive inhabitants of wealthier households to have a more cooperative character and more self-control. Although the relationship was not significant in all countries tested, our meta-analysis revealed that more wealth led to

higher perceived cooperative behavior overall. However, we did not find a significant correlation between perceived cooperative behavior and wealth in the mixed model approach, suggesting that this result is less robust. Notably, this result also held when controlling for the participants' own income. These findings show that wealth stereotypes about trustworthiness appear to be culturally widespread, and are independent of the participant's social class. We found a stronger relationship between wealth and perceived character than behavior. This could be because character is thought of as fixed in individuals, while behavior in one situation may be a poor predictor of behavior in another because of contextual reasons (Cushman, 2008). For example, a very honest and loyal person might steal some money, if the money is used to help a friend in need. Another explanation may be that judgment serves not to predict behavior, but to motivate certain behaviors towards the target. For example, motivating restorative justice to victims, rather than predicting moral conduct (Jordan & Kouchaki, 2021).

Our study design allows us to measure the relationship between wealth and perceived trustworthiness, however, we do not know which aspects of an individual's living room people base their judgments on. For example, people may perceive wealthier households to be cleaner or tidier (because of larger spaces or cleaning help) and base their trustworthiness judgment on these aspects.

An important outstanding question is whether these stereotypes are accurate. The evolutionary psychology literature argues that stereotypes are useful tools for managing affordance, and as such must to some extent reflect costs and benefits (Neuberg & Sng, 2013; Sng et al., 2017). In addition, some theories in the stereotype literature suggest that many stereotypes hold a kernel of truth (for some reviews see Eagly, 1995; Jussim & Honeycutt, 2021; Ryan, 2003). In the case of wealth and trustworthiness, the empirical evidence is not clear. Some findings show that lower social status individuals are more likely to display cooperative behavior and have more prosocial intentions (Elbæk et al., 2023; Guinote et al., 2015; Kraus et al., 2012), suggesting that the stereotypes we measure run in the opposite direction of the truth. Yet, other studies have found the opposite effect: richer individuals are more prosocial (Korndörfer et al., 2015; Vanags et al., 2024), or there are no differences according to wealth (Schmukle et al., 2019).

Regarding self-control, there is a vast literature showing that individuals with more resources tend to be more future-oriented (for an overview, see Pepper & Nettle, 2017), suggesting that in this case, stereotypes are accurate. Given that correlations between people's economic standing and their actual cooperative behavior are at best very weak (for example, see Vanags et al., 2023), it appears that using someone's material wealth as a cue for trustworthiness is unreliable. Another explanation might be that individuals growing up in more adverse situations are themselves less trusting of others (Petersen & Aarøe, 2015), which could contribute to the perception of them being less trustworthy.

These stereotypes might also be designed for another purpose: to push people to affiliate with high-status individuals, whose ability to confer more material benefits makes them more desirable cooperation partners. This interpretation means that people may conflate the willingness and ability to confer benefits when appraising potential cooperation partners. This hypothesis could be further tested by measuring stereotypes related to other qualities that may benefit perceivers and thus encourage affiliation, as opposed to qualities that would not benefit perceivers. In addition, the positive disposition towards wealthier individuals might simply reflect a broader halo effect. To investigate this further, studies should measure other positive attributes to see whether they also vary with household wealth.

Regardless of the accuracy of these stereotypes, higher rates of poverty within a society may lead to lower levels of interpersonal trust, which in turn would affect a range of individual and societal outcomes such as economic development (Algan & Cahuc, 2013). Given that interpersonal trust is also central to the support of redistributive policies (Aarøe & Petersen, 2014; Daniele & Geys, 2015), poorer individuals may be stuck in a trust trap: people perceive them as untrustworthy and are therefore unwilling to support redistributive policies that could alleviate poverty. Our study also suggests that alleviating poverty may be a tool to increase trust in different societies. Overall, our study provides the first evidence that cues of material wealth are used similarly by people across cultures and income levels to infer trustworthiness. These findings suggest that there are universal negative stereotypes about the poor, independently from culture-specific beliefs.

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Figures



Figure 1: *Example of pictures of living rooms used in our study.* (a) a picture of a living room from a Filipino household, with a monthly consumption of \$194 (PPP). (b) a picture of a living room from a French household, with a monthly consumption of \$1,036 (PPP).

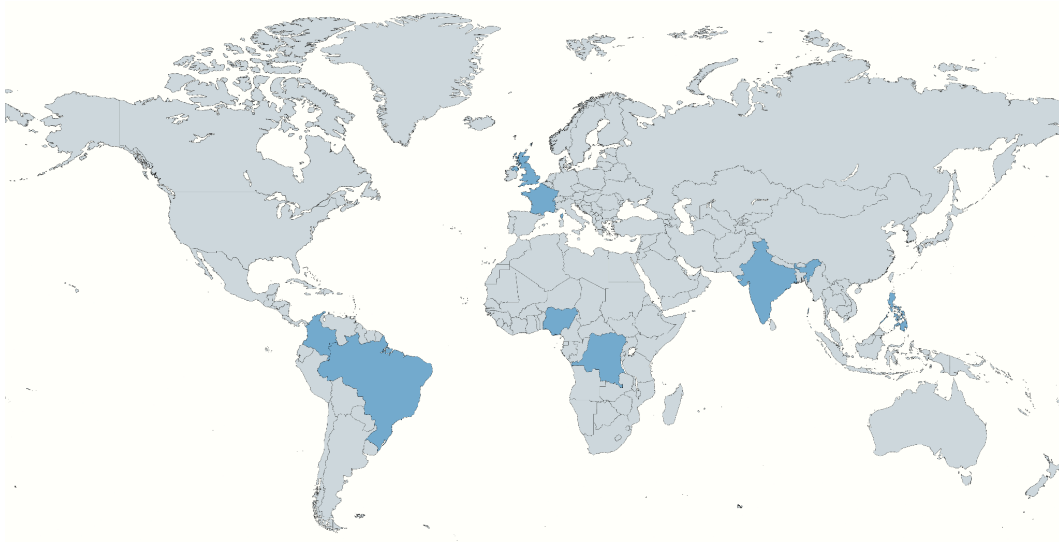


Figure 2: *Map of countries of participants.*

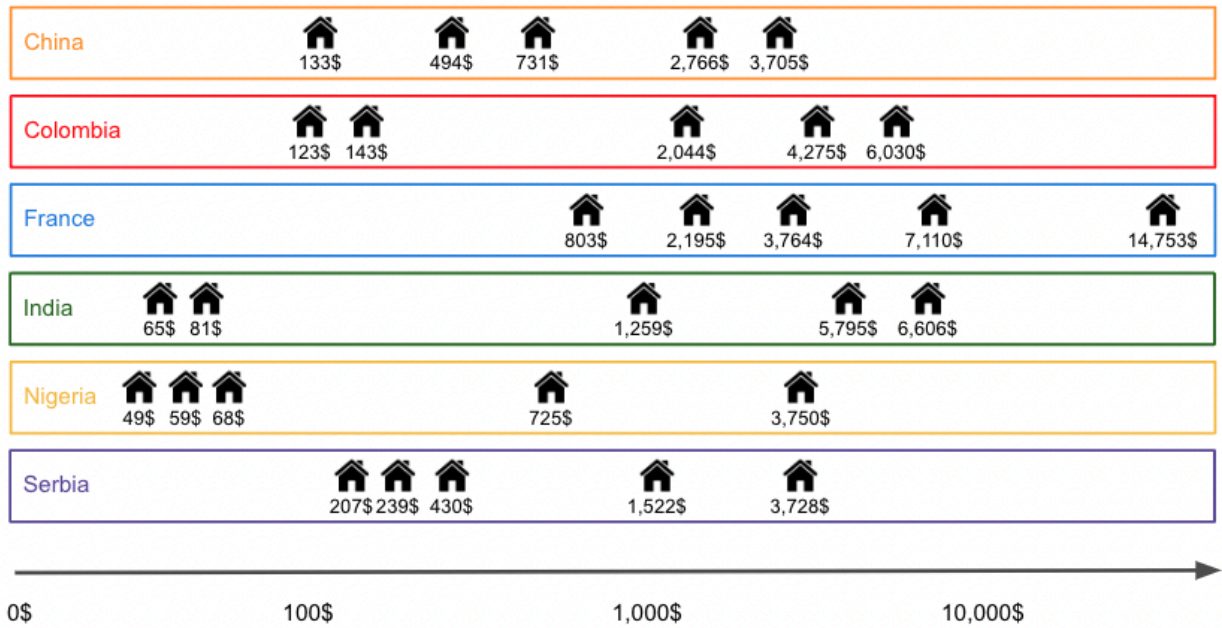


Figure 3: Households included as stimuli in the main study. The wealth scale is logged.

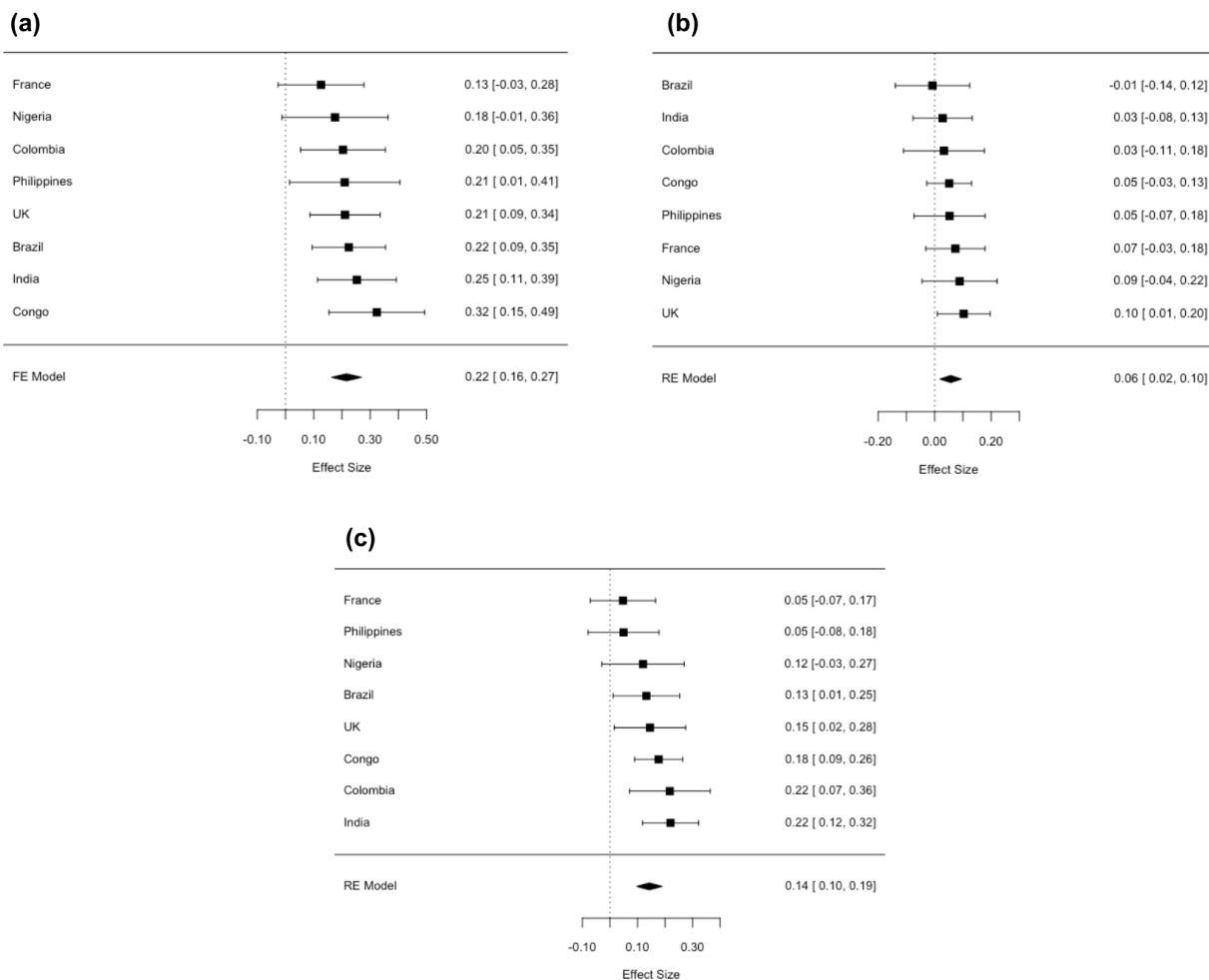


Figure 4: Forest plots of the meta analysis. (a) meta-analysis of the regression of perceived cooperative character of the inhabitant on the log of wealth in \$PPP of the household in each country of participants, (b) meta-analysis of the regression of perceived cooperative behavior of the inhabitant on the log of wealth in \$PPP of the household in each country of participants and (c) meta-analysis of the regression of perceived self-control of the inhabitant on the log of wealth in \$PPP of the household for each country of participants.

Table 1: *Experimental validation ranking score.* Correlation between actual ranking and reported ranking of household wealth, by country of participants.

Country of participants	Colombia	France	India	Brazil	Nigeria	Philippines
Ranking score	.51***	.49***	.55***	.73***	.74***	.80***

*5%, **1%, ***0.1% significance level