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Misperceiving economic success: experimental evidence on meritocratic beliefs and inequality acceptance

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Abstract

Meritocratic beliefs are often invoked as justification for inequality. We provide evidence on how meritocratic beliefs are shaped by economic rewards and how they contribute to the moral justification of inequality. In a large-scale survey experiment in the US, we show that economic rewards cause a change in beliefs about success depending on effort rather than luck. Exploiting exogenous variation in meritocratic beliefs in a two-stage analysis shows that these beliefs affect the level of inequality people accept. Successful people prefer to remain ignorant about the true underlying reasons for success, and there is no evidence that meritocratic beliefs are moderated by political orientation.

Keywords Meritocratic beliefs · Inequality acceptance · Fairness · Political views · Survey experiment

1 Introduction

Meritocratic beliefs are often invoked as a justification for inequality. People tend to accept more inequality if they think it reflects hard work, talent, and skill rather than external circumstances such as luck (Fong 2001; Alesina and Angeletos 2005; Cappelen et al. 2007; Almås et al. 2020, 2025b). This meritocratic ideal explains, for example, variation in income inequality and redistributive policies across countries (Alesina and Glaeser 2004; Alesina and Angeletos 2005; Mijs 2019), and is at the core of the “American Dream,” i.e. the notion that success can be attained by all who work sufficiently hard. Although the meritocratic ideal is appealing for fairness and aspirational reasons, there is a growing concern that a belief in meritocracy reinforces pre-existing inequality (e.g. Piketty 2020). Therefore, it is essential for society and public policy to understand how meritocratic beliefs are formed and contribute to income disparities.

This paper examines how economic rewards shape meritocratic beliefs, focusing on the influence of situational factors and ideological predispositions on the formation of these beliefs. First, success or failure may distort perceptions of merit. Although effort and hard work are key to success, they are often insufficient. A substantial body of literature,

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particularly on education and labor markets, highlights how better life circumstances and greater opportunities can significantly influence one's life trajectory. Yet, it is common for the successful (or those at the top of the distribution) to believe they earned their success solely through their own doing, a notion that reinforces their sense of deservingness.¹ When people misinterpret the role of personal effort in success, they risk embracing and normalizing inequality, seeing it as merit-based rather than structurally driven. Second, there is also an ideological component to how people perceive the role of effort in success. Public opinion polls consistently reveal a strong political polarization in these beliefs: liberals typically emphasize the role of luck in economic success, while at the same time, conservatives support the view that success is the result of hard work (Dunn 2018; Pew Research Center 2019).² Given that ideological dispositions on fairness views and beliefs differ so strongly between liberal and conservative voters, we also examine to what extent political orientation colors meritocratic beliefs.

Although the literature has documented a relationship between meritocratic views and preferences for redistribution, evidence on the causal effect of economic rewards on meritocratic beliefs and of beliefs on inequality acceptance is limited. This is in part because of the challenges of studying success and beliefs. First, economic success is typically the result of a combination of effort, talent, and life circumstances. Identification is thus complicated by the difficulty of specifying and quantifying the relative impact of luck and effort *ex-post*. Second, there are selection issues as beliefs are typically studied after success or failure has materialized. Even if it is possible to observe both – economic success and meritocratic beliefs – around the same time, any observed variation in beliefs is likely endogenous with respect to economic success and behavior. Third, it is rarely possible to create random variation of economic success in naturally occurring settings.³ A small experimental literature examines how experiencing success and failure affects redistributive preferences in the lab (e.g. Deffains et al. 2016; Cassar and Klein 2019). However, these analyses are unable to separately identify the effects of (i) economic success on meritocratic beliefs and (ii) meritocratic beliefs on inequality acceptance, instead estimating the effect of economic success on redistribution and beliefs in combination.⁴

To overcome the identification challenges mentioned above, we recruited a large and diverse sample of workers from an online labor market platform in the United States to complete a simple code-entry task that requires no prior knowledge or specific skills but effort. We randomly assign workers to an easy or hard version of the code-entry task, which is calibrated such that working on the easy version results in near certainty in a better performance and, thus, economic success. Because we do not disclose the difficulty of the work assignment and any subsequent tasks to workers and because the random assignment to the code-entry task essentially predetermines economic rewards, we can measure meritocratic beliefs without

¹ Indeed, observational evidence suggests that meritocratic beliefs are more prevalent in richer countries and appear to be particularly endorsed among richer as well as more conservative people (Mijts 2019; Fehr et al. 2020; Almás et al. 2025a; Suhay et al. 2021).

² Political affiliation appears, in general, as a strong indicator of how people perceive and navigate political and economic issues (Campbell 1960; Bartels 2002). For example, ideological dispositions are a critical input for government tax policies (e.g. Alesina and Glaeser 2004; Congdon et al. 2009).

³ A rare example comes from research funding. Some agencies and research foundations, such as the Swiss National Science Foundation, the Volkswagen Foundation in Germany, and the Health Research Council of New Zealand, have started experimenting with randomizing approval of eligible grant proposals.

⁴ Other recent empirical work has focused on how responsibility and information about the source of inequality affect fairness views (Cappelen et al. 2020, 2022, 2023, 2024) and on belief distortion for relative concerns, motivational or selfish reasons (Ng and Semenov 2020; Lobeck 2021; Albertazzi et al. 2021; Hansson and Sund 2022; Valero 2022).

strategic confounds and estimate the full causal chain from economic success to meritocratic beliefs to inequality acceptance. That is, we estimate the “first-stage” effect of economic success on meritocratic beliefs, the “reduced-form” effect of economic success on inequality acceptance, and then combine the two in a two-stage analysis to estimate the impact of meritocratic beliefs on inequality acceptance. Although the setting is admittedly stylized to identify the relationship of interest, it does map important aspects of socio-economic reality, as illustrated above. In particular, the setup allows us to show how exerting effort can distort meritocratic beliefs, and thus, we can isolate a mechanism through which meritocratic beliefs translate into inequality acceptance.

We present three main findings. First, we document a strong *first-stage* effect of economic success on meritocratic beliefs. We observe that economic success leads to a 16 percentage point higher belief that success in the work assignment depends on effort. While unsuccessful participants have well-calibrated meritocratic beliefs and view success equally as the result of luck *and* effort, successful participants believe that success is, to a large degree, the product of effort. Thus, the successful downplay the role of luck and predominantly attribute their success to effort, although it is very salient that success is mostly random in our setting.⁵ The *reduced form* estimates reveal a substantial divergence in inequality acceptance that is driven by economic success. Successful participants implement a highly unequal income distribution: the implemented inequality is twice as high as the inequality that unsuccessful participants would implement. Importantly, both types implement an income distribution that is far from their self-serving distribution, thereby acknowledging an entitlement to the rewards of hard work.

When combining the first stage and reduced form in a *two-stage analysis*, we find that meritocratic beliefs affect how much inequality people accept. Thus providing a causal underpinning for the belief channel that is central in the seminal theoretical work on redistribution by Piketty (1995), Alesina and Angeletos (2005), and Benabou and Tirole (2006).⁶ The two-stage effects leverage (i) the variation in meritocratic beliefs induced by the random work assignment and (ii) that participants are blind to the treatment assignment and tasks following the belief elicitation. The estimates show that a higher belief in the importance of effort in achieving success leads to more inequality acceptance. Therefore, the two-stage effects indicate that meritocratic beliefs strongly affect inequality acceptance. Taking these effects at face value suggests that the resulting greater inequality can feed meritocratic beliefs, creating a “meritocratic” trap (Markovits 2019).

Second, we find that a significant share of participants is willing to pay for non-instrumental information about task difficulty. This resonates with a common finding that a sizable number of people are willing to pay for such information (Eliasz and Schotter 2010; Eil and Rao 2011; Ganguly and Tasoff 2017; Falk and Zimmermann 2024). Notably, the willingness to pay for information on task difficulty is significantly lower for successful than unsuccessful participants, indicating that the successful are more than willing to maintain false perceptions about the causes of their success, misperceptions that morally justify greater inequality. This

⁵ A related and growing literature focuses on biased views about factual reality, such as inequality, social mobility, and relative income, and the consequences on a range of political preferences, such as redistribution (e.g. Cruces et al. 2013; Kuziemko et al. 2015; Karadja et al. 2017; Alesina et al. 2018, 2020; Fehr et al. 2024a, 2023; Fehr and Reichlin 2025; Fehr et al. 2024b; Hvidberg et al. 2023), as opposed to focusing on the formation of meritocratic beliefs that are to some extent more subjective.

⁶ This channel has also received much attention in some early observational studies (Fong 2001; Alesina and Angeletos 2005; Alesina and La Ferrara 2005; Alesina and Giuliano 2011). A consistent finding of these studies is that beliefs in effort are related to more acceptance of inequality or less support for redistribution. Relatedly, lab studies examine the impact of the source of inequality – effort and luck – on fairness views but typically do not focus on beliefs (e.g. Konow 2000; Cappelen et al. 2013, 2023).

is consistent with the empirical literature on self-image and motivated beliefs suggesting that people bias their beliefs, for example, to maintain a self-image of moral integrity (e.g. Di Tella et al. 2015).⁷ The successful in our study not only inflate the significance of the role of effort in their economic success, despite the large portion of luck involved, but are also less interested in obtaining information that may or may not threaten their meritocratic beliefs. This finding adds new evidence to the debate on motivated information selection, suggesting that people are more likely to avoid potential negative feedback if they are successful. Moreover, in light of our two-stage effects, the unwillingness to correct misperceptions about economic success may further fuel the vicious cycle between success, meritocratic beliefs, and inequality acceptance.

Third, our findings cast doubt on the broadly held notion that liberals are less likely to equate success with merit than conservatives. While it is true that conservatives have stronger meritocratic beliefs and embrace more inequality than liberals, which is in line with previous studies (Reed 2006; Alesina and Giuliano 2011; Fisman et al. 2017; Cappelen et al. 2018; Almås et al. 2020; Zampelli and Yen 2021), the differences are economically minor in both conditions and the effect of success is robust across political orientations.⁸ In other words, liberals respond to success in a similar fashion as conservatives. Moreover, they assign as little importance to learning about the role of luck in their success as conservatives. Thus, our findings indicate that both liberals and conservatives exhibit similar tendencies in attributing success to merit, challenging the idea of a fundamental ideological divide on this issue.

2 Experimental design

The study combines a work assignment with a survey and incentivized decision tasks. We pre-registered the study and posted a pre-analysis plan in the AEA RCT Registry (AEARCTR-0004455).

Setup We first elicited some basic socio-demographic information, personality traits, and political views. In particular, we asked participants about their political orientation, ranging from “strongly liberal” to “strongly conservative” (on a 6-point scale), which we will use to examine its moderating effect on meritocratic beliefs. More details and a complete list of all covariates can be found in Supplementary Information Section A.1. After the survey, participants worked on a job assignment for 3 minutes. The assignment involves retyping a series of randomly generated sequences of upper- and lowercase letters. Working on this assignment reflects effort, as the task is tedious and unpleasant. Moreover, participants can quit working at any time and immediately find other work on the online platform that we use to run our study.

We implemented two types of tasks: An *Easy Task* consisting of five-letter sequences and a *Hard Task* consisting of 15-letter sequences (see Fig. A1 for an example).⁹ We informed

⁷ Such motivated beliefs can prevail despite frequent feedback that people typically receive, for example, because people selectively recall the feedback (Zimmermann 2020) or because people tend to avoid negative feedback (Castagnetti and Schmacker 2022).

⁸ Relatedly, a growing literature in economics is concerned with the influence of political views on a host of social and economic issues and highlights heterogeneity along these views for a host of policy preferences (e.g. Cruces et al. 2013; Kuziemko et al. 2015; Karadja et al. 2017; Alesina et al. 2018, 2020; Bursztyń et al. 2020; Grigorieff et al. 2020; Fehr et al. 2023, 2024a, b).

⁹ Using hard and easy tasks is also commonly used to manipulate self-confidence (e.g., Dargnies et al., 2019; Barron and Gravert, 2022).

participants that there are two task types and that they would be randomly assigned to one of the two (treatment assignment). While participants are aware that the *Easy Task* involves shorter sequences and the *Hard Task* involves longer sequences, they are not informed of the exact number of letters in each task type, thereby creating uncertainty about their work assignment. We intentionally designed the tasks to ensure divergence between participant scores based on the random work assignment rather than (endogenous) effort. Specifically, due to the length of the sequences, participants in the *Hard Task* will retype fewer sequences than participants assigned to the *Easy Task*.

We paid participants according to their relative performance. That is, we randomly matched a participant working on the *Easy Task* with a participant working on the *Hard Task* and compared their scores. The participant with the higher score receives a bonus payment of \$2, and the participant with the lower score receives \$0. Note that the matching protocol is public knowledge, i.e. participants are uncertain about the difficulty of their task but know their matching partner is doing the other task (whether *Hard* or *Easy*).

After the work assignment, we elicited our outcomes of interest: (meritocratic) beliefs, inequality acceptance, and willingness to pay for information on task difficulty and performance in pairs. Importantly, we introduced and measured these outcomes sequentially, i.e. participants were, for example, unaware of our interest in inequality acceptance when stating their beliefs. Directly after the work assignment, but before we revealed the outcome of the performance comparison (i.e. the bonus payment), we elicited beliefs about the work assignment in a randomized order. We reminded participants that there was a 50 percent chance of being in either task and asked them to estimate the likelihood that they would work through the *Hard Task* (“Prior Belief, Task Difficulty”). Moreover, they estimate how many of 100 participants performing the same task achieved a lower score (“Prior Belief, Relative Performance”), and how much they think they deserve the \$2 bonus payment based on their score (“Given your score in the task, how much would you deserve the \$2-bonus payment?” – “Prior Belief, Deserving Bonus”). After revealing the bonus payment, we asked the same questions again (“Posterior Beliefs”). In addition, we elicited our measure for meritocratic beliefs, i.e. the extent to which participants think that the bonus payment depends on luck or effort (“Effort Determines Success”). Building on evidence suggesting that complex incentive rules do not outperform introspection (e.g. Trautmann and van de Kuilen, 2015; Charness et al., 2021; Danz et al., 2022), we did not remunerate the elicitation of these beliefs to avoid complicating the tasks and to keep the study within a reasonable time frame.

Next, participants had to decide how much inequality they wanted to implement in the matched pair. More specifically, they had to indicate the share of the bonus payment (i.e. a “tax rate” between 0 and 100 percent) that would be equally redistributed within their pair. Using an interactive slider, participants could immediately see how their decision would affect their income and that of the other person. To incentivize the decision, we randomly selected and implemented one decision within each pair at the end of the study.¹⁰ The variable of interest is then the inequality participant i implements, which we calculate as the ratio of the absolute income difference in the pair and total income:

$$inequality_i = \frac{|income\ success - income\ failure|}{total\ income} \quad (1)$$

¹⁰ This procedure elicits participants’ true inequality acceptance given that participants are consequentialists and care about final outcomes. This assumption seems reasonable in our setting as merit considerations typically overlay ex-ante fairness concerns (Cappelen et al. 2013; Durante et al. 2014; Cappelen et al. 2023).

where *income success* is the income after redistribution of the successful participant and *income failure* is the income after redistribution of the unsuccessful participant.¹¹ Note that this ratio corresponds to the Gini coefficient in this two-person situation, which is equal to one if the successful player keeps his entire bonus and zero if the bonus is fully redistributed, resulting in equal incomes.

Finally, we offered participants the opportunity to buy information about task difficulty and the task performance of the other participant. We elicited their willingness to pay (“WTP”) for this information using a simple price list. In this price list, we presented participants with eight scenarios in which they had to decide between seeing the information or receiving extra money, with amounts ranging from \$0.01 to \$0.50.¹² For instance, in Scenario 1 they had to choose between seeing information and receiving \$0.01, and in Scenario 8 they had to choose between seeing information and receiving \$0.50. To incentivize participants, we randomly selected one of the eight scenarios for each participant and implemented their chosen scenario. That is, a participant either received the information immediately after the price-list decision or received the extra money at the end of the survey. In the final step, all participants who received the information and a random subset of the remaining participants (50 percent) had the unexpected opportunity to revise their decision regarding the level of inequality to implement.

Implementation We recruited participants via Amazon Mechanical Turk (MTurk) in the summer of 2019 and implemented the study using the open-source software oTree (Chen, Schonger, and Wickens 2016). MTurk is a widely used platform in high-profile economic research (e.g. Kuziemko et al. 2015; Exley and Kessler 2022; Bronchetti et al. 2023) that offers access to a diverse population of respondents (e.g. Berinsky et al. 2012; Buhrmester et al. 2011; Arechar et al. 2017) and evidence suggests that the findings of MTurk studies are robust to using other subject populations, such as students, convenience, and nationally representative samples (e.g. Horton et al. 2011; Arechar et al. 2018; Coppock and McClellan 2019; Snowberg and Yariv 2021). To ease recruitment, we offered a relatively high flat payment of \$0.75 and promised additional payments (participants could expect to earn \$1.50). Considering the average study duration of 10 minutes, incentives were substantially above the hourly minimum wage in all US states in 2019.

Data quality We took several precautionary measures to ensure high data quality. Among them, we required a minimum of 1000 completed Human Intelligence Tasks (HITs) and an acceptance rate of at least 98 percent, implemented several bot screens (e.g. non-machine-readable content), and enforced strict timeouts on each question to minimize inattention of participants due to multitasking and switching between several HITs (for more details on these measures see Supplementary Information A.2). Besides these precautionary measures, we can also check data quality ex post by looking at monotonicity violations in the WTP elicitation task (i.e. switching multiple times between buying information and keeping the offered amount of money). The share of inconsistent participants is 3 percent, which is clearly at the lower end of the range observed in other studies.¹³ We take this as an indication that

¹¹ Note that this is a slight deviation from the pre-specified use of the “tax rate” as outcome. The qualitative results, however, are obviously not affected by this transformation.

¹² This procedure is similar to elicitation procedure in Fuster et al. (2018), which also tested understanding in cognitive interviews, and Fehr et al. (2023).

¹³ Using a similar procedure, for example, Fehr et al. (2023) report 5 percent inconsistent choices in a high-quality panel study, the German Socio-Economic Panel (SOEP). The same is true for the sample used in Fuster et al. (2018), the SCE Housing Survey of the Federal Reserve Bank of New York, whereas Cullen and Perez-Truglia (2022) report 15 percent among employees of a large international bank.

data quality is high and that participants are attentive throughout the study, as this WTP measure is elicited towards the end of the survey.

Attrition and balance In total, 2,026 workers started the work assignment, and 1,845 participants finished all tasks.¹⁴ The overall attrition rate is about 9 percent, which is comparatively low for this type of study.¹⁵ Importantly, attrition is random across the treatment assignment (10 percent in the *Hard Task* and 8 percent in the *Easy Task*, t-test, $p = 0.25$). The low level of attrition illustrates the effectiveness of the implemented measures to minimize dropouts and suggests that the treatment assignment did not cause participants to quit our HIT. A regression of an indicator for dropouts on the treatment indicator shows no difference in the likelihood of attrition between the *Easy* and *Hard Task* (see Table A1).¹⁶ Moreover, comparing socio-demographic characteristics (including political views) of dropouts and non-dropouts reveals no differences (see Table A2). Across 30 tests, there is not a single t-statistic exceeding 1.96. Taken together, attrition is, therefore, unlikely to affect our results.

In our final sample, we excluded 20 participants because they ended up with the same score, resulting in the bonus being split equally within pairs. This leaves us with 1,825 observations. Comparing this sample with data from the US census reveals remarkable similarities along a large set of observables. Our sample closely matches the US population in terms of age, gender, marital status, household size, and income, and geographic location, but white and educated people are overrepresented (see Table A3). In Table A4, we show summary statistics in column 1. In the remaining columns, we show that participants do not differ along a large set of observables in the two tasks. A joint test for all observables being equal to zero reveals an F-statistic of 1.09 ($p = 0.35$).

Summary statistics of work assignment Figure A2 shows the distribution of performance in the work assignment, and Table A5 summarizes participants' performances in the two tasks. In the *Easy Task*, participants coded, on average, substantially more sequences of letters compared to participants in the *Hard Task* (35 vs. 10). The ratio between correctly encoded tasks and attempted tasks is substantially lower in the *Hard Task* than in the *Easy Task* (0.72 vs 0.89), indicating that the *Hard Task* was more difficult. Despite that, the scores in the two tasks overlap to some extent. That is, the 10th percentile in the *Easy Task* is 16, while the 90th percentile in the *Hard Task* is 17.¹⁷

¹⁴ A total of 2,535 workers accepted our HIT. Of those, 383 failed on a simple CAPTCHA at the start of the study, which served as a first bot control, and 105 did not finish the demographics survey. Our work assignment served as a second bot control, as we displayed the letter sequences in non-machine-readable format, and 21 MTurkers dropped out after the demographics survey but before the work assignment, resulting in our final sample of 2,026.

¹⁵ For example, Kuziemko et al. (2015) report an attrition rate of 15 percent in an early survey experiment on MTurk, and Arechar et al. (2018) report an attrition rate of 18 percent in a long and interactive repeated public good game on MTurk.

¹⁶ The coefficient for the treatment indicator is -0.015 (s.e. 0.013). The same is true if we run the same regression but only consider dropouts after participants learned about the bonus payment (coefficient -0.013, s.e. 0.009).

¹⁷ This overlap led to non-compliance with the treatment assignment in about 6 percent of cases. That is, in these cases, a participant assigned to the *Hard Task* outcompeted a participant in the *Easy Task*, such that the bonus is paid to the participant in *Hard Task*, instead of the participant in the *Easy Task*. Note that non-compliance is unlikely to be the result of bots – recall that we displayed the codes in non-machine-readable format – but rather due to some people providing little effort on the task (only 0.5 percent of participants exerted no effort).

Empirical strategy We randomly assigned participants to an *Easy* and *Hard Task*, that are calibrated such that performing the *Easy Task* leads to economic success (i.e. receiving the \$2 bonus payment). At the outset, participants know they will be assigned to one of the two tasks with equal probability and will be randomly matched with a participant completing the other task. Therefore, we use the random treatment assignment to estimate our outcomes of interest.

3 Results

3.1 Beliefs about work assignment

We begin by documenting participants’ subjective assessments of their performance in the work assignment measured before *and* after revealing whether they received the bonus payment or not.

In Fig. 1, we present a graphical illustration of prior beliefs (panel a) and belief updating after revealing information about the bonus payment (panel b). Recall that we elicited prior beliefs directly after the work assignment. At this point, the participants were unsure whether they had been successful. They only experienced the task and knew that they had a 50 percent chance of completing either task. Looking first at the priors about task difficulty in panel (a) reveals that participants had some notion of their work assignment. They shift their beliefs in the right direction in both tasks, but this shift is far from perfect. In particular, participants in the *Easy Task* are more uncertain about their work assignment (63 percent) than participants in the *Hard Task* (68 percent, $p < 0.001$, two-sided t-test).

Second, Participants in the *Easy Task* find themselves as more deserving of the bonus compared to participants in the *Hard Task* (75.2 percent vs. 71.9 percent, $p < 0.05$, two-sided t-test). This is notable, as it suggests that performance (i.e. coding a large number

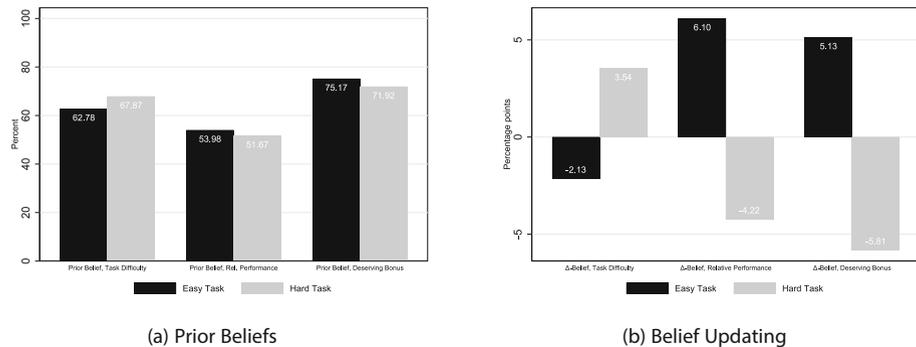


Fig. 1 Prior beliefs and belief updating about work assignment by treatment. **Notes:** **Panel (a)** shows prior beliefs about task difficulty, relative performance, and deservingness that we elicited after the task, but before revealing the bonus payment in the two conditions. All beliefs are measured on a scale from 0 – 100: “Prior Belief, Task Difficulty:” likelihood of performing the easy (hard) task in % (100 indicates certainty about work assignment); “Prior Belief, Deserving Bonus:” deserving the \$2 bonus payment in %. **Panel (b)** shows the difference between posterior and prior beliefs (in percentage points) in the *Easy Task* or *Hard Task*. “ Δ -Belief, Task Difficulty,” “ Δ -Belief, Relative Performance,” and “ Δ -Belief, Deserving Bonus” denote the difference in beliefs about task difficulty, relative performance, and deservingness

of sequences) creates a perception that one worked hard and thus deserves the bonus. This view is supported by the observation that actual task performance and *prior* perceptions of deservingness are strongly correlated in both tasks. Specifically, we see that each-point increase in task performance is associated with a 0.48 percentage points higher prior belief in deservingness in the *Hard Task* and with a 0.26 percentage point higher prior in the *Easy Task* (see Fig. A3).¹⁸ Moreover, we can rule out that the higher deservingness in the *Easy Task* is due to participants correctly anticipating their success. In fact, we observe a negative relationship between prior beliefs about task difficulty and prior beliefs of deservingness, i.e. more certain participants think they are less deserving (see Fig. A4).

Finally, coding more sequences is related to the impression that one ranks higher in the performance distribution. Participants in the *Easy Task* thought they outperformed 54 percent of other participants completing the *Easy Task*, whereas participants in the *Hard Task* thought they were better than 52 percent of those completing the *Hard Task*. Although this difference is small, it is statistically significant ($p < 0.05$, two-sided t-test). Together, the prior beliefs suggest significant uncertainty about the work assignment and in predicting success, particularly in the *Easy Task*.

Next, we examine belief updating and the effect of the bonus announcement on beliefs about the work assignment. For Bayesian individuals, the information about the bonus payment is a signal about task difficulty and should reduce the uncertainty about it, leading to an update towards the signal (i.e. to the *Easy Task* when receiving the bonus and to the *Hard Task* otherwise). Panel (b) of Fig. 1 presents the changes in beliefs (posterior minus prior beliefs).¹⁹ One can clearly see that individuals do update all three beliefs in response to the information about the bonus payment, but the updating is either insufficient or excessive. Looking first at beliefs about task difficulty, we see that failure leads to far too little updating (about 4 percentage points from 68% to 72%). That is, unsuccessful participants still display considerable uncertainty about the work assignment. In contrast, successful participants update away from the signal, i.e. participants in the *Easy Task* think that they were less likely to have completed the easy task.

In line with this observation, they also update their beliefs about deservingness. Successful participants increase their posterior beliefs about deservingness by 5 percentage points, while at the same time, failure induces participants to decrease perceived deservingness by almost 6 percentage points. This widens the belief gap in deservingness across tasks from 3 to 14 percentage points (*Easy Task* 80 percent vs. *Hard Task* 66 percent). Similarly, successful participants increase their beliefs about their performance relative to others doing the same task by 6 percentage points, while unsuccessful participants reduce their beliefs by 4 percentage points. The resulting belief gap across conditions amounts to 13 percentage points, i.e. in the *Easy Task*, participants think they performed better than 60 percent of participants doing the same task, while in the *Hard Task*, this belief drops to 47 percent.²⁰

¹⁸ Note that we rescaled the scores in the two tasks to have a common scale ranging from 0-100, see Fig. A3 for details.

¹⁹ In Table A6, we show the estimates of the work assignment on belief updating by regressing the difference between posterior and prior beliefs on a treatment indicator.

²⁰ There is also evidence that being successful triggers overconfidence. If we compare the posteriors of relative performance with individuals' true ranks in the performance distribution, we see substantially more overestimation of relative performance in the *Easy Task* than in the *Hard Task* (0.59 vs. 0.46; t-test, $p < 0.01$). This is not the case if we instead consider prior beliefs. In this case, the share of participants who overestimate their performance is nearly the same in both tasks (0.52 vs. 0.50; t-test, $p < 0.37$).

3.2 First stage: effects on meritocratic beliefs

We now turn to our belief of interest and discuss meritocratic beliefs in greater detail. More specifically, we focus on how the random work assignment – i.e. revealing the bonus payment – influences beliefs about the role of effort and luck in determining success. The belief updating on deservingness suggests that success reinforces a belief that those who work hard deserve the rewards they earn. Given this view, we would also expect to see an effect on meritocratic beliefs.

Figure 2 presents a graphical illustration of the impact of economic success on the belief that success is due to effort in the task. Panel (a) of Fig. 2 shows a strong divergence in beliefs across tasks. While participants in the *Hard Task* give effort and luck almost equal weight in determining success (54 percent effort), this is not the case for participants in the *Easy Task*. Successful participants think that success is predominantly the result of effort (70 percent). Panel (b) of Fig. 2 shows the same relationship but splits the relationship along political orientation. Using pre-treatment information on participants' self-assessments in the political left-right spectrum, we observe a typical pattern for liberals and conservatives.²¹ Both liberals and conservatives think that effort is more likely to determine success if they are successful, though liberals to a slightly lesser degree. Conversely, if they are unsuccessful, both place only slightly more weight on effort than on luck.

In Table A7, we present estimates supporting the observations from Fig. 2. We regress meritocratic beliefs on a treatment indicator for the *Easy Task*, participants' political orientation, and its interaction with the treatment indicator. Receiving the bonus affects beliefs about the role of effort and luck: successful participants are more likely to believe that effort is a primary determinant of success than unsuccessful participants. The magnitude of the effect, 16 percentage points, is large (column 1) and matches what we have seen in Panel (a) of Fig. 2. Adding political orientation reveals that conservatives, compared to liberals, consistently think that effort is more important than luck in determining success. This conservative-liberal gap, however, is small, amounting to 4 percentage points, and we observe virtually no treatment heterogeneity along the political orientation. This implies that the magnitude of the treatment effect (16 percentage points) is the same for liberals and conservatives. Thus, the impact of success on meritocratic beliefs is unaffected by political orientation.

3.3 Reduced form: effects on inequality acceptance

We now turn to examining how economic success influences the acceptance of inequality. As we did in the analysis of the first stage, we first examine the pooled sample and then investigate the heterogeneous effects of political orientation using pre-treatment information on participants' self-reported classifications as liberal or conservative.

In Fig. 3, we present the implemented inequality among participants in the *Easy Task* and *Hard Task*. Panel (a) of Fig. 3 shows a strong divergence of implemented inequality across the two conditions: the implemented inequality in the *Easy Task* is twice as high as in the *Hard Task* (0.79 vs. 0.40). Panel (b) of Fig. 3 illustrates that economic success affects inequality

²¹ As mentioned above, participants had to indicate their political orientation on a six-point scale ranging from "strongly liberal" to "strongly conservative." We classify them as liberal if they indicate that they are "strongly liberal," "moderately liberal," and "slightly liberal." We also asked participants about their party affiliation (Republican, Democrat, other). Our results remain unchanged whether we use this information or a combination of both questions in our analysis.

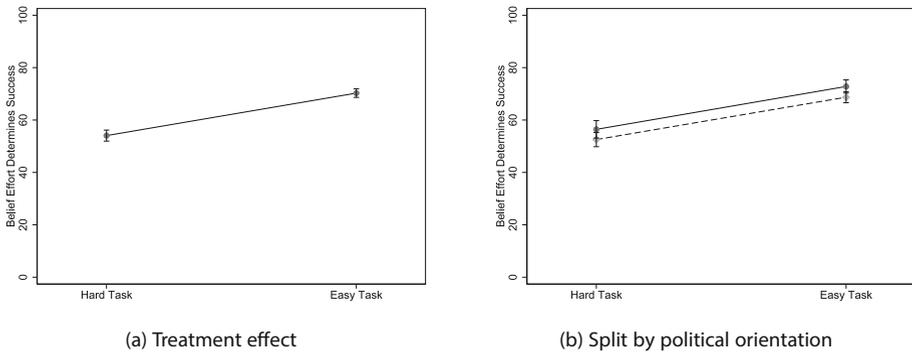


Fig. 2 Meritocratic beliefs by treatment and political orientation. **Notes:** The figure shows meritocratic beliefs across the different conditions. **Panel (a)** displays the belief “Effort Determines Success” across treatments (*Hard Task* and *Easy Task*). **Panel (b)** displays the belief “Effort Determines Success” across treatments (*Hard Task* and *Easy Task*) split by political orientation: conservatives (solid black line) and liberals (dashed light-gray line). Political orientation is measured on a six-point scale ranging from “strongly liberal” to “strongly conservative.” We classify participants as liberal if they indicate that they are “strongly liberal,” “moderately liberal,” and “slightly liberal,” and otherwise as conservatives. Error bars denote 95% confidence intervals

acceptance irrespective of political views: conservatives *and* liberals prefer a lower level of inequality when they are unsuccessful and they accept more inequality when they are successful.²² However, it is also true that liberals tend to implement lower inequality than conservatives. Specifically, the difference in the implemented inequality is about 0.08 points in the *Hard Task* (t-test, $p < 0.01$), while it is about 0.03 points in the *Easy Task* (t-test, $p = 0.06$).

Table 1 presents regressions showing how economic success shapes inequality acceptance. The first column confirms that the implemented inequality is about 0.4 points higher when participants received the bonus. Including covariates does not change the estimate (column 2). In the remaining specifications, we consider the role of political orientation. Columns 3–4 show that, on average, liberals implement slightly less inequality than conservatives, corroborating the observations from Fig. 3. However, the difference in the implemented inequality between successful and unsuccessful liberals remains substantial. Interacting treatment status with political views in columns 5–6 illustrates that the liberal-conservative gap gets smaller in the *Easy Task*. The coefficient estimate is positive (but statistically insignificant) and roughly half the difference between liberals and conservatives in the *Hard Task*. That is, while liberals tend to implement less inequality than conservatives, this difference is substantially smaller when liberals are successful (*Easy Task*) than when they are not (*Hard Task*).

Despite the substantial divergence in inequality acceptance that we observe, it is clear that fairness and merit considerations remain important. First, if participants were purely selfish, we would expect an equal income distribution (i.e. a Gini coefficient of 0) in the *Hard Task* and a completely unequal distribution (i.e. a Gini coefficient of 1) in the *Easy Task*. The implemented inequality, however, falls far short of these extremes in both conditions (0.4 and 0.79). Second, in both conditions, the implemented inequality seems to reflect a widespread view that hard work entitles participants to what they earn. While this is most obvious in the behavior of the successful, even the unsuccessful share this view as they do not equalize income within pairs. To more thoroughly examine the extent to which this behavior is driven

²² Figures A5 and A6 show the distribution of implemented inequality (pooled and separated by political orientation).

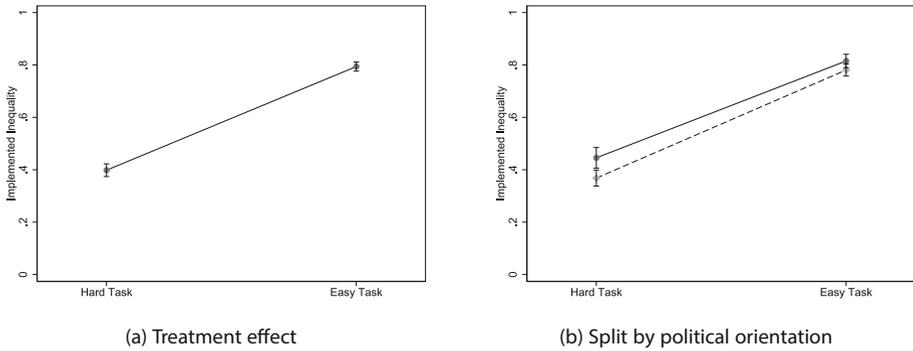


Fig. 3 Inequality acceptance by treatment and political orientation. **Notes:** The Figure shows inequality acceptance across the different conditions. **Panel (a)** displays implemented inequality across treatments (*Hard Task* and *Easy Task*). **Panel (b)** shows the implemented inequality across conditions split by political orientation: conservatives (solid black line) and liberals (dashed light-gray line). Political orientation is measured on a six-point scale ranging from “strongly liberal” to “strongly conservative.” We classify participants as liberal if they indicate that they are “strongly liberal,” “moderately liberal,” and “slightly liberal,” and otherwise as conservatives. Error bars denote 95% confidence intervals.

by the view that one deserves or is entitled to the rewards of hard work, we take advantage of our design that elicits beliefs about deservingness prior to the bonus announcement and *before* participants learned about the measurement of inequality acceptance. Thus, these beliefs reflect heterogeneity in participants’ deservingness unaffected by the bonus announcement and cannot reflect a preference for self-serving redistributive behavior.

Table 1 Regression: reduced form – inequality acceptance and political views

	Inequality Acceptance					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Easy Task</i>	0.395***/# (0.015)	0.394***/# (0.015)	0.396***/# (0.015)	0.395***/# (0.015)	0.370***/# (0.024)	0.367***/# (0.024)
Liberal			-0.056*** (0.015)	-0.058*** (0.016)	-0.077*** (0.025)	-0.080*** (0.026)
Liberal* <i>Easy Task</i>					0.043 (0.031)	0.045 (0.031)
Constant	0.398*** (0.012)	0.279** (0.114)	0.432*** (0.016)	0.330*** (0.114)	0.446*** (0.020)	0.338*** (0.115)
Observations	1825	1822	1825	1822	1825	1822
Controls	No	Yes	No	Yes	No	Yes
R-squared	0.272	0.277	0.277	0.282	0.278	0.283

Notes: OLS-regressions with robust standard errors in parentheses. “Inequality Acceptance” is the implemented inequality in a group, measured on a scale from 0 to 1. “*Easy Task*” is an indicator for participants randomly assigned to the *Easy Task*. “Liberal” is an indicator for participants who self-identified as strongly liberal, moderately liberal and slightly liberal. Controls include sex, age, household size, log income and dummy variables indicating white/European-American ethnicity, college degree, working, married and U.S.-regions. * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; # indicates significance, when using the two-stage linear step-up procedure by Benjamini et al. (2006) that controls for a false discovery rate at $q = 0.05$ for the treatment variable *Easy Task*

Table 2 presents the results and reproduces, for comparison, the treatment effect of economic success on inequality acceptance in columns 1–2. We focus on the specifications in columns 5–6, which include the prior beliefs about the deservingness of the bonus.²³ One can see that the magnitude of the treatment effect becomes substantially smaller and statistically insignificant compared to the estimates in columns 1–2 and that prior beliefs about deservingness explain the differences in inequality acceptance across conditions. This is true if we consider only prior beliefs about deservingness (column 5) or all three prior beliefs simultaneously (column 6). A higher prior belief in deserving the bonus payment is associated with a lower acceptance of inequality among unsuccessful participants, but not among successful participants. More precisely, a 1 percentage point higher prior belief in deserving the bonus payment is associated with a 0.2 percentage point lower inequality for unsuccessful participants but a 0.4 percentage point higher inequality for successful participants. Given the effect size of the interaction term, the joint effect of prior beliefs is also positive and significant (Wald test, $p < 0.01$). Together, this suggests that meritocratic views are a major driver of the observed inequality acceptance.

3.4 Two-stage estimates: the effect of meritocratic beliefs on inequality acceptance

Thus far, we have seen that random variation in the work assignment caused: (i) a change in beliefs about economic success depending on effort rather than luck (meritocratic beliefs) and (ii) a strong divergence in inequality acceptance, with successful participants accepting substantially higher inequality than unsuccessful participants. Next, we combine the first-stage and reduced-form effects in a two-stage analysis that allows us to estimate the causal impact of meritocratic beliefs on inequality acceptance.

The idea is that success induces participants to perceive that hard work pays off, and this perception leads to a greater acceptance of inequality. More precisely, we predict participants' inequality acceptance using their meritocratic beliefs, instrumenting these beliefs with the treatment, i.e. the random assignment to the *Easy Task* or the *Hard Task*. A critical assumption here is that participants are unaware of the treatment assignment. While participants can only learn their treatment status after deciding how much inequality to implement, our analysis in Section 3.2 revealed that participants update their beliefs about the task difficulty after completing the task (recall, however, that participants are still uncertain about task difficulty, particularly in the *Easy Task*). Consequently, we control for the priors in perceived task difficulty to account for heterogeneity in perceived certainty about treatment assignment.

We begin by estimating the two-stage model using the pooled sample with and without socio-demographic controls. In Table 3, column 1, one can see that for each percentage point higher belief about the role of effort and luck for success, inequality acceptance increases by 0.025 points. Including controls has virtually no effect on this estimate (column 2). In the remaining columns of Table 3, we split the sample along political orientation. Columns 3–4 display the results for liberals, and columns 5–6 display the results for conservatives. We obtain results of similar magnitude to those of the pooled sample for both subsamples,

²³ Prior beliefs about task difficulty and relative performance are also related to inequality acceptance (columns 3–4). We first note that in both treatments, participants who are more certain about task difficulty react more strongly by demanding less (*Hard Task*) and more inequality (*Easy Task*), respectively. Similarly, believing in stronger relative performance is associated with demanding a larger share of the pie. Importantly, we observe a large and significant treatment effect in both cases.

Table 2 Regression: prior beliefs and inequality acceptance

	Inequality Acceptance					
	(1)	(2)	(3)	(4)	(5)	(6)
<i>Easy Task</i>	0.395***# (0.015)	0.394***# (0.015)	0.273***# (0.041)	0.160***# (0.038)	0.068 (0.044)	-0.064 (0.058)
Prior Belief, Task Difficulty			-0.002*** (0.000)			-0.001*** (0.000)
<i>Easy Task</i> x Prior Belief, Task Difficulty			0.002*** (0.001)			0.002*** (0.001)
Prior Belief, Relative Performance				-0.003*** (0.001)		-0.001*** (0.001)
<i>Easy Task</i> x Prior Belief, Relative Performance				0.004*** (0.001)		0.002*** (0.001)
Prior Belief, Deserving Bonus					-0.002*** (0.000)	-0.001*** (0.001)
<i>Easy Task</i> x Prior Belief, Deserving Bonus					0.004*** (0.001)	0.003*** (0.001)
Constant	0.398*** (0.012)	0.279** (0.114)	0.395*** (0.117)	0.430*** (0.116)	0.490*** (0.116)	0.573*** (0.119)
Observations	1825	1822	1822	1822	1822	1822
Controls	No	Yes	Yes	Yes	Yes	Yes
R-squared	0.272	0.277	0.284	0.297	0.303	0.310

Notes: OLS-regressions with robust standard errors in parentheses. “Inequality Acceptance” is the implemented inequality in a group, measured on a scale from 0 to 1. “*Easy Task*” is an indicator for participants randomly assigned to the *Easy Task*. Prior beliefs elicited before the bonus payment and measured on a scale from 0–100: “Prior Belief, Task Difficulty:” likelihood of performing in the easy/hard task in %; “Prior Belief, Relative Performance:” relative performance rank among participants performing the same task; “Prior Belief, Deserving Bonus:” deserving the \$2-bonus payment in %. Controls include sex, age, household size, log income and a set of indicator variables for white/European-American ethnicity, college degree, working, married and U.S.-regions (North, East, South, Midwest, West). * $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; # indicates significance, when using the two-stage linear step-up procedure by Benjamini et al. (2006) that controls for a false discovery rate at $q = 0.05$ for the treatment variable *Easy Task*

Table 3 Regression: two-stage estimates of inequality acceptance

	All subjects		Liberals		Conservatives	
	(1)	(2)	(3)	(4)	(5)	(6)
Effort Determines Success	0.026***/# (0.002)	0.026***/# (0.002)	0.027***/# (0.003)	0.026***/# (0.003)	0.024***/# (0.003)	0.024***/# (0.003)
Observations	1825	1822	1122	1121	703	701
Controls	No	Yes	No	Yes	No	Yes
F-statistic	123.49	127.15	74.01	80.04	50.65	50.31

Notes: Two-stage estimates of the effects of meritocratic beliefs on inequality acceptance. The first stage estimates the impact of the exogenous work assignment on meritocratic beliefs and the second stage uses variation in meritocratic beliefs induced by the exogenous work assignment (controlling for perceived task difficulty, deservingness, and relative performance) to estimate the effect of meritocratic beliefs on inequality acceptance. “Inequality Acceptance” is the implemented inequality in a group, measured on a scale from 0 to 1. “Effort Determines Success” is the likelihood that the \$2 bonus payment depends on exerted effort in %. Columns 1-2 include the whole sample, columns 3-4 restrict the sample to liberals (participants who self-identified as strongly liberal, moderately liberal, and slightly liberal) and columns 5-6 restrict the sample to conservatives (participants who self-identified as strongly conservative, moderately conservative, and slightly conservative). Controls include sex, age, household size, log income and dummy variables indicating white/European-American ethnicity, college degree, working, married and U.S.-regions.

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; # indicates significance, when using the two-stage linear step-up procedure by Benjamini et al. (2006) that controls for a false discovery rate at $q = 0.05$

with and without controls. These findings suggest that meritocratic beliefs are shaped by economic success and that these meritocratic beliefs have a causal impact on the amount of inequality participants accept, which is independent of their political orientation.

A crucial question is whether the observed treatment effect might work through mechanisms other than meritocratic beliefs. We consider that economic rewards shift beliefs about the importance of effort for success, i.e. the random work assignment directly affects inequality acceptance only through meritocratic beliefs. However, the exclusion restriction would be violated if participants are aware of their treatment status or if the treatment works through other channels distinct from meritocratic views. We can evaluate these concerns. First, as noted above, we control for prior beliefs of task difficulty to account for heterogeneity in these beliefs. Moreover, more certainty about treatment status should be reflected in higher perceived deservingness. However, participants’ perceptions about task difficulty are uncorrelated with changes in perceived deservingness (see Fig. A8). Participants who are less certain about task difficulty update their perceived deservingness after learning about success in a similar fashion as more certain participants (4.98 (bottom-50%) vs 5.29 (top-50%), t -test $p = 0.76$). Second, we may be concerned that success (or failure) reduces perspective taking, which may affect how much one thinks others deserve and, thus, how much inequality one accepts. We note that both the successful and unsuccessful implement inequality far from the extremes, suggesting that they acknowledge others’ work efforts, and we also see that heterogeneity in participants’ priors about deservingness (which are unaffected by success) predicts inequality acceptance (see discussion in Section 3.3 above). Below, we also demonstrate that people are willing to pay for information about task difficulty and subsequently change how much inequality they accept in response to this information. This further suggests that success is unlikely to limit perspective-taking.

3.5 Willingness to revise meritocratic beliefs

In our setting, it is easy to maintain distorted beliefs to morally justify one's success and higher inequality, as there is substantial uncertainty about the task difficulty. To examine whether participants are willing to update their beliefs about task difficulty and thus verify their perceptions about the role of effort and luck in success, we elicited their willingness to pay for information about task difficulty with the help of an incentivized price list in the last part of the survey.²⁴ That is, participants had to choose between receiving an additional sum of money (which varied between 1, 3, 5, 7, 10, 20, 35, and 50 cents) or information about the difficulty of the completed task and their opponent's score.

In both tasks, we observe that a significant share of participants are interested in the information (see Fig. A7 for the distribution of participants' WTP). About 55 percent of participants display a positive WTP in the *Hard Task* and 48 percent in the *Easy Task*, resulting in an overall higher WTP in the *Hard Task* than in the *Easy Task*. In Table 4, we use interval regressions to support these observations statistically. Column 1 reveals that the average WTP in the *Hard Task* is about 7.4 cents, whereas it is about 14 percent (or 1 cent) lower in the *Easy Task*. Adding controls in column 2 leaves the coefficient of the treatment variable nearly unchanged. Moreover, we see that political views play no role in the willingness to obtain information: liberals and conservatives display a similar willingness to pay. Thus, the successful are less willing to resolve the uncertainty about the determinant of their success than the unsuccessful. While the difference seems small, we put these findings into perspective relative to the total earnings. The average WTP in the *Hard Task* corresponds to 10 percent of the total earnings, whereas it is only 2 percent in the *Easy Task*.

In summary, these findings suggest that participants are less likely to obtain information about task difficulty when they are successful, possibly to maintain their meritocratic beliefs, and this applies to liberals and conservatives to an equal degree. This may contribute to the persistence of belief, which can reinforce meritocratic narratives and, in turn, sustain existing social and economic hierarchies.

4 Conclusion

There is widespread support for meritocratic principles in modern societies. Few would disagree that people should be able to climb the ladder of success and reap its associated rewards if they only work hard enough. Using a large-scale online experiment, we provide evidence that economic success shapes meritocratic beliefs and inequality acceptance. Specifically, we document that success induces people to be more likely to believe they deserve their success and to misperceive the cause of success by placing undue weight on the role of luck. Success and failure also have implications for inequality acceptance: success results in twice as high inequality as failure. Leveraging our experimental design, we then demonstrate that stronger meritocratic beliefs drive higher inequality acceptance. Together, this suggests the existence of a feedback loop: economic success leads to the impression that success is deserved due to hard work, which in turn justifies greater acceptance of inequality, thereby reinforcing economic rewards. We present two potential reasons why such a feedback loop may persist. First, people of all political orientations flexibly adjust their meritocratic beliefs and inequality acceptance to their economic interests, thus embracing the meritocratic narrative. Second, we observe a reluctance to obtain information that corrects misperceptions about the cause

²⁴ In the Supplementary Information, we also examine whether resolving the uncertainty about task difficulty changes the inequality they implement.

Table 4 Regression: willingness to pay for information

	Willingness to Pay			
<i>Easy Task</i>	-0.991* (0.535)	-1.109**/# (0.531)	-0.990* (0.534)	-1.109**/# (0.531)
Liberal			-0.635 (0.565)	-0.213 (0.579)
Constant	7.367*** (0.403)	-0.892 (3.832)	7.760*** (0.558)	-0.697 (3.816)
Observations	1776	1773	1776	1773
Controls	No	Yes	No	Yes

Notes: Interval-Regression with robust standard errors in parentheses. The sample includes only participants with consistent answers, i.e. we dropped 49 participants who switched multiple times between a monetary amount and receiving information. “Willingness to Pay” (in cents) is the willingness to pay for receiving information about the task difficulty and the score of the other participant, categorized in 9 intervals [0, 1]; [1, 3]; [3, 5]; [5, 7]; [7, 10]; [10, 20]; [20, 35]; [35, 50]; [50, ∞). “*Easy Task*” is an indicator for participants randomly assigned to the *Easy Task*. “Liberal” is an indicator for participants who self-identified as strongly liberal, moderately liberal and slightly liberal. Controls include sex, age, household size, log income and dummy variables indicating white/European-American ethnicity, college degree, working, married and U.S.-regions (North, East, South, Mid-west, West).

* $p < 0.10$, ** $p < 0.05$, *** $p < 0.01$; # indicates significance, when using the two-stage linear step-up procedure by Benjamini et al. (2006) that controls for a false discovery rate at $q = 0.05$ for the treatment variable *Easy Task*

of success. Both factors can contribute to the persistence of meritocratic beliefs, and as a result, to increased inequality.

Our results contribute to and add new causal evidence to a rekindled debate about the merits of meritocracy. Some have drawn a bleak picture of meritocratic ideals in this debate, arguing that it benefits those who are already in advantageous positions (e.g. Frank 2016; Sandel 2020; Markovits 2019). While meritocracy emphasizes the importance of a level playing field, reality diverges sharply from this ideal in most countries. In the United States, for example, social mobility is among the lowest across developed countries (Corak 2006; Chetty et al. 2014, 2017). These unequal opportunities are strikingly visible in the college admission process. The most selective colleges in the US, which also offer the best earning prospects, predominantly enroll students from affluent families. The share of students at elite colleges coming from families in the top 1% of the income distribution is higher than the share from the bottom 50% (Chetty et al. 2020). Although these students from privileged families have to work hard for admission, they clearly have a much easier route to success than others. Our setting mirrors this socio-economic reality, and the findings demonstrate how success in the college admission process can easily reinforce the impression that one has worked hard and that other factors are less relevant. Because this belief creates a perception of deservingness and may persist across generations, it can widen inequality and further strengthen the meritocratic ideal.

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Data Availability See supplementary information

Declaration

Competing interests The authors declare no competing interests.

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