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# Socioeconomic Inequality in Life Expectancy: Perception and Policy Demand

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# Socioeconomic Inequality in Life Expectancy: Perception and Policy Demand\*

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## Abstract

Using survey experiments in the United States and Germany with 12,000 participants, we examine perceptions of life expectancy inequality between rich and poor people. The life expectancy of the poor is underestimated more than that of the rich, leading to exaggerated perceptions of inequality in both countries. Receiving accurate information narrows concerns about this inequality. However, the impact of information on policy demand is limited because support for policies addressing life expectancy for the poor is consistently high, regardless of varying perceptions of inequality. We conclude that there is strong and unconditional public support for health equity policies.

JEL: C90, D71, D83, I14, I18

Keywords: socioeconomic inequality in life expectancy, health care, information treatment, survey experiment

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# 1 Introduction

One of the most fundamental aspects of human well-being is the individual lifespan. Economic considerations pale in comparison and become meaningful only while individuals are alive. Moreover, aggregate and group-specific mortality patterns can offer insights into the overall functioning of society, providing valuable information that extends beyond conventional measures of material well-being (Case & Deaton, 2023; Miller & Bairoliya, 2023). It is therefore of general concern that life expectancy varies considerably by socioeconomic status.<sup>1</sup> In the United States, for instance, high earners outlive the poor by about 10 years (Chetty et al., 2016).<sup>2</sup> Even in a country like Germany, which has universal health care and less economic inequality than the United States, the socioeconomic inequality in life expectancy easily reaches 7 years (Lampert et al., 2019). There is also evidence that socioeconomic inequalities in life expectancy have widened in recent decades, adding to the severity of the problem.<sup>3</sup>

When it comes to the question of who is responsible for correcting this fundamental dimension of inequality, the public assigns the highest responsibility to the government.<sup>4</sup> To enable and design appropriate policy reforms, it is therefore crucial to understand the constraints on governments imposed by voters' knowledge and preferences regarding socioeconomic inequalities in life expectancy. Are voters fully aware of the extent of life expectancy inequality? Might misperceptions limit their concern and demand for policy action? How dispersed are attitudes about the role of government, and could this dispersion make it difficult to build majorities for reform?

We contribute to these questions by providing the first systematic analysis of the perceived socioeconomic inequality in life expectancy and the policy demand associated with this inequality. Our analysis leverages a pre-registered, large-scale survey conducted be-

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<sup>1</sup> See Marmot (2005); Mackenbach et al. (2008); Braveman et al. (2010); Chetty et al. (2016); Lampert et al. (2019).

<sup>2</sup> Throughout the paper, our definition of rich and poor individuals is in terms of the top and bottom deciles of the household income distribution. We define socioeconomic inequality in life expectancy as the difference in life expectancy between these deciles.

<sup>3</sup> See Meara et al. (2008); Olshansky et al. (2012); National Academies of Sciences, Engineering, and Medicine and Committee on Population (2015); Bosworth et al. (2016).

<sup>4</sup> In our survey, approximately 60% of the respondents in the United States and 80% of the respondents in Germany say that the government has a lot responsibility for reducing the differences in life expectancy between rich and poor people (Appendix Figure B-1). This is far more than the perceived responsibility of any other potential actor such as charities, rich individuals, trade unions, churches, and private companies. Moreover, survey evidence by the PEW Research Center shows that 72% of Americans agree that making health care more affordable—a policy that would mainly benefit the poor—should be a top priority for the federal government (Horowitz et al., 2020).

tween August and November 2022 in the United States and Germany—two high-income countries with distinct health care systems and potentially different perceptions of inequality in life expectancy, its origins, the role of government, and demanded policy actions. In total, we surveyed 6,000 participants in each country and obtained nationally representative samples of the adult population between the ages of 18 and 70. In the survey, we first elicit perceptions of life expectancy of men and women in the bottom and top 10% in terms of household income. To reduce noise due to heterogeneous perceptions of average life expectancy and income inequality, we provide survey participants with the average life expectancy by gender and the income thresholds associated with the bottom 10% and top 10% of the income distribution. We then randomly assign half of the sample an information treatment that reveals the actual socioeconomic inequality in life expectancy. In the post-treatment survey, we collect information on participants’ concerns about socioeconomic inequality in life expectancy and their support for policies that address a wide range of social determinants of health. Informed by health equity campaigns of the [World Health Organization \(2019\)](#) and the [U.S. Department of Health and Human Services \(2023\)](#), we elicit support for 12 policies in the areas of health care access, economic stability, living conditions, education, and working conditions.<sup>5</sup> Finally, we ask the participants about their beliefs and attitudes regarding health, government, and society, and we collect additional socioeconomic characteristics.

Defining socioeconomic inequality in life expectancy as the difference in life expectancy between the top 10% and the bottom 10% of the household income distribution (averaged across men and women), we find that this inequality is overestimated by 5 years in the United States and 4 years in Germany. While life expectancy is underestimated for both the rich and the poor, respondents underestimate the life expectancy much more for the poor (by 8 years in the United States and 6 years in Germany) than for the rich (by 3 years in the United States and 2 years in Germany). This result holds across socio-demographic groups and is only slightly more pronounced for young, educated, rich, and left-leaning respondents. Importantly, we document substantial individual heterogeneity in perceived socioeconomic inequality in life expectancy. In both countries, about two-

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<sup>5</sup> A large body of literature suggests that the correlation between income and health is due to reverse causality and a variety of other factors (such as education, health behavior, access to health care, parental resources, and genes), while the causal role of income appears to be more modest ([Link & Phelan, 1995](#); [Cutler et al., 2006, 2011](#)). Our approach does not take a stance on the underlying mechanism and offers respondents a set of policy measures that accommodate different beliefs about the roots of the health gradient.

thirds of participants overestimate the inequality, while about one-third underestimate it. Notably, the range of misperceptions, i.e., perceived inequality relative to actual inequality, is rather wide and does not change much when we incentivize the accuracy of perceptions. Overall, these patterns suggest that society is largely uninformed about the actual socioeconomic inequality in life expectancy.

In both countries, we find a strong correlation between perceived socioeconomic inequality in life expectancy and the concern that this inequality constitutes a serious problem. While the control-group average shows that 47% of respondents agree that socioeconomic inequality in life expectancy is a serious or very serious problem, we observe a gap of 18 percentage points (0.50 of a standard deviation on a standardized 5-point Likert scale) in this figure between those who overestimated inequality and those who underestimated it. The information treatment closes 85% of this gap by increasing the share of respondents who consider this inequality a serious or very serious problem by 12 percentage points among those who underestimated inequality (0.33 SD) and by decreasing this share by 4 percentage points (0.09 SD) among those who overestimated the inequality. The treatment effects, as well as the misperceptions, are quantitatively very similar for the United States and Germany.

Perceived socioeconomic inequality in life expectancy is also correlated with general policy demand, which we measure by asking respondents whether they think the government should do more to improve the life expectancy of poor people. However, the association between perceptions and general policy demand is noticeably weaker than the link between perceptions and concerns. The gap in the share of respondents who agree or strongly agree with the general policy demand question is 7.5 percentage points (0.19 SD) between those who overestimate the inequality and those who underestimate it. The information treatment reduces this gap by significantly increasing general policy demand among those who underestimated the inequality and weakly decreasing general policy demand among those who overestimated it. Yet, the treatment effects are quantitatively very small.

In further analysis, we examine the robustness and persistence of our results. To mitigate possible concerns about priming, experimenter demand effects, or social desirability bias, we show that the treatment effects vary sensibly with the size and direction of misperception. To test whether the inelastic policy demand is due to limited attention, we

split the sample into respondents who pass or fail a standard attention test. We show that the treatment effect on general policy demand remains weak even for attentive respondents. Moreover, regardless of respondent attention, the treatment effect on general policy demand becomes insignificant in the follow-up survey conducted two weeks after the main survey. By contrast, the treatment effect on concerns is substantially stronger for attentive respondents in both the main and the follow-up survey. We also discuss possible effects of the COVID-19 pandemic on our results. Yet, the treatment effects for those who believe that COVID-19 changed life expectancy and those who do not are very similar.

The association between perceived socioeconomic inequality in life expectancy and policy demand weakens further when we consider specific policies. The correlation between perceptions and an index combining all our twelve proposed specific policies is small. Moreover, the correlation remains small for each policy area represented in the index. The provision of information has no detectable effect on the demand for specific policies. Consistent with the results for general policy demand, large majorities of 70% to 80% of respondents, including those with substantial misperceptions about socioeconomic inequalities in life expectancy, favor or strongly favor implementing almost all specific policies to address the life expectancy of the poor.

Overall, we demonstrate that perceptions and concerns about socioeconomic inequality in life expectancy vary widely within society. However, the demand for the government to improve the life expectancy of the poor is high across different perceptions of inequality, therefore providing information has only a weak effect on policy demand. To some extent, this result is in line with previous literature studying inequalities in other domains, such as economic inequality (Kluegel & Smith, 1986; Bartels, 2005; Luttmer & Singhal, 2011; Cruces et al., 2013; Kuziemko et al., 2015; Karadja et al., 2017; Alesina et al., 2018; Hoy & Mager, 2021; Fehr et al., 2022), educational inequality (Lergetporer et al., 2020), the gender wage gap (Settele, 2022), and racial discrimination and immigration (Grigorieff et al., 2020; Haaland & Roth, 2023), which often documents a low elasticity of policy demand with respect to information treatments. Several studies find important heterogeneity in effects when studying populations with different political views and different levels of trust in government (e.g. Kuziemko et al., 2015; Alesina et al., 2018; Lergetporer et al., 2020; Fehr et al., 2022). We provide some evidence that this is also the case in our survey. That

is, treatment effects are slightly more pronounced for respondents who are left-leaning or centrist, trust the government, and are altruistic. Yet, despite small differences, in our survey the treatment effects are generally very stable across different population groups.

We conclude that, despite imprecise knowledge about socioeconomic inequalities in life expectancy, there is broad and high support for (potentially costly) public policies targeting the life expectancy of the poor. The robustness of this support across perceptions of inequality, sociodemographic characteristics, political attitudes, as well as across the United States and Germany, suggests that respondents might feel morally obliged to support health equity policies and are unwilling to trade off the lifespan of the poor against the monetary resources needed to implement the policies. In this way, our findings are consistent with a large literature in psychology arguing that some domains, such as health, are protected (sacred) from trade-offs with more secular values, such as money, consumption, or employment (Tetlock et al., 2000; Hanselmann & Tanner, 2008). This conclusion is also in line with recent survey evidence from the COVID-19 pandemic, during which many people favored shutdown policies even at high economic costs (Lesschaeve et al., 2021; Settele & Shupe, 2022).

Our results also contribute to the literature measuring perceptions of inequality in different domains. A typical, though not universal, finding is that economic inequality is often underestimated (Norton & Ariely, 2011; Hvidberg et al., 2023). For socioeconomic inequality in life expectancy, we find that overestimation is the more common type of error. Previous literature emphasizes the perception of inequality, rather than the actual level of inequality, as a key determinant of individual policy preferences (Gimpelson & Treisman, 2018). In our setting, policy demand is relatively stable across a wide range of individual perceptions of inequality, and across two countries with different levels of actual inequality, suggesting that policy preferences may be driven substantially by other motives (consistent, e.g., with the sacred value hypothesis).

The remainder of the paper is organized as follows. Section 2 describes our survey and the included information experiment. Section 3 documents the perceptions of life expectancy of rich and poor individuals in the United States and Germany. In Section 4, we present the main results of the information experiment. In Section 5, we discuss potential mechanisms. Section 6 concludes.



## 2 Survey and Experimental Design

We devised large-scale population surveys in the United States and Germany to examine people’s perceptions of the socioeconomic inequality in life expectancy, defined as the difference in life expectancy between individuals in the top 10% and bottom 10% of the household income distribution. We targeted a sample size of 6,000 individuals for each country to have enough observations to analyze both positive and negative misperceptions of the socioeconomic inequality in life expectancy. For each country, we also collected additional information about the respondents’ policy preferences, beliefs, and various socioeconomic characteristics. Figure 1 provides an overview of the survey structure.<sup>6</sup> Including a follow-up survey, which was carried out two weeks after the main survey to test for the persistence of the effects, the data were collected between August 15 and November 30, 2022. The interviews were conducted by the commercial survey company Schlesinger Group. The pay per completed survey was €2 in the United States and €1.78 in Germany. The median response time for the survey was 19.5 minutes in the United States and 17.6 minutes in Germany (see Appendix Figure B-2 for the distribution of response times). The samples were drawn to be representative of the country’s population between the ages of 18 and 70 years in terms of age, gender, geographic region, educational attainment, and ethnicity (only in the United States). The majority of respondents (78%) did not perceive the survey to be politically biased.<sup>7</sup>

### 2.1 Measuring Life Expectancy Perceptions

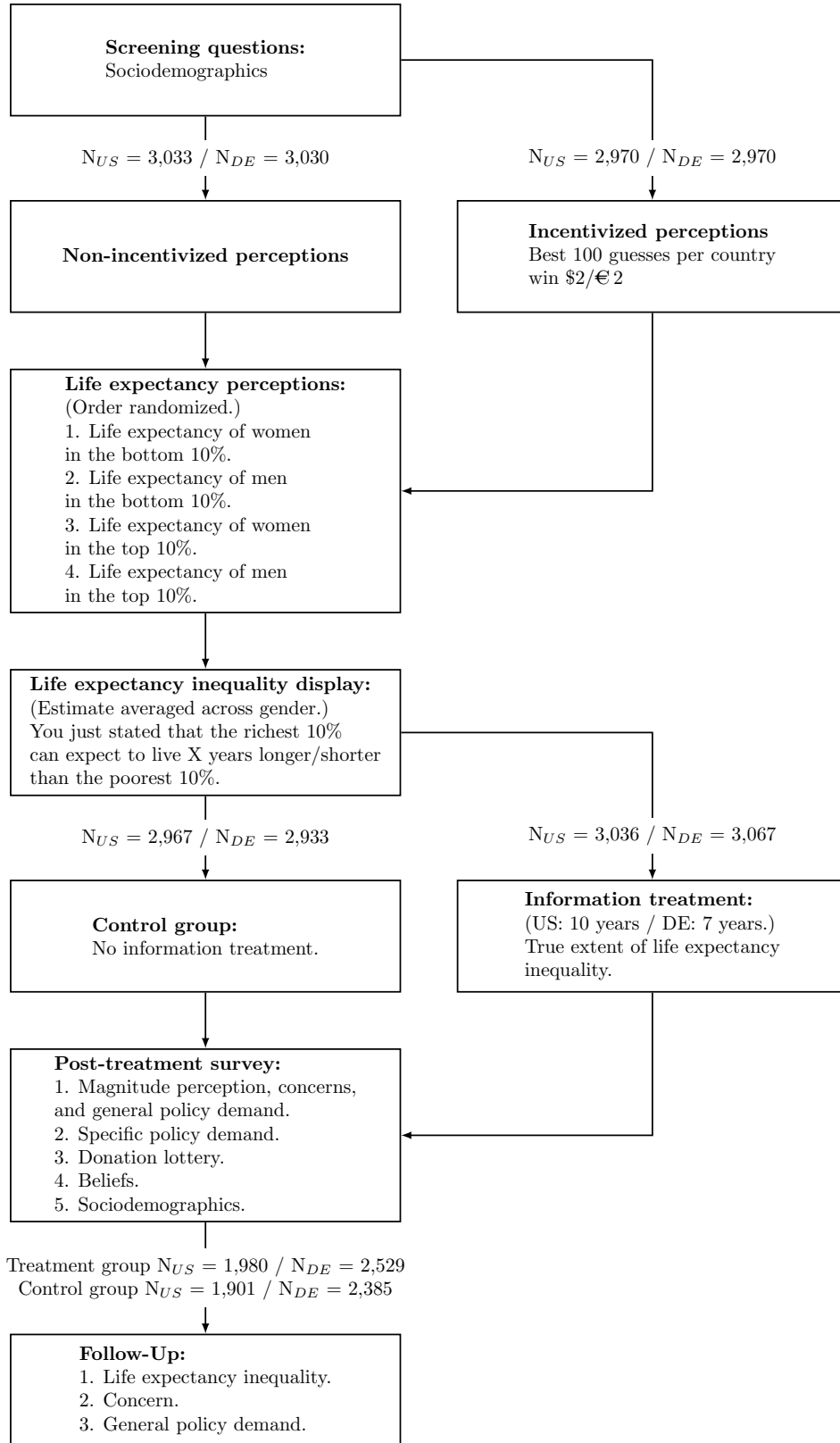
After a series of screening questions at the beginning, we ask participants to tell us their perceptions of the current life expectancy at birth for women in the bottom 10% of the household income distribution, men in the bottom 10% of the household income distribution, women in the top 10% of the household income distribution, and men in the top 10% of the household income distribution. Each question appears on a different screen, and the order of the screens is randomized. We ask for gender-specific life expectancies because women on average have a much higher life expectancy than men (about five to six years in both countries). Thus, responses to gender-neutral perception questions

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<sup>6</sup> Appendix D contains screenshots of the survey instrument.

<sup>7</sup> Not surprisingly for a survey about inequality, there is a fraction of respondents (18%) who perceived the survey to be left-wing biased. Another fraction of respondents (4%) perceived the survey to be right-wing biased.

**Figure 1: Overview of the Survey and the Information Experiment**



*Notes:* The figure shows the setup of the experiment for both countries. The planned total number of observations was 6,000 participants in each country. Half of the sample is assigned to the treatment group.

may be influenced by different perceptions of gender ratios at different income positions. To reduce measurement error due to heterogeneity in perceptions of life expectancy by gender, we provide official information on the average life expectancy of women when we ask about the life expectancy of women, and likewise when we ask about the life expectancy of men. Because the literature documents that people are uncertain about the distribution of income (Engelhardt & Wagener, 2018; Hoy & Mager, 2021; Bublitz, 2022; Hvidberg et al., 2023), we also always state the income level that is associated with either the bottom 10% or the top 10% of the income distribution.

Note that we do not ask directly about the difference in life expectancy between the bottom 10% and the top 10% for three reasons: First, a direct estimate of the socioeconomic inequality in life expectancy would not allow us to test whether misperceptions of the socioeconomic inequality in life expectancy are due to misperceptions of the life expectancy of the rich or the poor. Second, it is arguably more cognitively demanding to estimate the socioeconomic inequality in life expectancy than to estimate the life expectancy of rich and poor men and women in separate steps, with gender-specific average life expectancies being given. Third, asking directly about the difference in life expectancy may have revealed the main target parameter of the study right at the outset. In the follow-up survey, however, we ask directly for an estimate of the difference in life expectancy between rich and poor people and without making the question specific about the gender. Reassuringly, we find similar data patterns there (see Section 5 for further discussion).

For half of the sample, the elicitation of the life expectancy perceptions is incentivized with \$2/€2 (United States/Germany) awarded to the 100 respondents whose answers to the four perception questions come closest to the true answer.<sup>8</sup> Providing incentives may lead to more accurate responses, increase attention, and reduce the risk of a potential partisan bias in responses (Haaland et al., 2023; Stantcheva, 2023). However, the literature also shows that incentives usually have no effect (Stantcheva, 2023) and can sometimes lead to increased online search (Grewenig et al., 2020). Because the elicitation stage occurs early in the survey, and because the true life expectancy by income level is not readily available through an online search, we do not expect any significant differences in perceptions between incentivized and non-incentivized respondents.

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<sup>8</sup> Perception accuracy is calculated based on the sum of the absolute errors across all four predictions.

After the elicitation stage, each respondent receives a screen that summarized the respondent’s assessment by stating the implied gender-averaged difference in the reported life expectancy between the top 10% and the bottom 10% of the income distribution (see Appendix Figure D-16). This step ensures that all respondents are reminded of their perceived socioeconomic inequality in life expectancy.

## 2.2 Information Treatment

In the next stage of the survey, we apply an information treatment to a random half of the sample, providing treated respondents with an estimate of the true socioeconomic inequality in life expectancy. The estimate is based on Chetty et al. (2016) for the United States and Lampert et al. (2019) for Germany, who report the life expectancy of women and men at different points in the income distribution based on the most recent data.<sup>9</sup> In the United States, the true socioeconomic inequality in life expectancy is equal to 10 years. In Germany, the true socioeconomic inequality in life expectancy is slightly smaller, but still amounts to 7 years. Only less than 4% of all treated respondents find the information somewhat or very untrustworthy. To increase attention, respondents are required to confirm that they have reviewed the information in order to proceed. In addition, the preceding introductory screen alerted them to the forthcoming information about the true socioeconomic inequality in life expectancy (see Appendix Figures D-17 and D-18).

## 2.3 Outcomes

*Magnitude, concerns, and general policy demand.*—Directly after the treatment stage, the next screen elicits respondents’ perceptions of the magnitude of the socioeconomic inequality in life expectancy, their concerns about the socioeconomic inequality in life expectancy, and their general policy demand for improving the life expectancy of poor people. In particular, we ask respondents whether they think the differences in life expectancy between rich and poor people are very small, small, neither small nor large, large, or very large to capture their perceptions of the magnitude of the socioeconomic inequality in life expectancy. To elicit their concern, we ask whether they think that differences in life expectancy between rich and poor people are not a problem, a small problem, a problem, a serious problem, or a very serious problem. To assess respondents’

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<sup>9</sup> See Appendix C for details of the calculations of socioeconomic inequality in life expectancy.

general policy demand, we ask whether the government should do more to improve the life expectancy of poor people on a 5-point Likert scale from strongly disagree to strongly agree.

We evaluate these outcomes in two ways. First, following the procedure of [Kling et al. \(2007\)](#), we construct a linear outcome index based on the answers to the three domains. The index is constructed as an equally weighted average of the three variables, which have been transformed into standardized  $z$ -scores by subtracting the control-group mean and dividing by the control-group standard deviation of the joint sample of both countries. Index aggregation addresses concerns of multiple hypothesis testing by combining all outcome indicators into one measure and improves the statistical power to detect effects ([Anderson, 2008](#); [Heller et al., 2017](#)). Second, we also examine the shares of responses in the top two response categories for each item. That is, we construct dummy variables that are one (otherwise zero) if respondents answer large or very large for the magnitude question, serious or very serious for the concern question, and agree or strongly agree for the general policy demand question. We also construct an index dummy that is one (otherwise zero) if all three dummy variables are one for a given respondent. This index dummy serves as an indicator for individuals who perceive the magnitude of socioeconomic inequality in life expectancy to be large, are concerned about the problem, and agree that the government should do more to improve the life expectancy of the poor.

*Self-reported policy demand.*—While we assess the general policy demand in the previous set of outcomes, we also examine respondents’ demand for specific policies to address socioeconomic inequality in life expectancy. We draw on reports from the [World Health Organization \(2019\)](#) and the [U.S. Department of Health and Human Services \(2023\)](#) that outline five key areas for achieving health equity. These areas are health care access, economic stability, living conditions, education, and working conditions. From these areas, we have extracted 12 policies that are suitable for improving the health of the poor or compensating the poor for having a lower health status. Appendix Table [A-1](#) provides an overview of the items in English and German. Each item had to be answered on a 5-point Likert scale ranging from strongly oppose to strongly favor. To address the potential problem that respondents may not be able to relate specific policies to how they address the life expectancy of poor people, we introduce each set of specific policies with an explanation of how the policies are supposed to work out. For example, for health policies, we

state at the beginning that *some people believe that poor individuals don't get the health care services they need because they lack insurance, cannot afford them or live too far way from providers. Policies to increase access to health care aim to help people get the care they need.* To mitigate concerns about multiple hypothesis testing and to improve the statistical power to detect effects, we construct policy indices that cover the items of each category following again the procedure of [Kling et al. \(2007\)](#). We also construct a specific policy demand index that combines the five area-specific indices. For standardization, we again use the control-group mean and the control-group standard deviation of the joint sample of both countries.

*Experimenter demand effects and social desirability bias.*—The literature discusses the problem that stated preferences are susceptible to experimenter demand effects and social desirability bias ([Haaland et al., 2023](#); [Stantcheva, 2023](#)). One reason is that the statements usually have no consequences for the respondent. While recent evidence suggests that this problem is of little empirical relevance ([de Quidt et al., 2018](#); [Mummolo & Peterson, 2019](#)), we attempt to mitigate such concerns by introducing a degree of political consequentiality when respondents express their preferences for specific policies. We do this by announcing at the beginning of the specific policy questions that the average level of support for each policy will be forwarded to the politicians in their State Legislature/General Assembly after the survey is completed (see, e.g., [Lergetporer & Woessmann, 2022](#)).

Other papers attempt to validate self-reported policy views by real-stakes questions. In particular, the donation to a charity related to the topic of interest is commonly used to lend credibility to the stated policy preferences. In our survey, each respondent participates in a lottery with a chance to win \$500/€500 (United States/Germany) and is given the option to keep the money for themselves or to donate (a part of) the money to charities from a given list (see, e.g., [Settele, 2022](#); [Alesina et al., 2023](#), for similar setups).<sup>10</sup> Importantly, respondents have to make this choice before they know if they have won.

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<sup>10</sup> For each country, we select charities that are known for helping the poor or caring for the health of the poor. For the United States, we choose Feeding America, Salvation Army, Patient Access Network Foundation, and American Red Cross. For Germany, we choose Tafel, Arbeiterwohlfahrt, Armut und Gesundheit in Deutschland, and Deutsches Rotes Kreuz.

## 2.4 Properties of the Analytical Sample

In total, our partner collected 6,003 completed surveys in the United States and 6,000 completed surveys in Germany. To reduce the impact of outliers, our analytical sample selects respondents with prior perceptions between the 5th and 95th percentiles of the distribution.<sup>11</sup> This yields an analytical sample with 5,432 observations in the United States and 5,400 observations in Germany. As shown in Appendix Tables A-2 and A-3, the samples are representative in terms of age, gender, geographic region, educational background, and ethnicity (in the United States). Notably, however, both samples contain a lower proportion of participants with very low levels of education, which is a common tendency in samples from online opt-in panels (Malhotra & Krosnick, 2007). Appendix Tables A-5 and A-6 provide extensive summary statistics for our surveys. We can also infer from the tables that there are barely any statistically or economically significant differences between the treatment and control groups, or between the incentivized and non-incentivized samples, on a number of individual attributes.

Before we elicit perceptions of life expectancy in the main survey, we include a question to test the attention of the respondents (see Appendix Figure D-8 for a screenshot). Overall, 62% of respondents pass this test. While there are studies with similar attention levels (see, e.g., Chopra et al., 2022), some studies obtain higher attention levels (often above 90%) in online surveys (Alesina et al., 2018; Bottan & Perez-Truglia, 2022; Alesina et al., 2023). While some papers drop inattentive respondents from their analysis to strengthen internal validity (see, e.g., Haaland & Roth, 2020; Enke & Graeber, 2023), Stantcheva (2023) points out that dropping inattentive respondents from the analysis may affect the external validity of the estimates. To address both considerations, we generally keep inattentive respondents in the analytical sample and provide extensive sensitivity checks of the treatment effects with respect to respondent attention.

## 2.5 Estimation Approach

While describing people’s perceptions of socioeconomic inequality in life expectancy in the United States and Germany is one major innovation of our paper, we also examine the extent to which perceptions causally affect people’s sense of the magnitude, their

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<sup>11</sup> This procedure drops the respondents who expect the richest 10% to live shorter than the poorest 10% or who expect the richest 10% to live at least 37.5 (25) years longer than the poorest 10% in the United States (Germany).

concerns, and their policy demands for addressing the life expectancy of poor people. To do so, we use the random information treatment to update individuals’ perceptions of socioeconomic inequality in life expectancy. Importantly, we expect opposite effects of the information treatment for those who overestimated the socioeconomic inequality in life expectancy compared to those who underestimated it.<sup>12</sup>

We use the following regression setup to test for (potentially asymmetric) information treatment effects:

$$y_i = \beta_0 + \beta_1 T_i + \beta_2 T_i \times \text{Overestimated}_i + \beta_3 \text{Overestimated}_i + \mathbf{X}'_i \gamma + \epsilon_i. \quad (1)$$

In this regression,  $y_i$  refers to one of the outcomes mentioned earlier (see Section 2.3) and the index  $i$  denotes individual responses. The term  $T$  is a dummy variable that equals one if the individual belongs to the treatment group and zero otherwise. The term “Overestimated” is also a dummy variable that indicates whether the individual overestimated the socioeconomic inequality in life expectancy. The vector  $\mathbf{X}$  contains the control variables summarized in Appendix Tables A-5 and A-6 to increase the precision of the estimates. Finally,  $\epsilon_i$  is an idiosyncratic error term.

The coefficient  $\beta_1$  gives the effect of the information treatment on the outcome variable for those who underestimated the socioeconomic inequality in life expectancy. Similarly, the linear combination  $\beta_1 + \beta_2$  yields the treatment effect for those who overestimated the socioeconomic inequality in life expectancy. The coefficient  $\beta_3$  reports the association between the outcome and the overestimation of socioeconomic inequality in life expectancy (with the correlation of the control variables partialled out).

Our large sample size allows us to estimate the effect of the treatment along the distribution of perceptions to study whether larger misperceptions are associated with larger adjustments in the outcomes. We do this by partitioning the misperceptions into four-year bins and interacting the specific indicator for each bin with the treatment indicator.

## 2.6 Follow-up Survey

Approximately two weeks after the main survey, participants are invited to an obfuscated follow-up survey, where we again ask about their perceptions of life expectancy inequality, their concerns, and their general policy demand (see Appendix D.2 for details on the sur-

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<sup>12</sup> In principle, we expect that the information treatment should not have a strong effect on those who have accurate perceptions. We discuss this issue in more detail in the results section.



vey). The follow-up survey allows us to examine the persistence of treatment effects, and also allows us to consider the relevance of potential experimenter demand and attention effects in the main survey. We use four measures to obfuscate the survey. First, we (truthfully) state on the first screen that the follow-up survey is part of a scientific qualification work by young researchers. Second, the topic of the survey is changed to environmental and inequality issues. Third, the first questions in the survey are about climate change perceptions, renewable energy, and electric cars. Only after these questions are the respondents asked to state their (posterior) perceptions of socioeconomic inequality in life expectancy. More specifically, we ask for their best guess about how much longer the richest 10% live compared to the poorest 10%. This change in the wording of the perception question compared to the main survey should have led to a further obfuscation of the follow-up survey. Fourth, we also ask about other inequalities. For instance, we ask respondents about their perceptions of income inequality and about how much later the richest 10% become dependent on care compared to the poorest 10%. We then ask about their concerns about socioeconomic inequalities in life expectancy and whether the government should do more to improve the life expectancy of poor people.

The sample size in the follow-up survey is 3,881 for in United States and 4,914 in Germany. This corresponds to a recontact rate of 65% in the United States and 82% in Germany, which is comparable to what other studies report (Karadja et al., 2017; Roth & Wohlfart, 2020; Fehr et al., 2022). Importantly, attrition from the sample is not correlated with the treatment.

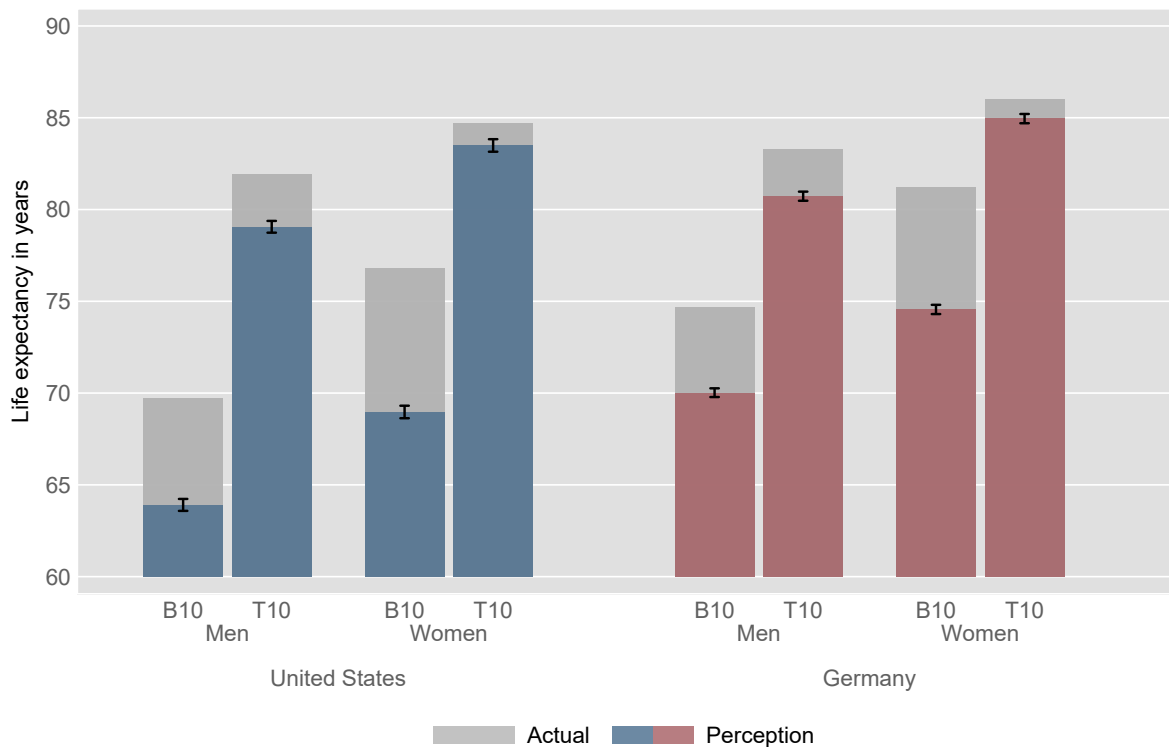
### 3 Perceptions of Socioeconomic Inequality in Life Expectancy

Figure 2 provides the first systematic evidence on the perceptions of life expectancy of poor and rich population groups in the United States and Germany, separately for women and men. In the United States, people think that men in the bottom 10% of the income distribution have a life expectancy of 63.9 years, while in fact their life expectancy is 69.7 years. The estimate for men in the top 10% of the income distribution is more accurate, but still shows an underestimation of 2.8 years (perception of 79.1 years versus actual of 81.9 years). Overall, this pattern leads Americans to *overestimate* the socioeconomic inequality in life expectancy for men by 3 years (perception of 15.2 years versus actual of 12.2 years). For women, they overestimate the socioeconomic inequality by 6.6 years

(perception of 14.5 years versus actual of 7.9 years). Again, this result is due to a much stronger underestimation of the life expectancy for the bottom 10% (69 versus 76.8) than for the top 10% (83.5 versus 84.7).

The same general pattern holds for Germany. Respondents overestimate actual socioeconomic inequality in life expectancy by 2.1 years for men (perception of 10.7 years versus actual of 8.6 years) and by 5.6 years for women (10.4 versus 4.8). Both Germans and Americans strongly underestimate the life expectancy of the bottom 10%, leading to an overestimation of socioeconomic inequality in life expectancy by 4 to 5 years when averaged across gender.<sup>13</sup>

**Figure 2: Perceived Life Expectancy of Men and Women in the Bottom 10% and Top 10% of the Income Distribution**



*Notes:* The figure shows the average perceived and actual life expectancy of men and women in the bottom 10% (B10) and the top 10% (T10) of the household income distribution for the United States and Germany. The whiskers around the averages indicate 95% confidence intervals. The actual numbers are based on [Chetty et al. \(2016\)](#) for the United States and [Lampert et al. \(2019\)](#) for Germany (see Appendix C for details). Averages can be found in Appendix Table A-7.

<sup>13</sup> Note that the order of the perception questions slightly affects the extent of misperceptions of socioeconomic inequality in life expectancy. Asking about the life expectancy of the bottom 10% first increases misperceptions by 1.8 (1.2) years in the United States (Germany) ( $p < 0.001$ ) compared to asking about the life expectancy of the top 10% first (see Appendix Figure B-3). In the survey, we randomized the order of the perception questions across subjects to avoid biased estimates due to order. Moreover, the average estimates look very similar when we use only the first perception question of each respondent to calculate the perceived difference in life expectancy between the top 10% and bottom 10% (see Appendix Figure B-4).

The average estimates conceal a large heterogeneity in the perception of socioeconomic inequality in life expectancy in the population. The top panel of Figure 3 shows the distribution of misperceptions, defined as perceived minus actual socioeconomic inequality in life expectancy, in the United States. While about one-third of respondents underestimate socioeconomic inequality in life expectancy—that is, they believe that the socioeconomic inequality in life expectancy is smaller than it actually is—the other two-thirds of respondents overestimate socioeconomic inequality in life expectancy. Accurate perceptions are very rare. Only 3.9% report the correct socioeconomic inequality of life expectancy.<sup>14</sup> The bottom panel of Figure 3 shows the distribution of misperceptions for Germany. The results are almost the same as in the United States—that is, one-third underestimate socioeconomic inequality in life expectancy and two-thirds overestimate it.<sup>15</sup>

Notably, the distribution of misperceptions is rather wide even after excluding outliers in the top and bottom 5% of the distribution in the analytical sample. Misperceptions range from  $-10$  to  $+30$  years in the United States ( $-7$  to  $+20$  years in Germany), with heaps in the distribution at the perception that there is no difference in life expectancy between rich and poor people in both countries ( $-10$  in the United States and  $-7$  in Germany).<sup>16</sup> Comparing the misperception distributions between those who were randomly assigned an incentive to report the true life expectancy and those who were not (see Appendix Figure B-5), we find that the use of incentives does not lead to more accurate estimates (i.e., no bunching at the accurate level of socioeconomic inequality in life expectancy), nor does it prevent heaping at the perception of no difference in life expectancy.<sup>17</sup>

The heterogeneity of misperceptions in the population does not appear to be driven by particular population groups. This can be inferred from Figure 4, which shows the average level of misperception by various individual sociodemographic characteristics in the top panel and by various individual preferences and beliefs in the bottom panel.<sup>18</sup> While

<sup>14</sup> Even if we allow a window of  $\pm 2$  years around the actual level of socioeconomic inequality in life expectancy, we find that only 17% hold accurate perceptions.

<sup>15</sup> Correct perceptions are again very rare (2.3%). If we allow a window of  $\pm 2$  years around the actual level of socioeconomic inequality, the percentage of accurate perceptions increases to 28%.

<sup>16</sup> The response quality of those who perceive no difference in life expectancy is similar to that of the other respondents. They have a similar pass rate in the attention check as the other respondents (60% vs 62%,  $p = 0.355$ ), as well as a similar median response time in the four perception questions (1.3 minutes vs. 1.2 minutes) and the entire survey (19 minutes vs. 18.5 minutes).

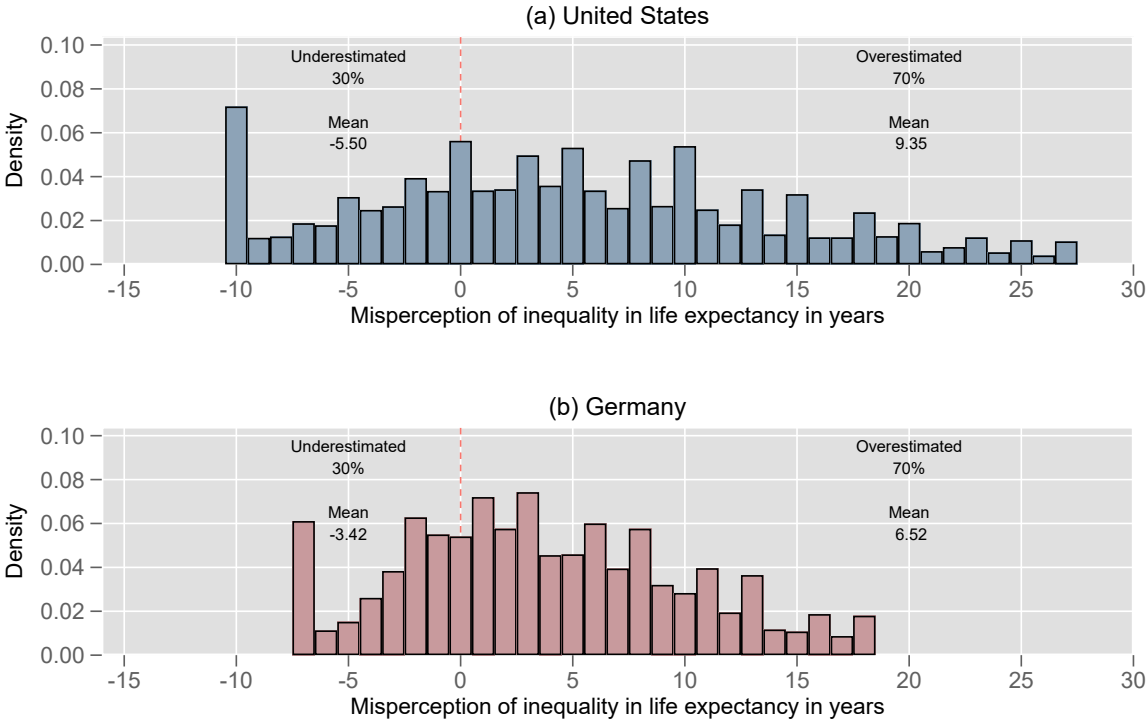
<sup>17</sup> Appendix Figure B-3 shows that the average level of misperception does not differ between the information treatment groups and incentive treatment groups.

<sup>18</sup> Appendix Figure B-6 shows the percentages of respondents who underestimate and overestimate the socioeconomic inequality in life expectancy by various sociodemographic characteristics, preferences, and beliefs.

there is some heterogeneity in the United States, that is, misperceptions are slightly more pronounced among young, educated, rich, and left-leaning participants, these differences are quantitatively very small. In Germany, there are virtually no differences in average misperceptions across individual characteristics. In both countries, however, participants who believe the corona pandemic had an effect on life expectancy perceive higher socioeconomic inequality in life expectancy. Importantly, despite small differences in the extent of misperceptions, all population groups in both the United States and Germany significantly overestimate socioeconomic inequality in life expectancy.

Overall, the scarcity of accurate perceptions, the rather homogeneous misperceptions across population groups, and the lack of treatment effects of perception incentives lead us to conclude that the population is generally unaware of the actual socioeconomic inequality in life expectancy.

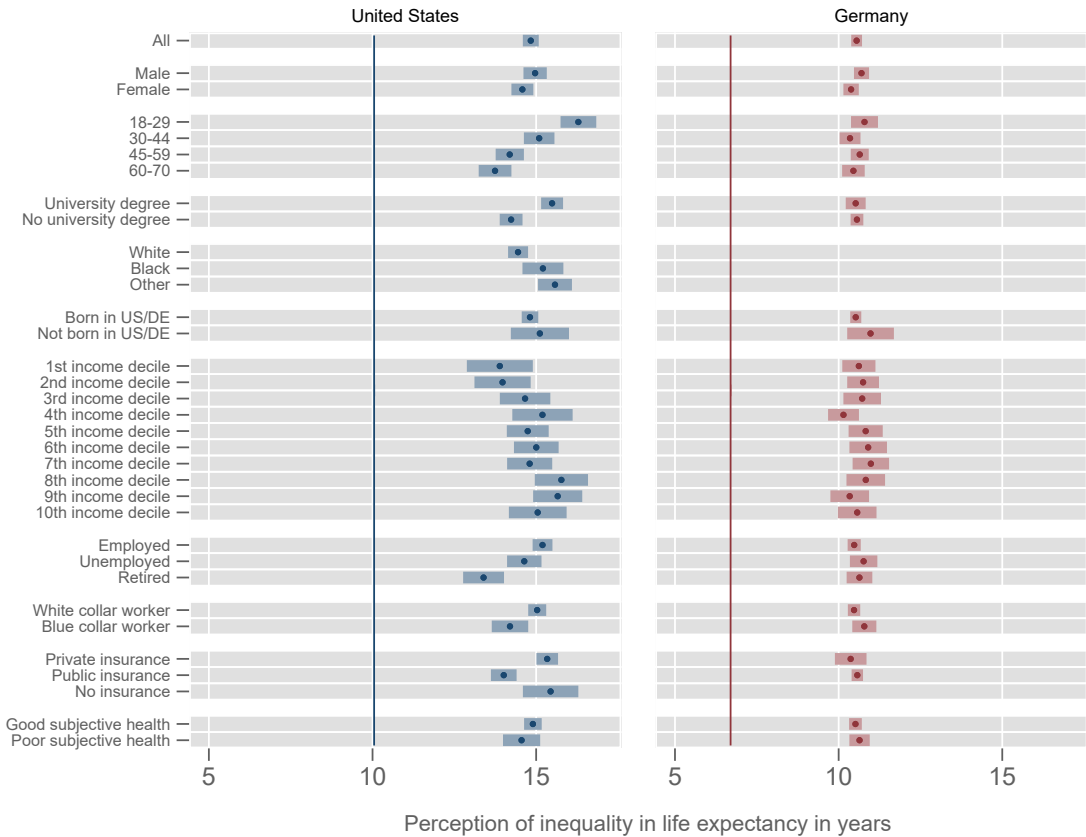
**Figure 3: Distribution of Misperceptions of Socioeconomic Inequality in Life Expectancy**



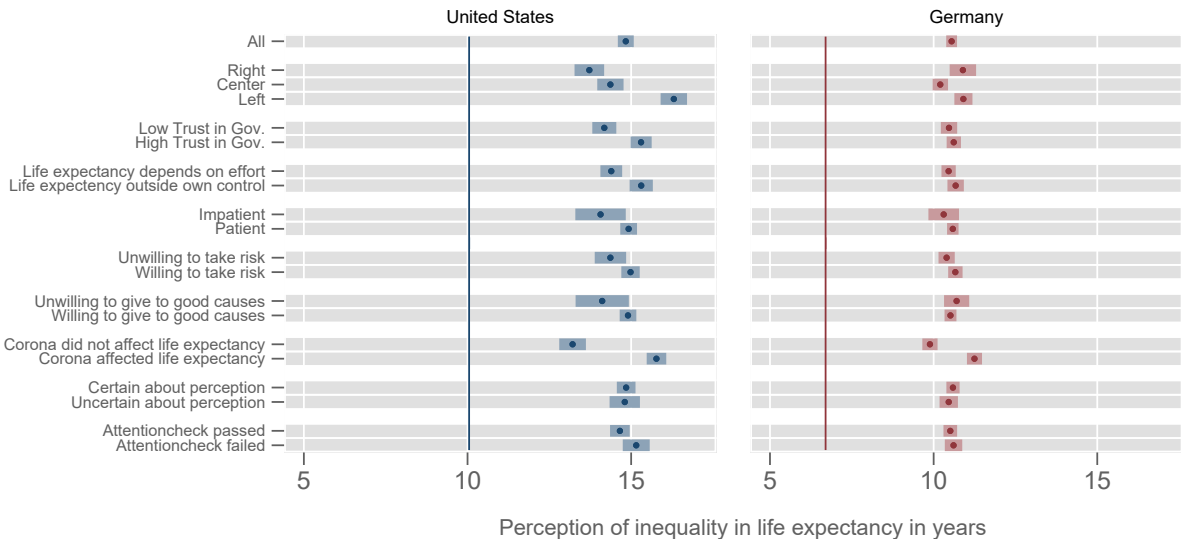
*Notes:* The figure shows the distribution of misperceptions of the socioeconomic inequality in life expectancy for the United States and Germany. Misperceptions are calculated as the respondents' perceptions of gender-averaged socioeconomic inequality in life expectancy minus the actual gender-averaged socioeconomic inequality in life expectancy as obtained from [Chetty et al. \(2016\)](#) for the United States and [Lampert et al. \(2019\)](#) for Germany (see Appendix C for details).

**Figure 4: Heterogeneity in Perceptions of Socioeconomic Inequality in Life Expectancy**

(a) Sociodemographic characteristics



(b) Preferences and beliefs



*Notes:* The figure shows the heterogeneity of average perceptions of socioeconomic inequality in life expectancy in the United States and Germany, by sociodemographic characteristics in panel (a) and preferences and beliefs in panel (b). The shaded areas around the averages indicate 95% confidence intervals. The vertical colored lines reference the actual socioeconomic inequality in life expectancy.

## 4 Perceptions, Concerns, and Policies: Causal Evidence

In this section, we study whether perceptions of socioeconomic inequality in life expectancy are causally linked to people’s views about the magnitude of socioeconomic inequality in life expectancy, their concerns about socioeconomic inequality in life expectancy, and their policy demands to improve the life expectancy of the poor. We do this by implementing the empirical approach introduced in Section 2.5. Since the distribution of misperceptions is very similar between the United States and Germany, we report results for the joint sample of both countries. Detailed results for each country, which are usually very similar, are presented in Appendix B.

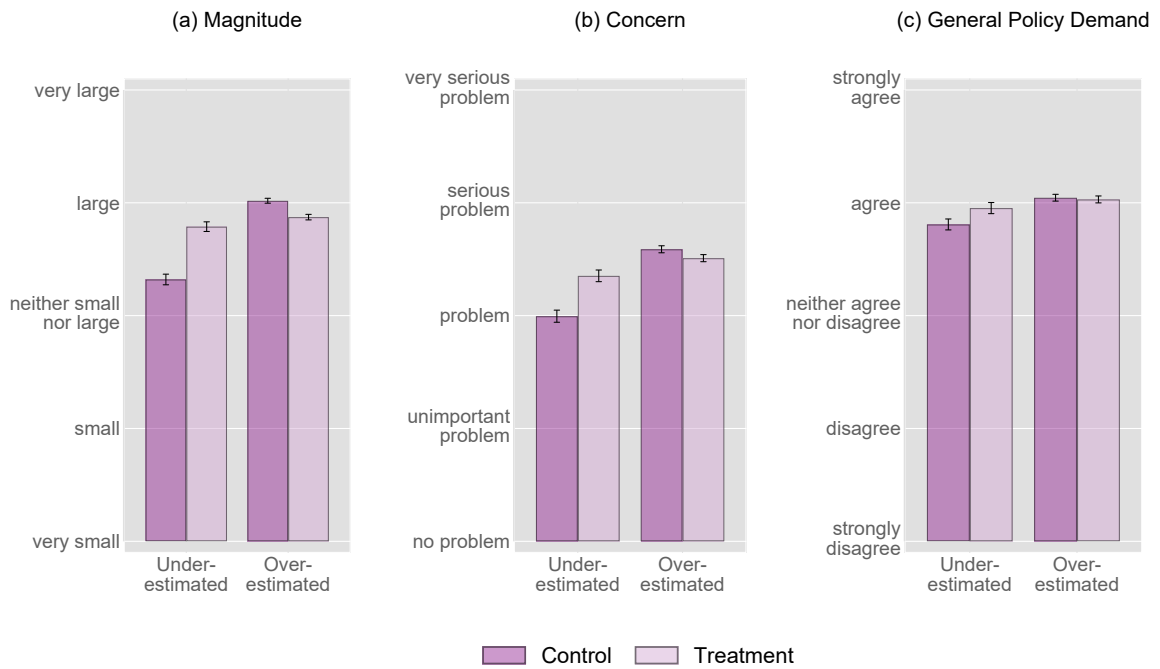
### 4.1 Magnitude, Concerns, and General Policy Demand

Figure 5 previews our main results. The figure shows the average responses to the questions about magnitude perception, concerns, and general policy demand for the treatment and control groups.<sup>19</sup> There are four notable observations. First, for those who underestimated the socioeconomic inequality in life expectancy, the information treatment significantly increases perceptions that the magnitude of socioeconomic inequality in life expectancy is large, that socioeconomic inequality in life expectancy is a problem, and that the government should do more to improve the life expectancy of poor people. By contrast, for those who overestimated the socioeconomic inequality in life expectancy, the information treatment significantly decreases all three outcomes. Second, the positive treatment effect for those who underestimated the socioeconomic inequality in life expectancy is larger than the negative treatment effect for those who overestimated the socioeconomic inequality in life expectancy. The asymmetry in treatment effects suggests that perceptions are downward rigid. Third, after the information treatment, we observe similar levels in the magnitude perception, concerns, and general policy demand among those who initially underestimated and overestimated the socioeconomic inequality in life expectancy. This suggests that the information is processed, resulting in updated perceptions after the information is provided. Fourth, the effect sizes diminish across the three outcomes, being largest for the magnitude question, more modest for the concern

<sup>19</sup> This picture is corroborated by Appendix Figure A-1, which shows the treatment-specific shares of individuals who think that the magnitude of the socioeconomic inequality in life expectancy is large or very large, that the difference in life expectancy between rich and poor people is a serious or very serious problem, and who agree or strongly agree that the government should do more to improve the life expectancy of poor people.

question, and smallest for the general policy demand question. In fact, we would argue that the effects for general policy demand are economically very small. Notably, Figure 5 shows that there is already a high level of agreement that the government should do more to improve the life expectancy of poor people in the control group even among those who underestimated the socioeconomic inequality in life expectancy. It seems that this pattern makes it difficult to further increase policy demand through the information treatment.

**Figure 5: Perceived Magnitude, Concerns, and General Policy Demand by Treatment Status**



*Notes:* The figure reports average responses to the magnitude, concerns, and general policy questions for respondents who received the information treatment and those who did not. The whiskers around the averages represent 95% confidence intervals. The data are pooled for the United States and Germany. Appendix Figure B-7 shows the results separately by country.

We now turn to a more structured analysis using the regression setting introduced in Section 2.5. Table 1 provides the results for the linear outcome specification in Panel A and for the share specification in Panel B.<sup>20</sup> Column (1) shows that individuals who over-estimated the socioeconomic inequality in life expectancy perceive the magnitude of the inequality to be 0.77 standard deviations (SD) larger than those who underestimated the inequality. The information treatment works as expected. Those who underestimated the inequality and received the treatment report a 0.54 SD higher perception of the magnitude

<sup>20</sup> Appendix Table A-8 provides the same table without conditioning on the control variables. All coefficients are quantitatively very similar, which also corroborates our earlier finding that misperceptions about socioeconomic inequality in life expectancy are very similar across population groups (Figure 4).

than those in the control group. Those who overestimated the inequality and received the treatment report a 0.19 SD lower perception of the magnitude than those in the control group. Overall, the combined effect explains almost all of the control-group gap in perceptions of the magnitude of inequality. The same holds true for the share specification in Panel B. There, the initial gap of 33 percentage points vanishes once the information is provided, as the treatment increases the share of those who perceive the inequality as large or very large by 21 percentage points among those who underestimated the inequality (an increase by 41% compared to the control-group mean of 51%) and decreases the share of those who perceive the inequality as large or very large by 8 percentage points among those who overestimated the inequality. Thus, after the information is provided, all respondents have similar views on whether the magnitude of the socioeconomic inequality in life expectancy is large or not.

Column (2) shows that the treatment also affects respondents' concerns about socioeconomic inequality in life expectancy. Specifically, the control-group gap in concern between those who overestimated and those who underestimated the inequality is 0.49 SD (18 percentage points) and decreases by 85% in both specifications after the provision of information. We also observe a sizeable, albeit smaller, control-group gap in general policy demand between those who overestimated and those who underestimated the inequality, amounting to 0.19 SD or 7.5 percentage points, respectively (Column (3)). The information treatment decreases this gap by 96% in the linear specification and by 72% in the share specification. The index specifications in Column (4) corroborate the results, showing that the information treatment can explain most of the gap between those who overestimated and those who underestimated the inequality with respect to the views and general policy demands regarding socioeconomic inequality in life expectancy. Overall, the regression analysis confirms the four observations already derived from Figure 5. That is, first, the treatment effects have opposite signs for those who overestimated compared to those who underestimated the socioeconomic inequality in life expectancy. Second, the treatment effects are larger for those who underestimated inequality than for those who overestimated it. Third, outcome values after the treatment are very similar for the treatment and control groups. Fourth, as a rule of thumb, treatment effects always fall by about half as we move from perceptions of the magnitude of inequality to concerns and to general policy demands.



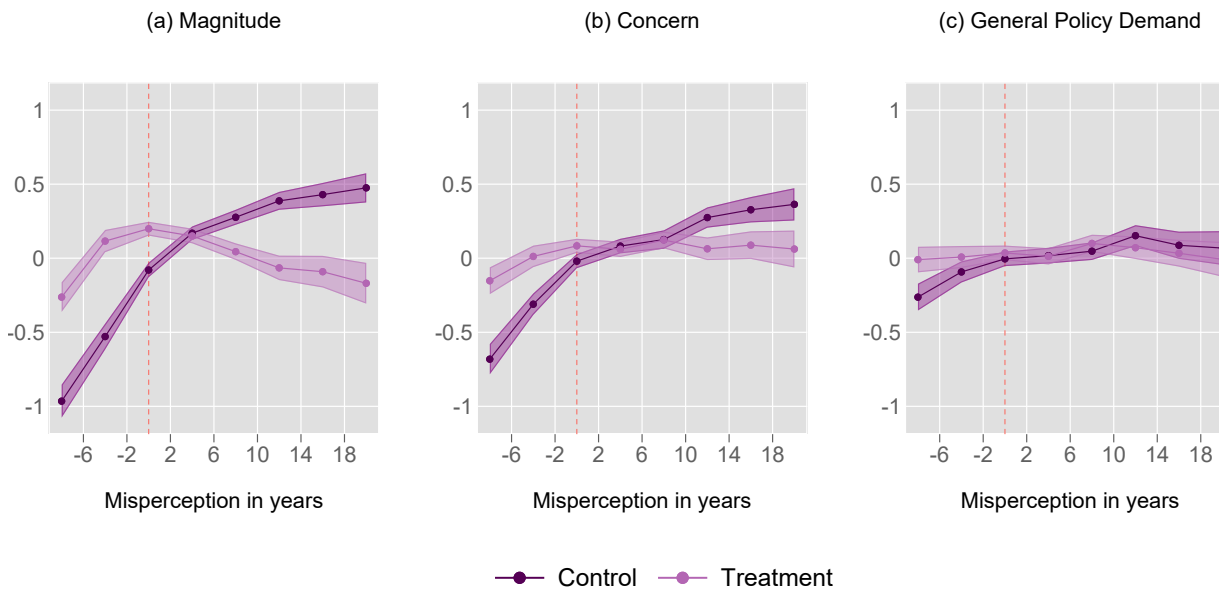
**Table 1: Information Treatment Effect on Perceived Magnitude, Concerns, and General Policy Demand**

	Index components			Index
	Magnitude	Concerns	Policy	
	(1)	(2)	(3)	(4)
<i>Panel A: Linear (standardized)</i>				
Treatment	0.543*** (0.038)	0.329*** (0.034)	0.145*** (0.033)	0.423*** (0.034)
Treatment × Overestimated	-0.731*** (0.042)	-0.423*** (0.039)	-0.181*** (0.039)	-0.556*** (0.039)
Overestimated	0.767*** (0.031)	0.494*** (0.029)	0.188*** (0.027)	0.604*** (0.028)
Controls	Yes	Yes	Yes	Yes
Adj. R-squared	0.129	0.177	0.213	0.226
Treatment effect for Overestimated	-0.188*** (0.019)	-0.094*** (0.020)	-0.036* (0.020)	-0.132*** (0.019)
<i>Panel B: Shares</i>				
Treatment	0.214*** (0.016)	0.121*** (0.016)	0.044*** (0.015)	0.127*** (0.015)
Treatment × Overestimated	-0.293*** (0.018)	-0.158*** (0.019)	-0.054*** (0.017)	-0.161*** (0.019)
Overestimated	0.326*** (0.013)	0.183*** (0.014)	0.075*** (0.013)	0.195*** (0.013)
Controls	Yes	Yes	Yes	Yes
Adj. R-squared	0.135	0.127	0.160	0.143
Treatment effect for Overestimated	-0.079*** (0.008)	-0.037*** (0.011)	-0.010 (0.009)	-0.034*** (0.011)
Control group mean	0.760	0.468	0.740	0.403
Control group mean (Underestimated)	0.512	0.317	0.670	0.242

*Notes:* The table reports treatment effects on the outcome variables indicated in the column header. Panel A reports  $z$ -standardized outcomes. The index in panel A is an equally weighted average of  $z$ -scores of the three outcome variables. Calculation of each  $z$ -score subtracts the score’s control-group mean and divides by the control-group standard deviation of the joint sample. Panel B uses dummy variables for each outcome that are 1 if the response is in the two top answer categories of each item, and 0 otherwise. The index variable in panel B is a dummy variable that is 1 if individual answers to all three dummy outcome variables are 1, and 0 otherwise. “Treatment” indicates individuals who received the information treatment. “Overestimated” indicates individuals who overestimated the socioeconomic inequality in life expectancy. Controls: gender, age, university degree, ethnicity (US only), birthplace, parental birthplace, partner in household, children in household, income decile, employment status, occupation, region, political orientation, trust in government, belief about control over life expectancy, risk aversion, patience, altruism, health insurance status, own self-assessed health status, belief about corona effect on life expectancy, certainty about perceptions, attentiveness, incentive treatment, and perception question order. The data are pooled for the United States and Germany.  $N = 10,832$ . Appendix Tables B-1 and B-2 show the results separately for each country. Robust standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

In Figure 6, we show how the perceived magnitude of inequality, the concern, and the general policy demand vary with the extent of misperception and by treatment status. We use four-year bins of misperception and interact the specific indicator of each bin with the treatment indicator. The figure then plots the predictions and 95% confidence intervals for each of the three outcomes for each four-year bin, separately for the treatment and control groups. As expected, the treatment-group differences are largest for the bins indicating the strongest misperceptions. Individuals with relatively accurate perceptions ( $\pm 2$  years) seem to react very little. Moreover, individuals who overestimated the inequality do not change their views much until the misperception exceeds 10 years. For the general policy demand, we see that the average effects highlighted earlier originate from individuals with very large misperceptions. The figure also illustrates again that the treatment effect on general policy demand is quantitatively small—a result we will discuss further in the next sections.

**Figure 6: Perceived Magnitude, Concerns, and General Policy Demand by Treatment Status along the Distribution of Misperceptions**



*Notes:* The figure reports predicted average responses to the magnitude, concerns, and general policy questions for respondents who received the information treatment and those who did not along the distribution of misperceptions. Predictions are based on four-year misperception bins where the indicator for each bin is interacted with the treatment indicator. Dependent variable in each prediction is the  $z$ -standardized outcome. Calculation of each  $z$ -score subtracts the score's control-group mean and divides by the control-group standard deviation of the joint sample. The data are pooled for the United States and Germany. Appendix Figure B-9 shows the results separately by country.

## 4.2 Robustness

In this section, we present some sensitivity checks that underscore the causal effect of the information treatment on perceived magnitude and concerns. We also demonstrate the robustness of the weak treatment effect on general policy demand.

*Attention.*—In our sample, 38% of respondents fail the attention check. If respondents do not pay attention, we should expect weaker effects of the information treatment. In line with this argument, Appendix Table A-9 documents much stronger effects of the treatment on the perceived magnitude and on the concern about socioeconomic inequality in life expectancy for attentive respondents compared to inattentive respondents. However, for general policy demand, there is no difference in treatment effects between attentive and inattentive respondents. Thus, limited attention cannot explain the small treatment effects on general policy demand.

*Priming, experimenter demand, and social desirability bias.*—In principle, one might be concerned that the effects in information treatment studies reflect priming, experimenter demand effects, or social desirability bias rather than information updating. For our study, this is unlikely because treatment effects on concerns increase with the size of the misperception (Figure 6). The results show that this is the case not only for those who *underestimated* socioeconomic inequality in life expectancy (a response that could be driven by experimenter demand effects or social desirability bias), but also for those who *overestimated* socioeconomic inequality (where such effects seem less likely).

The evidence from the follow-up survey further supports the conclusion that the treatment leads to information updating. We find that two weeks after the survey experiment, the information treatment significantly reduces misperceptions about socioeconomic inequality in life expectancy. Moreover, among attentive respondents, the treatment significantly increases concerns of those who underestimated socioeconomic inequality (Appendix Table A-10). We find no treatment effects on general policy demand in the follow-up survey, which is consistent with the modest treatment effects on general policy demand in the main survey. In addition, we also observe no treatment effects in the donation-lottery (Appendix Table A-11). The majority of respondents (87%) donate at least one dollar to one of the charities. While this pattern could in principle be driven by experimenter demand effects, the control-group misperceptions and the information treatment are both unrelated to the amount donated.

*Perception certainty.*—A share of 30% of respondents say that they are uncertain if they have correctly stated the life expectancy of rich and poor people. We should expect weaker treatment effects for these respondents because information provision should trigger a larger response in people who were certain about their false perception. Appendix Figure 8 confirms this expectation for the general policy demand effects. However, the differences between the groups are very small and not statistically significant. Thus, uncertainty about life expectancy perceptions cannot explain the small treatment effects on general policy demand.

*COVID-19.*—Our project took place in the aftermath of the COVID-19 pandemic—one of the largest health crises in recent history. Preliminary evidence shows that the pandemic led to an increase in socioeconomic inequality in life expectancy compared to the pre-pandemic period (Schwandt et al., 2022). While on average the pandemic should have affected perceptions of life expectancy equally in the treatment and control groups, the effect of the information treatment may depend on beliefs about the impact of the pandemic. Treated with information from pre-pandemic periods, respondents who believe that the pandemic has affected life expectancy may not perceive our information as being accurate and may largely ignore it when asked to state their policy preferences.<sup>21</sup> To address this issue, we ask respondents directly whether they think COVID-19 has changed the life expectancy of the poorest 10% and the richest 10% of the income distribution. Overall, we find that 55% (25%) think that the pandemic has led to a change in the life expectancy of poor (rich) people. Figure 4 also shows that the average misperception of the socioeconomic inequality in life expectancy is larger for respondents who think that COVID-19 has changed the life expectancy of rich or poor people. Nevertheless, the information treatment has similar effects on those who think that life expectancy has changed because of COVID-19 and those who think it has not (Figure 8).

### 4.3 Demand for Specific Policies

In the previous two sections, we established that the information treatment leads to an update in perceptions of the magnitude of socioeconomic inequality in life expectancy and the associated concerns (especially among those who underestimated the actual inequality), but had little to no effect on general policy demand. In this section, we examine

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<sup>21</sup> In fact, there is a small significant negative relationship between stating that the pandemic has changed the life expectancy for some groups and the perceived trustworthiness of the information provided.

the demand for specific policies that address the life expectancy of the poor, rather than general policy demand. Before eliciting support for specific policies in the survey, we asked all respondents to list as many measures as possible that the government could use to improve the life expectancy of the poor. In this way, we uncover the respondents' first-order policy demands (see Ferrario & Stantcheva, 2022). Figure 7 presents the word pairs with the most frequent entries. The most dominant theme is better health care. Respondents also mention education, low income and minimum wage, and housing.<sup>22</sup>

**Figure 7: Individual Suggestions for Specific Policies to Improve Life Expectancy of the Poor**



*Notes:* The figure presents the most frequent answers to the question of what measures the government could use to improve the life expectancy of poor people. Respondents were allowed to name as many measures as they wished. Size of the entries refer to more frequent mentions. The data are pooled for the United States and Germany. Appendix Figures B-10 and B-11 show the results separately for each country. We follow the approach outlined in Ferrario & Stantcheva (2022) to clean the data.

<sup>22</sup> The listings are comparable for the United States and Germany (see Appendix Figures B-10 and B-11).

The strong emphasis on health care to address socioeconomic inequality in life expectancy is in line with reports by the [World Health Organization \(2019\)](#) and [U.S. Department of Health and Human Services \(2023\)](#), which we use to identify specific policy areas and interventions for our survey. In total, we ask respondents how they feel about 12 specific policies grouped into 5 policy areas: (i) health care access, (ii) economic stability, (iii) living conditions, (iv) education, and (v) working conditions (see Appendix Table A-1 for an overview of the questions). More specifically, in the area of health care access we ask respondents how they feel about (i) establishing a universal health insurance and an equal access health care system that is independent of income or employment status, (ii) expanding medical care in rural areas despite low profitability, and (iii) abolishing deductibles and co-payments for medical services and medication for individuals with low incomes. Regarding economic stability, we ask the respondents about their opinion on (i) more redistribution of income from rich to poor people (e.g., through more generous social benefits for the poor, financed by higher taxes for the rich), (ii) increasing expenses on employment and training programs for the unemployed, and (iii) raising the federal minimum wage. On living conditions, we ask the respondents about their views on (i) higher investments to improve living conditions in disadvantaged neighborhoods (e.g. by improving air quality, local public transport or public safety) and (ii) higher taxes on unhealthy food, alcohol, and cigarettes. With respect to education, we ask about (i) increasing public funding of child-care centers and schools in disadvantaged neighborhoods and (ii) expanding the education on health-conscious living across all schools. Finally, regarding working conditions, we ask about (i) stricter regulation of workplace safety (e.g. through higher safety requirements or lower limits for noise and air pollution at the workplace) and (ii) enabling an early retirement without deductions for individuals with physically demanding jobs.

Table 2 provides the results for the indices of the five policy areas and a joint index that summarizes the response behavior of the policy areas. Among respondents who underestimated socioeconomic inequality in life expectancy, the information treatment increases the support for specific policies overall (Column (6)) and for health (Column (1)), economic stability (Column (2)), and working conditions (Column (5)) in particular.

However, the magnitude of all coefficients is very small and not statistically significantly different from zero.<sup>23</sup>

**Table 2: Information Treatment Effect on Demand for Specific Policies**

	Index components					Index
	Health	Economic	Living	Education	Working	
	(1)	(2)	(3)	(4)	(5)	(6)
Treatment	0.049 (0.032)	0.045 (0.030)	-0.020 (0.033)	-0.022 (0.033)	0.036 (0.033)	0.023 (0.031)
Treatment × Overestimated	-0.039 (0.038)	-0.059* (0.036)	0.028 (0.039)	0.022 (0.039)	-0.046 (0.039)	-0.025 (0.036)
Overestimated	0.084*** (0.027)	0.079*** (0.025)	0.054** (0.027)	0.070** (0.027)	0.097*** (0.028)	0.100*** (0.025)
Controls	Yes	Yes	Yes	Yes	Yes	Yes
Adj. R-squared	0.236	0.291	0.179	0.209	0.162	0.327
Treatment effect for Overestimated	0.010 (0.020)	-0.014 (0.019)	0.007 (0.021)	-0.001 (0.020)	-0.010 (0.021)	-0.002 (0.018)

*Notes:* The table reports treatment effects on the outcome index indicated in the column header. Each index is an equally weighted average of  $z$ -scores of the underlying outcome variables (see Appendix Table A-1). Calculation of each  $z$ -score subtracts the score’s control-group mean and divides by the control-group standard deviation of the joint sample. The index in Column (6) is an equally weighted average of all index components. “Treatment” indicates individuals who received the information treatment. “Overestimated” indicates individuals who overestimated the socioeconomic inequality in life expectancy. Controls: gender, age, university degree, ethnicity (US only), birthplace, parental birthplace, partner in household, children in household, income decile, employment status, occupation, region, political orientation, trust in government, belief about control over life expectancy, risk aversion, patience, altruism, health insurance status, own self-assessed health status, belief about corona effect on life expectancy, certainty about perceptions, attentiveness, incentive treatment, and perception question order. The data are pooled for the United States and Germany.  $N = 10,832$ . Appendix Tables B-3 and B-4 show the results separately for each country. Robust standard errors in parentheses. Significance levels: \*\*\*  $p < 0.01$ , \*\*  $p < 0.05$ , \*  $p < 0.1$ .

## 5 Mechanism Discussion

In this section, we discuss why our information treatment changes the perceived magnitude of socioeconomic inequality and the associated concerns, but has weak to negligible effects on support for related public policies. The discussion begins with the observation that 74% of respondents agree or strongly agree with the statement that the government should take measures to improve the life expectancy of the poor (Appendix Table A-4). In addition, we observe high control-group approval ratings of typically around 70–80% for almost all of the 12 specific policies (Appendix Table A-4). As a result, misperceptions about the socioeconomic inequality in life expectancy are not strongly related to general policy

<sup>23</sup> We also do not find any significant treatment effects in the country-specific analyses (Appendix Tables B-3 and B-4).

demand (Table 1 and Figure 6) and even less strongly related to specific policy demand (Table 2). The high and widespread support for general and specific policies naturally limits the potential impact of the information treatment.

One question is whether there are population groups for which one can observe a stronger control-group relationship between misperceptions and policy demand, which would increase the probability of detecting significant information treatment effects. Examining potential effect heterogeneity by individual characteristics such as gender, age, education, income, employment status, occupation, insurance status, and self-assessed health status, we find only very modest correlations in the control group between misperceptions and policy demand and document limited treatment effect heterogeneity in the population (see panel (a) of Figure 8 for general policy and panel (a) of Appendix Figure A-2 for specific policy demand). Regarding the heterogeneity of effects by individual characteristics for those who underestimated inequality, the analysis suggests that treatment effects are slightly larger for young individuals, individuals without college education, poor individuals in the bottom quintile of the household income distribution, and retired individuals. To some extent, these are the people who are most vulnerable and therefore most likely to demand action when they become aware of the actual socioeconomic inequality in life expectancy. Overall, however, the treatment effects for these groups rarely exceed 0.20 SD, which is relatively small and still very close to the average effect of 0.15 SD. We generally find no treatment effects on policy demand for individuals who overestimated the inequality.

Limited treatment effects on the demand to reduce certain socioeconomic inequalities are not uncommon in information experiments (see, e.g., [Kuziemko et al., 2015](#); [Ciani et al., 2021](#); [Hoy & Mager, 2021](#)). At the same time, the literature also finds that results are sometimes driven by, e.g., political views and trust in government (see, e.g., [Alesina et al., 2018](#); [Lergetporer et al., 2020](#); [Fehr et al., 2022](#)). Panel (b) of Figure 8 shows the heterogeneity of correlation and treatment effects by political views, trust in government, economic preferences, and a range of other beliefs. Focusing on respondents who underestimated the socioeconomic inequality in life expectancy, we find that treatment effects emerge only for respondents with centrist or left-leaning political views, but are absent for respondents with right-leaning political views. Similarly, we find larger treatment effects for respondents with high trust in government, but not for respondents with low



trust in government. We also find larger treatment effects for respondents who believe life expectancy depends on own effort than for those who believe life expectancy depends on circumstances outside one’s own control. Yet, the treatment effects remain very small for general policy demand and absent for specific policy demand (Appendix Table A-2).

In summary, respondents express a strong preference for government action to improve life expectancy of the poor, which is largely unrelated to their individual perceptions of socioeconomic inequality in life expectancy. Even control-group respondents who severely underestimate the inequality tend to have a strong demand for both general and specific policies. Interestingly, this pattern holds across population groups with different individual characteristics, political views, and belief systems. It also holds true when comparing the results for the United States and Germany, two countries with distinct health care systems and political attitudes (Appendix Figures B-7, B-8, B-9). The homogeneity of policy preferences across the distribution of misperceptions, population groups, and countries is surprising because scarce resources require trade-offs between addressing health disparities and other policy goals. Thus, we would have expected policy preferences to be (more) sensitive to individual characteristics, political views, and belief systems.<sup>24</sup> Yet, despite receiving explicit information about the inevitable trade-offs in public budgets, respondents express high and broad support for all presented policy measures.<sup>25</sup>

Our preferred explanation for the results is that most respondents in both countries feel morally obliged to support policies aimed at improving the life expectancy of poor people, and are unwilling to trade off the monetary resources needed to implement the policies against the health of a disadvantaged group. This interpretation is consistent with the idea that some values and moral principles are sacred and protected from trade-offs with more secular values such as money, consumption, or employment (Tetlock et al., 2000; Hanselmann & Tanner, 2008). In fact, the psychological literature defines a sacred value as “any value that a moral community implicitly or explicitly treats as possessing infinite or transcendental significance that precludes comparisons, tradeoffs, or indeed any other mingling with bounded or secular values” (Tetlock et al., 2000, p. 853). Many of these values relate to human life, health, nature, love, honor, justice, and human

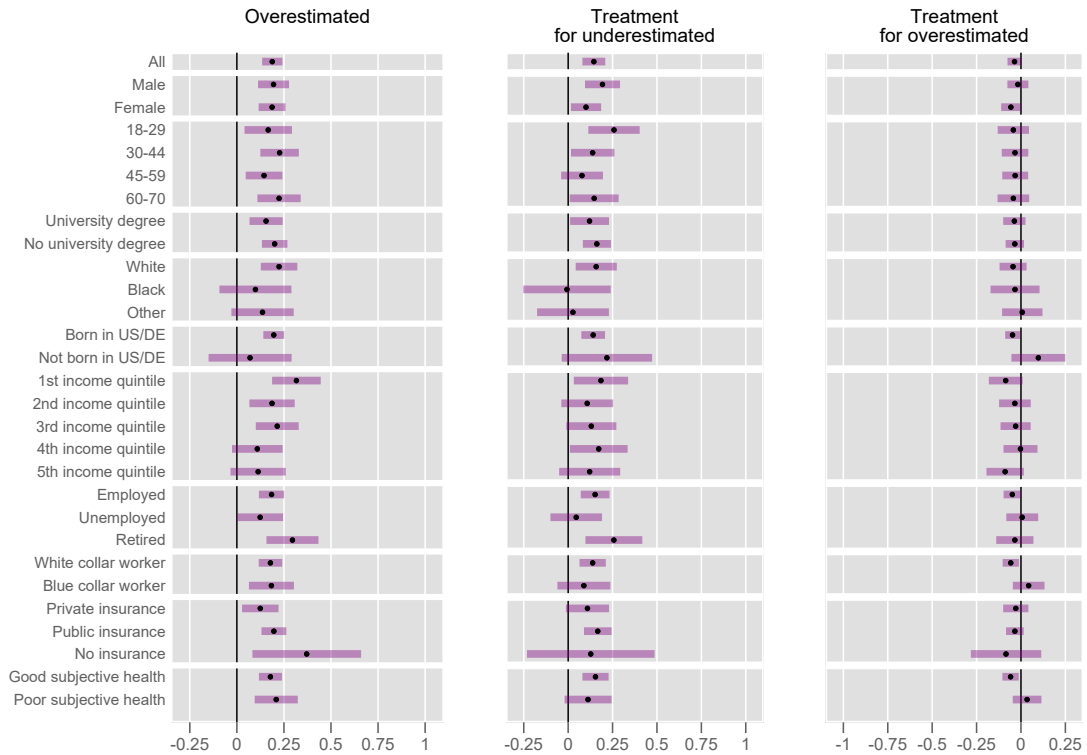
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<sup>24</sup> Even among respondents who are right-leaning, do not trust the government, or have low altruism, a clear majority agrees that the government should do more to improve the life expectancy of poor people (Appendix Figure A-3).

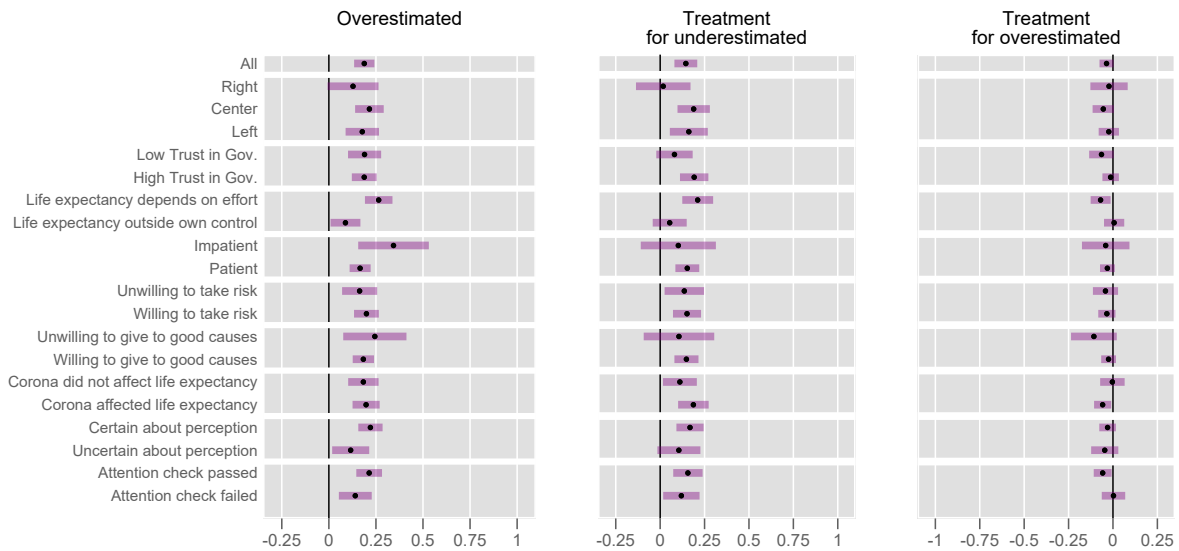
<sup>25</sup> In the survey, we make the budgetary trade-offs explicit by telling respondents at the beginning of the specific policy section that *[w]hen answering, please always bear in mind that implementing the respective measure may tie up financial means and other public resources, which are then no longer available in other areas.*

**Figure 8: Heterogeneity of Correlations and Treatment Effects on General Policy Demand**

(a) Sociodemographic characteristics



(b) Preferences and beliefs



*Notes:* The figure shows the heterogeneity of the correlation of perceptions with general policy demand with perception of socioeconomic inequality in life expectancy and the heterogeneity of treatment effects on general policy demand for respondents who under- or overestimated inequality in life expectancy. Panel (a) shows heterogeneity with respect to sociodemographic characteristics and panel (b) with respect to preferences and beliefs. The figure presents the regression results in Table 1 for the subsamples indicated on the y-axes. The dependent variable is the z-standardized general policy demand. Appendix Table A-2 shows the same heterogeneity for the specific policy index.

rights (Hanselmann & Tanner, 2008). The literature shows that decisions that involve trading these sacred values against less important values are considered taboo (Tetlock, 2003). For example, recent studies find that the majority of people supported economic shutdowns during the pandemic because they were unwilling to trade lives against a stable economy (Lesschaeve et al., 2021; Settele & Shupe, 2022). We conclude that our results are also likely to be influenced by moral values that mandate unconditional support for—potentially costly—health equity policies.

## 6 Conclusion

This paper examines public perceptions and policy demands related to socioeconomic inequality in life expectancy, focusing on the United States and Germany. Using two large-scale survey experiments with approximately 6,000 participants in each country, the paper shows that individuals tend to overestimate the extent of this inequality. Notably, life expectancy of the poor is underestimated more than that of the rich, and this result holds across various sociodemographic groups.

The study further reveals a strong connection between perceptions of socioeconomic inequality in life expectancy and concerns about the issue. Providing information about the actual socioeconomic inequality in life expectancy effectively reduces the gap in concerns between those who overestimate and those who underestimate the inequality. However, the information treatment has a limited impact on policy demand, as the majority of respondents support policies to improve life expectancy of the poor, regardless of their prior misperceptions.

These results provide valuable insights into the complex interplay between inequality perceptions, concerns, and policy preferences. The paper suggests that individuals feel morally inclined to support policies aimed at improving the life expectancy of the poor and are less influenced by monetary trade-offs. Importantly, these findings highlight that there is strong public support for potentially costly policies even without detailed knowledge of the actual extent of socioeconomic inequality in life expectancy. This has broader implications for public policy and the prioritization of well-being over economic considerations, as underscored by recent events such as the COVID-19 pandemic, where people favored shutdown policies even at high economic costs.

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