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## Abstract

While there is a vast (and mixed) literature on gender differences in social preferences, little is known about *believed* gender differences in social preferences. This paper documents robust evidence for believed gender differences in social preferences. Across a wide range of contexts that vary in terms of strategic considerations, selfish motives, fairness concepts and applications, we find that individuals robustly expect that women are more generous and more equality-oriented. Despite the robustness of these beliefs, the believed gender gap in social preferences—in the range of contexts we consider—is largely inaccurate.

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# 1 Introduction

There are persistent gender gaps in labor market outcomes, with women earning less money and having lower representation in leadership positions (Goldin, 2014; Blau and Kahn, 2017). Motivated by these gaps, a rich body of literature investigates gender differences in behavior, providing evidence that women negotiate and ask for less (Babcock and Laschever, 2003; Small et al., 2007; Hernandez-Arenaz and Iribarri, 2019; Recalde and Vesterlund, 2020; Roussille, 2021), compete less (Gneezy, Niederle and Rustichini, 2003; Niederle and Vesterlund, 2007, 2011; Saccardo, Pietrasz and Gneezy, 2018), speak up less (Coffman, 2014), claim less credit (Isaksson, 2018), and self-promote less (Exley and Kessler, 2022).

In addition to gender differences in behavior, beliefs about gender differences in behavior—whether accurate or inaccurate—may contribute to gender differences in the labor market.<sup>1</sup> For instance, if women are expected to perform less well than men in certain jobs, women may be less likely to be hired and promoted in those jobs. Similarly, if women are expected to act more socially-oriented—e.g., they are expected to be more generous and to care more about equality—they may be viewed as less suitable for highly competitive jobs or leadership positions. Indeed, just as gender differences in social preferences may influence which jobs workers prefer (Daymont and Andrisani, 1984; Grove, Hussey and Jetter, 2011; Abraham and Burbano, 2022; Burbano, Padilla and Meier, 2020), beliefs about gender differences in social preferences may influence whether employers in various industries tend to view men or women as better fits. However, unlike the rich and growing literature on believed gender differences in performance and ability (Coffman, 2014; Bohren, Imas and Rosenberg, 2019; Bordalo et al., 2019; Coffman, Collis and Kulkarni, 2019a,b; Coffman, Exley and Niederle, 2021), less is known about believed gender differences in social preferences.<sup>2</sup>

The goal of this paper is to provide—across a wide range of contexts—an extensive examination of *believed* gender differences in behavior and attitudes relating to social preferences. To do so, we first investigate decisions in classic experimental games that vary the relevance of selfish motives, strategic considerations and various fairness concepts. We then investigate employers' decisions to provide equal pay or performance pay to their workers as well as individuals' fairness attitudes related to distributional preferences, the division of household responsibilities, and equal access to healthcare, education, and housing. In terms of behavior and attitudes, we find little to no evidence for gender differences. But, in terms of beliefs about behavior and attitudes, we observe a robust difference. Relative to men—across all contexts we consider—women are believed to be substantially and significantly more generous and equality-oriented.

Since prior work on gender differences in prosocial behavior often builds off of classic economic

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<sup>1</sup>Most obviously, beliefs may contribute to gender discrimination (see Riach and Rich (2002), Blau and Kahn (2017) and Bertrand and Duflo (2017) for related reviews).

<sup>2</sup>Consistent with Bordalo et al. (2016), believed gender differences in performance and ability are often inaccurate and related to gender stereotypes. Believed gender differences have also been shown to be exaggerated in other contexts, such as those relating to risk (Eckel and Grossman, 2002; Ball, Eckel and Heracleous, 2010) and political differences (Robinson et al., 1995).

games, our first study—the Economic Games Study—asks participants to make decisions in games that are commonly used to study social preferences. These games include first-party and third-party versions of classic and modified dictator games, ultimatum games, trust games, prisoner’s dilemma games, and public goods games. In each game, participants make a binary choice between two outcomes, one of which we refer to as the “socially-oriented” outcome.<sup>3</sup> In each game, participants also provide incentivized beliefs about the percent of women and the percent of men who they think choose the socially-oriented outcome. While the first-party games allow us to connect to the literature on gender differences in prosocial preferences, the third-party games allow us to provide insight into gender differences in social preferences beyond any gender differences in prosocial preferences or selfish motives.

We ran the Economic Games Study among two study populations: undergraduate students from the University of Exeter and online participants from Prolific. While we observe little to no gender differences in decisions, we observe substantial and robust differences in beliefs about how men and women make these decisions. For each game and for each study population, the percent of women who are expected to favor the socially-oriented outcome is significantly higher—typically by around 10 percentage points—than the percent of men who are expected to favor the socially-oriented outcome.

In the first-party games—in which the socially-oriented outcome is the more generous and equality-oriented outcome—we find that women are believed to be more likely: (i) to choose an equal split rather than an unequal split that favors themselves in a classic dictator game, (ii) to choose an equal split rather than an unequal but more efficient split that favors themselves in a dictator game with efficiency concerns, (iii) to choose an equal split rather than an unequal split that awards themselves more if they outperform others in a dictator game with entitlement concerns, (iv) to propose an equal split rather than an unequal split that favors themselves in an ultimatum game, (v) to trust by sending money to the second-mover in a trust game, (vi) to cooperate in a prisoner’s dilemma, and (vii) to contribute in a public goods game.

In the third-party games—in which the socially-oriented outcome is the more equality-oriented outcome but selfish motives are not relevant—we find similar patterns of beliefs. Thus, the results from the third-party games reveal that the belief that women are more socially-oriented is driven by more than any believed gender differences in prosocial behavior. Even when men and women make decisions that do not influence their own financial payoffs, women are believed to be more socially-oriented and hence more likely to choose the equal outcome.

In considering the potential drivers of the believed gender gap in social preferences—specifically, in light of it arising across many different contexts—one plausible explanation is that individuals hold broad beliefs about gender differences in social preferences that influence their beliefs about

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<sup>3</sup>Prior work (see, e.g., [Croson and Gneezy \(2009\)](#)) has also used the “socially-oriented” terminology. For our purposes, we emphasize that—by socially-oriented—we mean more than prosocial or generous, and in particular, intend to also include more equality-oriented and cooperative behavior.

gender differences in social preferences in specific contexts. For instance, as modeled by [Bordalo et al. \(2022\)](#), participants may form their beliefs about the specific (and likely unfamiliar) contexts we investigate by making simulations from similar—but not identical—contexts that they encounter outside of our study. Motivated by this possibility, we report several additional sets of results. First, consistent with a broader belief influencing a wide range of context-specific beliefs, individuals’ broader beliefs—when we ask them about, e.g., whether men or women are nicer “in general”—are highly predictive of their context-specific beliefs. Second, when we ask individuals about the drivers of their incentivized context-specific beliefs, they frequently point to experiences with men and women in contexts that are broadly similar but not identical. Third, when asked to describe someone in their life who they think of as generous, over 20% of participants (unprompted) point to their mothers and the vast majority point to a woman in their life. In addition, consistent with broad experiences outside of our study influencing their context-specific beliefs in our study, participants who point to a woman from their life are significantly more likely to believe that women are more generous in our study. Fourth, as evident via an additional study below, we show that these believed gender differences in social preferences extend to several other contexts as well.

In our additional study—the Applications Study—we recruit more online participants from Prolific to investigate whether our results extend to various applications and policy-relevant questions. In this study, participants indicate whether they “mostly agree” or “mostly disagree” with various equality statements. Participants also provide incentivized beliefs about the percent of women and men who indicate agreement with each equality statement. These statements are as follows: (i) society should aim to equalize incomes, (ii) the government should take measures to reduce differences in income levels, (iii) all people should be paid equally for the same job regardless of how well they do the job, (iv) spouses should take equal responsibility for the home and family, (v) both parents should be equally involved in the upbringing of a child, (vi) all people should have equal access to health care, (vii) all people should have equal access to education, and (viii) all people should have equal access to suitable and affordable housing. Despite little difference in the extent to which men and women indicate agreement with each of these statements, we find that—for each of the eight equality statements—a significantly higher percentage of women are *believed* to indicate agreement.

In the Applications Study, participants also make decisions as employers in which they determine the payment of workers by choosing between equal pay or performance pay. While female and male employers are just as likely to choose equal pay, we find that participants *believe* that the female employers are significantly more likely to favor equal pay. Additional results from the worker data provide evidence on the potential implications of such beliefs: being a low performer who benefits from equal pay increases the extent to which workers are willing to work for female employers. Equivalently, being a high performer who benefits from performance pay decreases the extent to which workers are willing to work for female employers.

Finally, to investigate the robustness of our results, we ran several robustness studies that allow us to confirm three additional findings. First, our results are robust to separately eliciting beliefs

about women and beliefs about men (rather than eliciting beliefs about women and men on the same decision screen). Second, our results are not sensitive to the parameterization of the decisions we consider (e.g., the binary nature of the decisions or the payoff amounts in the decisions) because similar results emerge when asking about more context-free beliefs. For example, believed gender differences are similar when we ask about the likelihood of men and women favoring “decisions that achieve equality” as to when we ask about the likelihood that men and women choose (5,5) rather than (10, 0) in a dictator game. Third, even though prior work documents some differences across subjects pools ([Snowberg and Yariv, 2021](#); [Aksoy et al., 2021](#)), additional studies reveal that the believed gender gap in social preferences is robust across three distinct and commonly-used subject pools: undergraduate students, Prolific participants, and a representative sample.

Our findings connect to several strands of literature. The first strand of literature asks whether there are gender differences in behavior that relates to social preferences. Early work raised this important question and found evidence for women being more generous in dictator games ([Eckel and Grossman, 1998](#)) and for women being more equality-oriented in modified dictator games ([Andreoni and Vesterlund, 2001](#); [Dickinson and Tiefenthaler, 2002](#)). More recent work adds support to findings in which women give more in classic dictator games (for reviews, see [Engel \(2011\)](#) and [Bilén, Dreber and Johannesson \(2021\)](#)) and to findings in which women are more equality-oriented in contexts such as those relating to redistribution (see the review in [Bertrand \(2011\)](#)). However, when considering the results across many contexts, evidence for gender differences in social preferences is mixed: [Croson and Gneezy \(2009\)](#) conclude in their review article that “women are neither more nor less socially oriented, but their social preferences are more malleable.”<sup>4</sup> The findings in our paper add support to the growing consensus in the literature that—despite compelling gender differences in social preferences arising in some contexts—gender differences often do not arise in other contexts. We emphasize that the contribution of our paper is *not* to fully map out the space as to when gender differences in social preferences do and do not arise. Such a question, we believe, is best answered by a body of literature given the multitude of contextual features that are known to influence whether gender differences arise. Indeed, [Andreoni and Vesterlund \(2001\)](#) find that women give more when giving is expensive but that men give more when giving is cheap; [Andreoni, Brown and Rischall \(2003\)](#) find that gender differences depend on the type of charity involved; [List \(2004\)](#) finds that gender differences in giving depend on the age of individuals considered; [Meier \(2007\)](#) finds that men give more when provided with information about others frequently giving but that there are no gender differences absent this information; [Eckel and Grossman \(2008\)](#) show in their review article that women tend to be more socially-oriented in settings absent risk but that there are no systematic gender differences in more risky settings; [DellaVigna et al. \(2013\)](#) find that men give more when individuals can easily avoid the ask but that there are no gender differences when avoiding the ask is more difficult; [Ellingsen et al. \(2013\)](#) find that gender differences in cooperation

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<sup>4</sup>In a meta-analysis, [Van Den Akker et al. \(2020\)](#) no evidence for women being more prosocial in trust games, but some evidence fro men being more trusting.

depend on social framing; [Boschini et al. \(2018\)](#) find that women give more when gender is primed in a dictator game but that there are no gender differences absent such a prime; [Buser et al. \(2020\)](#) find that women are more likely to favor redistribution when inequity is due to merit but that there are no gender differences when inequity is due to luck; and, in a meta-analysis, [Doñate-Buendía, García-Gallego and Petrović \(2022\)](#) find that, while women give slightly more in dictator games than men on average, men give more in some countries and when playing with close family members or friends.<sup>5</sup> The contribution of our paper is to show—despite these differences in behavior across contexts and even in situations where there are no gender differences in behavior—there are robust *believed* gender differences in social preferences.

The second strand of literature jointly examines gender differences in social preferences *and* beliefs about gender differences in social preferences. Unlike the first strand of literature that has been reviewed in survey papers and meta-analyses, this second strand of literature is nascent and, we believe, vastly under-explored. We are aware of only four papers that directly examine gender differences in behavior relating to social preferences and beliefs about gender differences in that behavior. These papers find that, relative to men, women give more and are believed to give more in dictator games ([Brañas-Garza, Capraro and Rascon-Ramirez, 2018](#); [Mayo, 2017](#)), volunteer more and are believed to volunteer more in low-promotability volunteer tasks ([Babcock et al., 2017](#)), and are more prosocial towards and are believed to be more prosocial towards out-group members in a coordination game ([Cason, Gangadharan and Grossman, 2020](#)). Our paper contributes to this nascent literature by considering a multitude of new contexts, which allows us to establish a robust pattern of beliefs across all of these contexts. In addition, many of our contexts are topically distinct since—unlike those four papers—we also examine beliefs about equality preferences (i) when selfish motives are not relevant (which allows us to conclude that beliefs are not driven only by believed differences in generosity), and (ii) when connections are made to worker pay, societal redistribution, parental involvement, contributions to the household, education, healthcare, and housing. Moreover, absent our examination of new contexts in which behavior and beliefs do not directionally align, one could have expected that believed gender differences in social preferences are limited to the settings in which there are underlying gender differences. Our paper shows this is not the case: believed gender differences in social preferences arise across a wide range of contexts in which there are no gender differences in behavior. The robustness of these beliefs suggests the potential for these beliefs to influence a wide range of outcomes, opening up many lines of future work such as the backlash that women may face when they do not act in line with expectations ([Bowles, Babcock and Lai, 2007](#)) and the factors that may contribute to women being seen as unqualified for certain jobs and leadership positions ([Grossman et al., 2019](#)).

The third strand of literature relates to prior work, mostly in psychology, that shows through the use of various scales that women are believed to be more “communal”, “warm”, “kind”, and

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<sup>5</sup>More broadly, the relevant gender norms across situations is likely to influence the extent of gender differences ([Eagly, 2009](#); [Babcock, Bowles and Bear, 2012](#)).

“helpful” (Spence, Helmreich and Stapp, 1975; Eagly and Steffen, 1984; Williams and Best, 1990; Diekman and Eagly, 2000; Fiske et al., 2002). In addition to topical differences with this prior work from psychology—given our focus on distributional decisions and equality preferences—our paper expands upon this prior work by examining not only beliefs, but also corresponding behavior and attitudes. This latter difference allows us to show that the believed gender differences in social preferences are largely inaccurate in the contexts we consider.

Lastly, that these beliefs are largely inaccurate connects us to a fourth strand of literature on the underlying drivers of (often inaccurate) beliefs. In addition to broadly connecting us to prior work on how stereotypes (Bordalo et al., 2016) contribute to the inaccuracy of these beliefs<sup>6</sup>, stereotypes could bias beliefs if gender differences in one context—e.g., mothers providing more childcare (Aguiar and Hurst, 2007), women being more “nurturing” in family roles (Eagly, 2009), or women being more left-leaning (Bertrand, 2011)—cause individuals to (inaccurately) expect similar gender differences in other contexts. Indeed, as mentioned before and as modeled in Bordalo et al. (2022), individuals who encounter a new context may simulate likely behavior based off of prior experiences, some of which may be irrelevant. In this way, both memory and simulation can produce these types of biased beliefs (Mullainathan, 2002; Bordalo, Gennaioli and Shleifer, 2020; Bordalo et al., 2021; Enke, Schwerterm and Zimmermann, 2021). In addition, akin to Eagly and Steffen (1984) and Schwartzstein (2014), stereotypes that partly neglect the importance of the context (Ross, 1997) may cause individuals to overestimate the extent to which women are more socially-oriented if they are disproportionately likely to encounter women in contexts that promote socially-oriented behavior.

## 2 The Economic Games Study

The “Economic Games” Study elicits participants’ beliefs about gender differences in social preferences in classic economic games. Motivated by prior literature, we design economic games that are based off of classic dictator games (Kahneman, Knetsch and Thaler, 1986; Forsythe et al., 1994; Eckel and Grossman, 1998; Dickinson and Tiefenthaler, 2002), dictator games with efficiency concerns (Andreoni and Vesterlund, 2001; Charness and Rabin, 2002; Andreoni and Miller, 2002), dictator games with entitlement concerns (Cherry, Frykblom and Shogren, 2002; Dickinson and Tiefenthaler, 2002; Almås, Cappelen and Tungodden, 2020), ultimatum games (Güth, Schmittberger and Schwarze, 1982; Eckel and Grossman, 2001; Solnick, 2001; Bereby-Meyer and Niederle, 2005), trust games (Camerer and Weigelt, 1988; Berg, Dickhaut and McCabe, 1995; Croson and Buchan, 1999; Buchan, Croson and Solnick, 2008), prisoner’s dilemma games (Dal Bó and Fréchette,

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<sup>6</sup>While we observe little to no evidence for actual gender differences in the contexts we consider, the broader literature—in finding evidence for women being more socially-oriented than men in some contexts—does suggest that there could be a “kernel of truth” to the belief that women are more socially-oriented. That said, this belief seems unlikely to reflect stereotypes that are biased by differences in the tails of the distribution, since equality concerns appear to pull women towards the middle of the distribution in terms of the decisions they make. For instance, when making distributional decisions, women are less likely than men to choose “all or nothing” (Andreoni and Vesterlund, 2001; Thöni, Volk and Cortina, 2020; Thöni and Volk, 2021).

2011, 2018; Capraro, 2018), and public goods games (Marwell and Ames, 1981; Andreoni, 1988).

## 2.1 Experimental Design of The Economic Games Study

The Economic Games Study involves two main parts: the “beliefs” part and the “decisions” part. Both parts include 14 scenarios, seven related to first-party decisions in common economic games and seven related to third-party decisions in the same economic games. We will first describe the 14 scenarios before turning to details on either of these parts.

### The Scenarios

There are 14 scenarios, and three types of players: Player 1 (P1), Player 2 (P2), and the Neutral Player (NP). In each scenario, the decisions made by a subset of these players determines the points given to P1 and P2 in that scenario. Each scenario is built off of a common experimental game to measure social preferences in which one or two players make a binary decision. We focus on binary decisions to facilitate the belief elicitation in the beliefs part of our study.<sup>7</sup> Table 1 shows the points for P1 and P2 that result from the decisions made in each game. We note that we are specifically interested in results relating to the main decision-maker—who chooses between Decision 1 (D1) and Decision 2 (D2) in a game—and thus label our scenarios according to whether the main decision-maker is asked to make first-party or third-party decisions.<sup>8</sup> For clarity, we refer to D1 as the “non-socially-oriented” outcome and D2 as the “socially-oriented” outcome. While we view this designation as conceptually useful and reasonable—indeed the socially-oriented outcome results from acting more generously in the first-party versions and from acting more equality-oriented in the first-party and third-party versions—we emphasize that this designation is not intended to say social preferences may only cause participants to choose D2.<sup>9</sup> Moreover, as is later shown, the robustness of our results across each context implies that our results persist even when only considering the most “clearcut” contexts.

We refer to scenarios 1–7 as the “first-party” scenarios because they involve first-party versions of a game. Specifically, P1 chooses between D1 and D2, which then influences how many points are given to themselves (since they are P1) and how many points are given to someone else (i.e., to P2). The points that result from each “first-party” scenario are then as follows:

- **Scenario 1** involves a Dictator Game (DG). While D2 yields (5,5), D1 yields an unequal split of (10,0).

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<sup>7</sup>By restricting to binary decisions, we can elicit participants’ beliefs about the percentage of other participants who make one decision in a scenario, and these beliefs then immediately imply—with further elicitation—their beliefs about the percentage of participants who make the other decision in a scenario.

<sup>8</sup>To ensure our design is incentive compatible, we ask participants to make decisions as P2 when P2 has a decision to make. But, we don’t ask about beliefs about P2.

<sup>9</sup>In some games, the more equality-oriented outcome is obvious. In other games (e.g. a prisoner’s dilemma game where equal outcomes can result from both participants cooperating or both participants defecting), the more equality-oriented outcome is less obvious. If we define the more equality-oriented outcome as the outcome that either guarantees the equal outcome or makes the payoff-maximizing equal outcome more likely, the more socially-oriented outcome is always the more equality-oriented outcome. In addition, the more socially-oriented behavior aligns with other social preferences—e.g., the outcome in which participants trust more in the trust game, contribute more in the public goods game, and cooperate more in the prisoner’s dilemma game.

- **Scenario 2** involves a Dictator Game with efficiency concerns (DG-EFF). While D2 yields (5,5), D1 yields an unequal—but more efficient—split of (15,0).
- **Scenario 3** involves a Dictator Game with entitlement concerns (DG-ENT). While D2 yields (5,5), D1 yields a higher amount for P1 when P1 is “entitled” to it. Specifically, D1 yields (10,0) when P1 outperforms P2 on a math task (shown in Appendix Figure C.25) but (5,5) otherwise.<sup>10</sup>
- **Scenario 4** involves an Ultimatum Game (UG). While D2 yields (5,5), D1 yields the unequal split of (9,1) if it is accepted by P2 but (0,0) if it is rejected by P2.<sup>11</sup>
- **Scenario 5** involves a Trust Game (TG). If P1 distrusts P2 by choosing D1, then (10,0) is guaranteed. If P1 trusts P2 by choosing D2, the amount of points is doubled and the distribution of points equals (10,10) if P2 chooses to “reward that trust” or instead (0,20) if P2 chooses to “punish that trust.”<sup>12</sup>
- **Scenario 6** involves a Prisoner’s Dilemma (PD). If P1 defects by choosing D1, then (15,0) results if P2 cooperates, but (0,0) results if P2 also defects. If P1 cooperates by choosing D2, then (10,10) results if P2 also cooperates, but (0,15) results if P2 defects.
- **Scenario 7** involves a Public Goods Game (PGG). If P1 does not contribute by choosing D1, then (18,8) results if P2 contributes, but (10,10) results if P2 also does not contribute. If P1 contributes by choosing D2, then (16,16) results if P2 also contributes, but (8,18) results if P2 does not contribute.<sup>13</sup>

We refer to scenarios 8-14 as the “third-party” scenarios because they involve third-party versions of each game. Specifically, the NP chooses between D1 and D2, which then influences how many points are given to two other participants (i.e., to P1 and P2). Relative to the first-party scenarios, the only difference in the third-party scenarios is that the NP—rather than the P1—chooses between D1 and D2. That is, in the third-party scenarios, the payoffs of the decision-maker (i.e., the NP) are not influenced by whether D1 or D2 is chosen. Thus, while results from scenarios 1-7 allow us to explore beliefs about gender differences in social preferences when being socially-oriented can be

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<sup>10</sup>To narrow in on entitlement concerns—and given the well-documented gender differences in confidence (Niederle and Vesterlund, 2011)—note that P1 cannot be made worse off by choosing the entitlement payoff even if they performed “worse” than P2.

<sup>11</sup>To ensure P2 only faces a binary decision in this scenario and to ensure P2 receives a higher number of points from a choice of D2, P2 is only given the opportunity to reject or accept the unequal split of (9,1). If P1 chooses D2, the equal split of (5,5) is definitely implemented.

<sup>12</sup>Aksoy et al. (2018) finds that the behavior in an incentivized trust game is not correlated with other survey measures of trust. It is thus worth noting that we find similar results when looking at broader measures of trust as well. See results from the Broader Beliefs (Prolific Participants) Study, the Broader Beliefs (Representative Sample) Study, and the Broader Beliefs-2 Study detailed in Section 4.

<sup>13</sup>Note that this is equivalent to a PGG where both participants start off with 10 points, they can choose to either contribute their 10 points to the public good or not, the number of points in the public good is multiplied by 1.6, and the number of points in the public good is redistributed equally between P1 and P2.

Table 1: Scenarios in the Economic Games Study Version

Scenario	Games	P1 or NP chooses D1 ("non-socially-oriented")	P1 or NP chooses D2 ("socially-oriented")
1 or 8	DG	UNEQUAL SPLIT (10,0)	EQUAL SPLIT (5,5)
2 or 9	DG-EFF	UNEQUAL SPLIT (15,0)	EQUAL SPLIT (5,5)
3 or 10	DG-ENT	UNEQUAL SPLIT (10,0) if P1 outperforms P2 (5,5) otherwise	EQUAL SPLIT (5,5)
4 or 11	UG	PROPOSE UNEQUAL SPLIT (9,1) if P2 accepts it (0,0) otherwise	PROPOSE EQUAL SPLIT (5,5)
5 or 12	TG	DON'T TRUST (10,0)	TRUST (10,10) if P2 rewards trust (0,20) if P2 punishes trust
6 or 13	PD	DEFECT (15,0) if P2 cooperates (0,0) if P2 defects	COOPERATE (10,10) if P2 cooperates (0,15) if P2 defects
7 or 14	PGG	DON'T CONTRIBUTE (18,8) if P2 contributes (10,10) if P2 doesn't contribute	CONTRIBUTE (16,16) if P2 contributes (8,18) if P2 doesn't contribute

This table shows the points for (P1,P2) in each scenario according to the decisions made. In scenarios 1–7, P1 chooses between D1 and D2. In scenarios 8–14, NP chooses between D1 and D2. In the DG, DG-EFF, and DG-ENT games, P2 never makes a decision. In the other games, P2 makes a binary decision and influences the payoffs in the manner shown. In the UG, P2 makes a binary decision about whether, in the event that D1 is chosen (i.e., the unequal split is proposed), to accept or reject the unequal split. In the TG, P2 decides whether, in the event that D2 is chosen (i.e., trust is shown), to reward or punish the trust that is shown. In the PD, P2 decides to cooperate or defect. In the PGG, P2 decides to contribute or not to contribute.

financially costly (indeed D1 can be classified as the “selfish” choice in all of these scenarios), results from scenarios 8–14 allow us to consider beliefs about gender differences in social preferences when selfish motives are not relevant.<sup>14</sup>

### The Beliefs Part

In the beliefs part of the study, participants are asked two belief questions in each scenario for a total of 24 beliefs. In each first-party scenario, the two belief questions ask participants to predict the percentage of female P1s who choose D1 and the percentage of male P1s who choose D1 in that scenario. In each third-party scenario, the two belief questions ask participants to predict the percentage of female NPs who choose D1 and the percentage of male NPs who choose D1 in that scenario. Answers to each belief question are provided via sliders that allow participants to select a range that covers 7-percentage points from 0% to 100%. Beliefs are incentivized for accuracy:

<sup>14</sup>D1 can be classified as the selfish choice because of the following: P2 always receives (expected) higher payoffs from D2, but P1 receives (expected) higher payoffs from D1 with only one possible exception (i.e., the expected payoffs from D1 in scenario 4 could be lower if the rejection rates of D1 are high in the UG).

participants are awarded £10 or \$2 (when run with undergraduate students and Prolific participants, respectively) if they select a range on the slider that includes the true percentage given the belief question.<sup>15</sup>

## The Decisions Part

In the decisions part of the study, participants are informed that they will be randomly assigned to a group with two other participants who complete this study and that each member of their group will be randomly assigned to be P1, P2, or the NP. Participants are then asked to make the relevant decisions in each scenario in the event that they are assigned to P1, P2, or the NP. This results in 14 decisions in which they choose between D1 and D2: seven decisions as P1 in the first-party scenarios (i.e., Scenarios 1–7) and seven decisions as the NP in the third-party scenarios (i.e., Scenarios 8–14). This also results in eight additional decisions as P2 in Scenarios 4–7 and 11–14.

## Implementation Details

All participants face the exact same set of decisions and belief questions. All that varies is that the order in which they make these decisions and provide these beliefs is randomly determined at the participant level.<sup>16</sup> On any screen where participants make a decision or provide beliefs, information about the points that result from the decisions made in that scenario is presented both quantitatively and qualitatively in a consistent manner across the beliefs part and decisions part of the study. After completing both the decisions part and beliefs part, participants answer a short follow-up survey. To determine their payments from the study, one part—either the decisions part or the beliefs part—is randomly selected as the part-that-counts. If the beliefs part is the part-that-counts, participants receive the amount they are awarded in one randomly-selected belief question. If the decisions part is the part-that-counts, participants receive the cash equivalent of the points given to them in one randomly selected scenario.<sup>17</sup> Participants receive detailed instructions—including on the payment procedure—and must correctly answer understanding questions at various points in the study. No participants are excluded from having answered understanding questions incorrectly. Rather, participants are given as many attempts as needed to answer these questions correctly.

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<sup>15</sup>We seek to follow the recommendation in [Danz, Vesterlund and Wilson \(2020\)](#) to provide simple, rather than complex, incentives for accurate beliefs, and indeed, implement their proposal of simply rewarding participants “if the true outcome falls within some bounds around their guess.”

<sup>16</sup>Participants are randomly assigned to complete either the decisions or beliefs part first. Within the beliefs part, participants face two blocks (beliefs relating to Scenarios 1–7 or Scenarios 8–14) in a random order, and the scenarios within those blocks are presented in a random order. The order in which the belief questions appear is also randomly determined such that the belief question about men always precedes the one about women, or vice versa. Within the decisions part, participants face four blocks (pertaining to P1’s decisions in Scenarios 1–7, P2’s decisions in Scenarios 4–7, the NP’s decisions on behalf of P1 in Scenarios 1–7, and the NP’s decisions on behalf of P2 in Scenarios 4–7) in a random order, and the order of scenarios within those blocks are in a random order.

<sup>17</sup>Specifically, if the decisions part is the part-that-counts, recall that participants are randomly assigned to a group with two other participants, and each member of their group is randomly assigned be P1, P2, or the NP. Thus, participants are given the number of points in the randomly selected scenario that corresponds with (i) whether they are assigned to P1, P2, or the NP, and (ii) the decision made by the participant assigned to be P1 if P1 made a decision in that scenario, the decision made by the participant assigned to be NP if NP made a decision in that scenario, and/or the decision made by the participant assigned to be P2 if P2 made a decision in that scenario.

We recruited two sets of participants to complete the Economic Games Studies. In the Economic Games (Undergraduate Students) Study, to assess these beliefs among a traditional subject pool, we recruited 381 undergraduate students through the Finance and Economics Experimental Laboratory at the University of Exeter in December 2020.<sup>18</sup> In the Economic Games (Prolific Participants) Study, to assess the robustness of these beliefs in a different subject pool, we recruited 400 online participants from Prolific (who had an approval rating of 95% or greater from at least 100 prior submissions and chose the United States when asked for their nationality) in March 2021.<sup>19</sup>

There are two main differences between the Economic Games (Undergraduate Students) Study and the Economic Games (Prolific Participants) Study. First, the payoff amounts are different across these two studies. The Economic Games (Undergraduate Students) Study involves a completion payment of £7 and an additional payment of (i) £10 if they correctly answer the question-that-counts in the beliefs part and the beliefs part is the part-that-counts, or (ii) £0 - £20 (specifically, £1 for each point they earn in the scenario-that-counts) if the decisions part is the part-that-counts. The Economic Games (Prolific Participants) Study involves a completion payment of \$8 and an additional payment of (i) \$2 if they correctly answer the question-that-counts in the beliefs part and the beliefs part is the part-that-counts, or (ii) \$0 - \$2 (specifically, 10 cents for each point they earn in the scenario-that-counts) if the decisions part is the part-that-counts. Second, some of the instructions are simplified in the Economic Games (Prolific Participants) Study. For full instructions, see Appendices C.1 and C.2.

## 2.2 Decisions in the Economic Games Studies

In this section, we present results on the decisions made in the Economic Games Studies. Specifically, for each scenario, we examine whether the rate at which a decision-maker chooses the socially-oriented outcome (i.e., chooses D2 over D1) in a scenario depends on whether the decision-maker is a man or woman.

Table 2 presents results on the rate at which the socially-oriented outcome is chosen. D(F) shows the rate among female decision-makers, D(M) shows the rate among male decision-makers, and  $\Delta$  shows the difference in these rates and whether this difference is statistically significant according to a two-sided t-test. Each scenario is defined according to the game involved (noted in the column) and whether it involves “first-party decisions” (Panels 1 and 2) or “third-party decisions” (Panels 3 and 4). The results are also presented separately for each study population: for the undergraduate students (Panels 1 and 3) and for the Prolific participants (Panels 2 and 4).

The main result from Table 2 is that—while some gender differences in decisions emerge—there are no robust gender differences in decisions. For example, consider the results in Column 1 of Panel 1. When undergraduate students make first-party DG decisions (i.e., decisions in Scenario 1), Column 1 shows that 0.32 of men and 0.32 of women choose the socially-oriented outcome

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<sup>18</sup>While we sought to only recruit undergraduate students, 13 graduate students completed our study and hence are dropped. Our results are entirely robust to including them.

<sup>19</sup>For more on Prolific, see Palan and Schitter (2018) and Peer et al. (2021).

of (5,5), which implies a  $\Delta$  that is nearly 0 (although not exactly 0 due to rounding). More generally, in 24 out of the 28 contexts—defined by the scenario and by the study population—we fail to reject that  $\Delta = 0$ . When considering the 4 times that  $\Delta$  is statistically significant, this evidence never replicates in both of our study populations. For instance, when considering first-party DG and DG-EFF decisions made by Prolific participants, women are significantly more likely to choose the socially-oriented outcome (see Panel 2, Columns 1-2). But, neither of these differences are statistically significant when considering decisions made by undergraduate students (see Panel 1, Columns 1-2). At best, gender differences in these decisions are sensitive to both the study population and the payoffs involved.

Table 2: Rate of choosing the socially-oriented outcome in the Economic Games Studies

Game:	DG (1)	DG-EFF (2)	DG-ENT (3)	UG (4)	TG (5)	PD (6)	PGG (7)
<b>Panel 1: Undergraduate Students, First-Party Scenario</b>							
D(F)	0.32	0.16	0.15	0.70	0.25	0.27	0.36
D(M)	0.32	0.13	0.18	0.74	0.24	0.36	0.43
$\Delta$	0.01	0.03	-0.03	-0.04	0.00	-0.09*	-0.07
N	381	381	381	381	381	381	381
<b>Panel 2: Prolific Participants, First-Party Scenario</b>							
D(F)	0.60	0.46	0.38	0.76	0.43	0.47	0.56
D(M)	0.46	0.36	0.37	0.77	0.44	0.47	0.52
$\Delta$	0.14***	0.10**	0.01	-0.01	-0.01	-0.00	0.04
N	396	396	396	396	396	396	396
<b>Panel 3: Undergraduate Students, Third-Party Scenario</b>							
D(F)	0.74	0.65	0.46	0.83	0.61	0.61	0.57
D(M)	0.72	0.57	0.44	0.87	0.66	0.67	0.73
$\Delta$	0.02	0.08	0.02	-0.05	-0.05	-0.05	-0.16***
N	381	381	381	381	381	381	381
<b>Panel 4: Prolific Participants, Third-Party Scenario</b>							
D(F)	0.82	0.72	0.61	0.83	0.74	0.68	0.75
D(M)	0.81	0.71	0.61	0.86	0.69	0.69	0.76
$\Delta$	0.02	0.01	0.01	-0.03	0.05	-0.01	-0.01
N	396	396	396	396	396	396	396

D(F) and D(M) show the rates at which female and male decision-makers choose the socially-oriented outcome in a scenario,  $\Delta$  shows the difference in these rates and whether this difference is statistically significant according to a two-sided t-test at the following levels: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Columns 1–7 correspond to the decisions made in the first-party version of the noted game in Panels 1 and 2 but to the third-party versions of the noted game in Panels 3 and 4. The data are from the Economic Games Study run with undergraduate students (excluding one student who did not select male or female as their gender) in Panels 1 and 3 and with Prolific participants (excluding four participants who did not select male or female as their gender) in Panels 2 and 4.

Despite the lack of evidence for gender differences in decisions, the pattern of results in Table

[2](#) makes clear that decision-makers pay attention to and respond to how the incentives vary across the scenarios. The most clear pattern is consistent with the rich literature on selfish motives, and specifically, how distributional decisions often reflect selfish motives (see, e.g., [Konow \(2000\)](#)). In each of the 28 contexts, both men and women are less likely to choose the socially-oriented outcome in first-party scenarios (see Panels 1 and 2) than in third-party scenarios in which selfish motives are not relevant (see Panels 3 and 4). This difference is always statistically significant and sizable: it ranges from 6 to 13 percentage points in the UG scenarios (in which the overall rates of choosing the socially-oriented outcome are higher) and from 19 to 49 percentage points in all other scenarios. In addition, relative to the DG scenarios (see Column 1), note that the rate of choosing the socially-oriented outcome is lower when it does not align with efficiency concerns in the DG-EFF scenarios (see Column 2), lower when it does not align with entitlement concerns in the DG-ENT scenarios (see Column 3), and higher when the unequal outcome may be rejected in the UG scenarios (see Column 4).<sup>[20](#)</sup>

## 2.3 Beliefs in the Economic Games Studies

In this section, we present results on the beliefs about male and female decision-makers in the Economic Games Studies. Specifically, for each scenario, we examine how participants' beliefs vary when they are asked about male decision-makers versus female decision-makers. While our belief results are robust to only considering the beliefs held by male or female participants, we emphasize—for clarity—that our main belief results relate to the gender of the decision-maker about whom the beliefs are elicited, not the gender of the participant providing beliefs.

Following a similar structure as Table [2](#), Table [3](#) presents results on beliefs. B(F) indicates the average believed percent of female decision-makers who choose the socially-oriented outcome, B(M) indicates the average believed percent of male decision-makers who choose the socially-oriented outcome, and  $\Delta$  shows the difference in these beliefs and whether this difference is statistically significant (when standard errors are clustered at the participant level).

Before turning to our main results, we note that—like with the results on decisions shown in Table [2](#)—several patterns in the results are directionally reassuring in terms of participants paying attention to and responding to how the incentives vary across the scenarios. The most clear pattern is consistent with the role of selfish motives. In each of the 28 contexts, participants believe that men and women are less likely to choose the socially-oriented outcome in first-party scenarios (see Panels 1 and 2) than in third-party scenarios (see Panels 3 and 4). This difference is statistically significant when asked about male decision-makers in each of these 28 contexts and statistically significant when asked about female decision-makers in each of these 28 contexts. In addition, relative to the DG scenarios (see Column 1), note that the participants believe that the percent of decision-makers choosing the socially-oriented outcome is lower when it does not align with efficiency

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<sup>20</sup>Out of the 24 tests for differences implied by these comparisons when separately considering men and women in either study population in either first-party or third-party scenarios, the difference is statistically significant in 23 out of 24 times.

concerns in the DG-EFF scenarios (see Column 2), lower when it does not align with entitlement concerns in the DG-ENT scenarios (see Column 3), and higher when the unequal outcome may be rejected in the UG scenarios (see Column 4).<sup>21</sup>

The main result from Table 3 is clear: women are expected to choose the socially-oriented outcome more often than men are. This difference is not context-specific. In 28 out of 28 contexts,  $\Delta$  is statistically significantly positive. This difference is substantial. Relative to the percent of men who are expected to choose the socially-oriented outcome, the percent of women who are expected to choose the socially-oriented outcome is believed to be anywhere from 8 to 13 percentage points higher, on average, across contexts.

More specifically, when considering beliefs about first-party scenarios, women are believed to be more likely to do the following: to choose an equal split rather than an unequal split that favors themselves in a classic dictator game (see Panels 1 and 2, Column 1), to choose an equal split rather than an unequal split that favors themselves and is more efficient in a dictator game with efficiency concerns (see Panels 1 and 2, Column 2), to choose an equal split rather than an unequal split that favors themselves if they outperformed P2 in a dictator game with entitlement concerns (see Panels 1 and 2, Column 3), to propose an equal split rather than the smallest non-zero amount possible in an ultimatum game (see Panels 1 and 2, Column 4), to trust by sending money to the second-mover in a trust game (see Panels 1 and 2, Column 5), to cooperate in a prisoner's dilemma game (see Panels 1 and 2, Column 6) and to contribute in a public goods game (see Panels 1 and 2, Column 7). All of these results correspond with a belief that women are more prosocial or generous: they are believed to be more likely to make decisions that benefit the payoffs of others even when doing so results in them receiving (potentially) lower payoffs.

But, as Panels 3 and 4 in Table 3 show, that the difference in beliefs about men and women persists when considering beliefs about third-party scenarios makes clear that the believed gender differences extend beyond believed differences in generosity or prosocial preferences. Even when men and women make decisions that do not influence their own financial payoffs in third-party scenarios, women are believed to be more likely to choose equal outcomes in dictator and ultimatum games, to trust more by sending more in trust games, to cooperate more in prisoner's dilemma games, and to contribute more in public goods games. Thus, we find that women are believed to be more socially-oriented than men are—when selfish motives are and are not relevant (i.e., in first-party and third-party scenarios), when strategic considerations are and are not relevant (e.g., in DG and UG scenarios), when various fairness concepts are relevant (e.g., across DG, DG-EFF and DG-ENT scenarios), and more broadly, across many contexts.

The believed gender gap in socially-oriented preferences is robust to several restrictions on our data. Appendix Table A.1 presents results on the average believed difference when pooling across

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<sup>21</sup>Out of the 24 tests for differences implied by these comparisons when separately considering men and women in either study population in either first-party or third-party scenarios, the difference is statistically significant in 23 out of 24 times.

Table 3: Beliefs about the percent of decision-makers choosing the socially-oriented outcome in the Economic Games Studies

Game:	DG (1)	DG-EFF (2)	DG-ENT (3)	UG (4)	TG (5)	PD (6)	PGG (7)
<b>Panel 1: Undergraduate Students, Beliefs about First-Party Scenarios</b>							
B(F)	32.33	28.79	27.91	51.41	31.20	36.27	38.98
B(M)	23.13	20.19	19.48	42.36	23.40	27.24	30.77
$\Delta$	9.20***	8.60***	8.43***	9.04***	7.80***	9.03***	8.21***
N	764	764	764	764	764	764	764
<b>Panel 2: Prolific Participants, Beliefs about First-Party Scenarios</b>							
B(F)	43.42	40.66	38.49	53.49	44.02	45.45	46.27
B(M)	30.43	27.82	27.52	42.14	32.26	32.58	35.25
$\Delta$	12.98***	12.84***	10.97***	11.35***	11.77***	12.87***	11.02***
N	800	800	800	800	800	800	800
<b>Panel 3: Undergraduate Students, Beliefs about Third-Party Scenarios</b>							
B(F)	52.63	46.71	39.45	59.25	45.99	50.48	52.07
B(M)	43.21	37.64	30.95	49.95	36.85	41.21	43.53
$\Delta$	9.41***	9.07***	8.49***	9.30***	9.14***	9.26***	8.54***
N	764	764	764	764	764	764	764
<b>Panel 4: Prolific Participants, Beliefs about Third-Party Scenarios</b>							
B(F)	54.10	50.04	44.18	55.55	51.56	50.22	51.25
B(M)	41.71	38.11	34.17	45.69	40.42	40.48	41.29
$\Delta$	12.39***	11.93***	10.01***	9.87***	11.14***	9.74***	9.96***
N	800	800	800	800	800	800	800

B(F) and B(M) show the average believed percent of female and male decision-makers who choose the socially-oriented outcome in a scenario,  $\Delta$  shows the difference in these percentages and whether this difference is statistically significant according to a two-sided t-test with SEs clustered at the participant level at the following levels: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Columns 1–7 correspond to the beliefs about decisions made in the first-party version of the noted game in Panels 1 and 2 but to the third-party versions of the noted game in Panels 3 and 4. The data are from the Economic Games Study run with undergraduate students in Panels 1 and 3 and with Prolific participants in Panels 2 and 4.

all first-party scenarios in Panels 1 and 2 and when pooling across all third-party scenarios in Panels 3 and 4. Column 1 shows these pooled results when including scenario fixed effects and clustering standard errors at the participant level. Relative to the men, the percent of women who are expected to choose the socially-oriented outcome is believed to be (i) 8.61 percentage points higher in first-party scenarios by undergraduate students, (ii) 11.97 percentage points higher in first-party scenarios by Prolific participants, (iii) 9.03 percentage points higher in third-party scenarios by undergraduate students, and (iv) 10.72 percentage points higher in third-party scenarios by Prolific participants. Column 2 shows that these differences are robust to controlling for demographic characteristics. Column 3 shows that these differences are robust to restricting to the 95% of undergraduate students or 99% of Prolific participants who pass an unincentivized attention check

at the end of the survey.<sup>22</sup> Columns 4 and 5 show that these differences are robust to whether participants provide beliefs before making any decisions or provide beliefs after making decisions, respectively. Columns 6 and 7 show that these differences are robust to whether participants first provide beliefs in response to scenarios (which appear in a random order) either earlier on or later for a participant, respectively.

The believed gender gap in socially-oriented preferences is robust to considering the full distribution of beliefs. Figure 1 shows the distributions of: beliefs about first-party scenarios provided by undergraduate students (see Panel A), beliefs about first-party scenarios provided by Prolific participants (see Panel B), beliefs about third-party scenarios provided by undergraduate students (see Panel C), and beliefs about third-party scenarios provided by Prolific participants (see Panel D). In each panel, the distribution of the beliefs about female decisions-makers first-order stochastically dominates the distribution of beliefs about male decision-makers and these distributions are statistically different (Kolmogorov-Smirnov test,  $p < 0.01$ ). Appendix Figures B.1, B.2, B.3 and B.4 further show that similar results follow when comparing these distributions in each of the 28 contexts (for each comparison: Kolmogorov-Smirnov test,  $p < 0.01$ ).

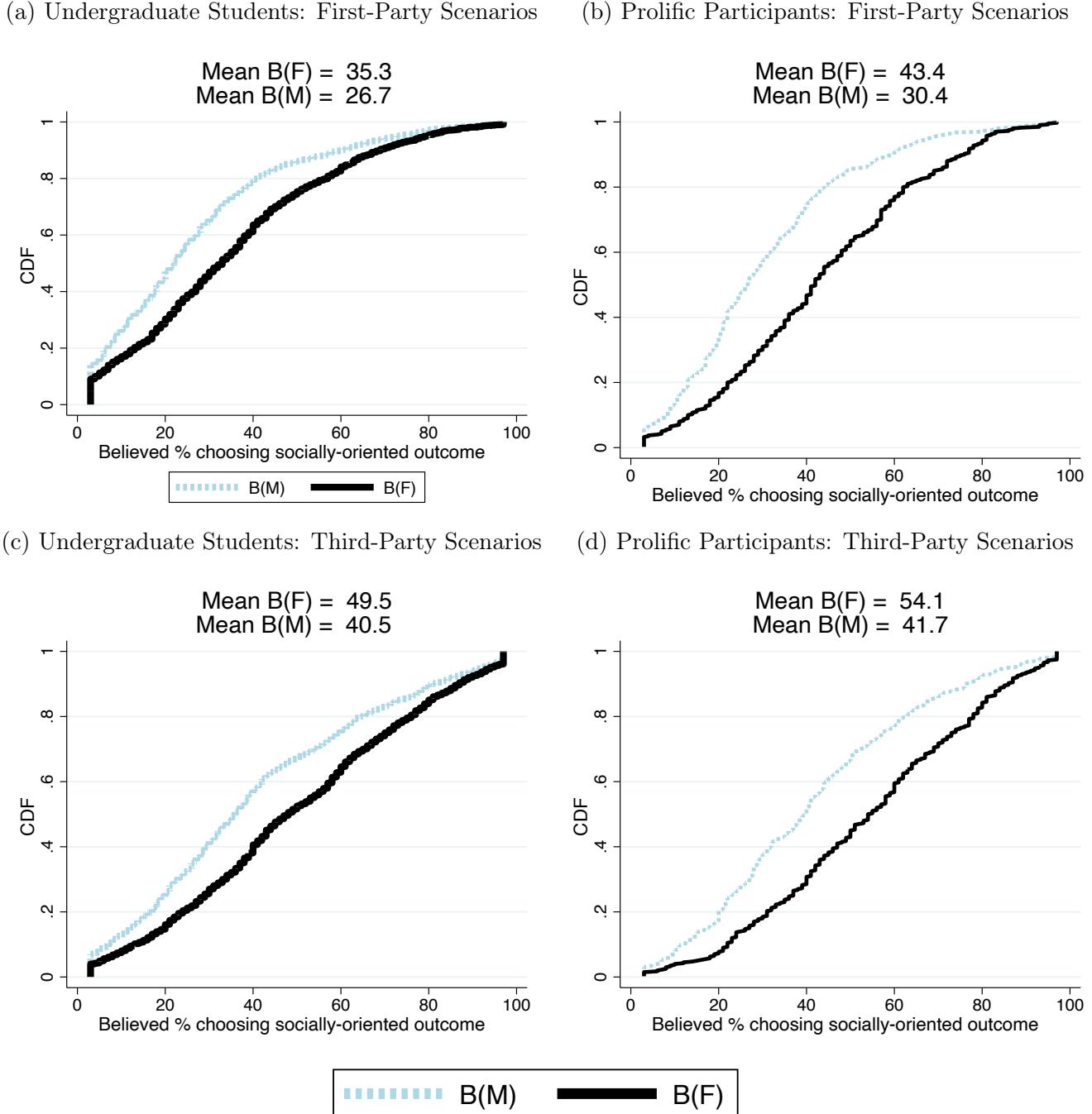
The believed gender gap in socially-oriented preferences is robust to considering the participant level. Appendix Table A.2 provides additional descriptive statistics on the beliefs. In each context, the majority of participants believe that the percent of female decision-makers choosing the socially-oriented outcome is higher than the percent of male decisions-makers choosing the socially-oriented outcome. For instance, when pooling across first-party scenarios, undergraduate students believe the percent of female decision-makers choosing the socially-oriented outcome is higher than the percent of male decision-makers choosing the socially-oriented outcome 73% of the time, believe the opposite 11% of the time, and believe there is no gender difference 16% of the time. In addition, as shown in Appendix Figure B.5, the distribution of the number of times each participant believes female decision-makers are more socially-oriented is skewed towards the right with the average participant believing female decision-makers are more socially-oriented 10 out of 14 times.

The believed gender in socially-oriented preferences is largely inaccurate. Appendix Table A.3 presents results related to the accuracy of beliefs. Two main patterns of results emerge. First, while the extent to which women are believed to choose the socially-oriented outcome is sometimes overestimated and other times underestimated (see  $B(F)$ - $Truth(F)$ ), the extent to which men are believed to choose the socially-oriented outcome is underestimated in 26 out of the 28 contexts (see  $B(M)$ - $Truth(M)$ ). Second, in 27 out of 28 contexts, relative to the truth, the extent to which women are more likely to choose the socially-oriented outcome than men is overestimated (see  $\Delta$ ). This

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<sup>22</sup>In our follow-up survey, participants are asked to select the option on the left that corresponds with “strongly disagree” in one question and the option on the right that corresponds with “strongly agree” in another question. They only pass our attention check if they correctly answer both of these questions. When completing our follow-up survey, participants know that their answers cannot influence their payments from the study in any way. The high rate of passing this attention check that is unincentivized and asked when participants may be most fatigued at the end of the study is also reassuring.

Figure 1: Distributions of incentivized beliefs when pooling across all games



latter result is indeed statistically significant in 26 out of 28 contexts and is not surprising given the results we observe on decisions and beliefs. Across contexts, we observe a robust believed gender gap in social preferences: women are believed to choose the socially-oriented outcome more often. But, across contexts, there are little to no gender differences in these decisions. Thus, the believed gender gap in social preferences is inaccurate in the contexts we consider—suggesting the relevance of future work on the potential implications of these inaccurate beliefs and how to correct these inaccurate beliefs. In addition to examining one such implication in an additional study described

in Section 3.5, we return to this discussion in our Conclusion.

## 2.4 Additional Results from the Economic Games Study

To provide additional insights into our results—including to help guide future work—we provide additional results related to the underlying drivers of these beliefs and implications. Specifically, we first present additional results from the Economic Games Study in this section and then present additional results from a new study version call the Economic Games (Stereotypes) Study in Section 2.5.

Motivated by the possibility that individuals' broader beliefs—shaped by their life experiences—may influence their beliefs about the specific contexts we investigate in this study, we examine whether there are certain “types” of individuals who are more likely to believe there is a gender gap in social preferences. Consistent with the existence of such types, we note that beliefs across contexts are highly correlated. When considering belief data from the undergraduate students, out of the 91 correlations that result from the pairwise comparison of the believed gender difference in each of the 14 contexts, all correlations are positive and 89 out of 91 correlations are statistically significant ( $p < 0.05$ ). When considering belief data from the Prolific participants, all correlations are positive and 91 out of 91 correlations are statistically significant ( $p < 0.05$ ).

In addition, individual characteristics are correlated with beliefs. Following the specifications in Appendix Table A.1, we display these results when examining first-party scenarios from the undergraduate students in Appendix Table A.4, first-party scenarios from the Prolific participants in Appendix Table A.5, third-party scenarios from the undergraduate students in Appendix Table A.6, and third-party scenarios from the Prolific participants in Appendix Table A.7. Three main findings follow.

First, gender is (somewhat) predictive of beliefs. In Appendix Tables A.4–A.7, while the believed gender gap is statistically significant for both women (see Column 1) and men (see Column 2), women expect the gap to be larger, significantly so among the undergraduate students and directionally so among the Prolific participants (see Column 3).

Second, an individual's own behavior is strongly predictive of their beliefs. In Appendix Tables A.4–A.7, Columns 4 and 5 add in an indicator for whether participants choose the socially-oriented outcome when making decisions in a context and an interaction of that indicator with the believed gender gap. Consistent with participants forming beliefs from their own experiences and expecting others to behave like them, both women (see Column 4) and men (see Column 5) who choose the socially-oriented outcome in a context are more likely to believe that others will choose the socially-oriented outcome in that context (see the coefficient estimates on *Socially-Oriented*). In addition, while the believed gender gap in socially-oriented preferences persists among men and women who do not act socially-oriented in a context (see the coefficient estimates on  $\Delta$ ), the believed gap is larger for those who choose the socially-oriented outcome in that context, particularly among women (see the mostly positive and sometimes statistically significant coefficient estimates on  $\Delta^*Socially-Oriented$ ).

Third, an individual’s “broader beliefs” are strongly predictive of their incentivized, context-dependent beliefs. In the study with undergraduate students, the unincentivized follow-up survey asks participants to select either men or women in response to three questions on who, in general, they think is (i) nicer, (ii) more selfish, and (iii) more fair. In Appendix Tables A.4 and A.6, the believed gender gap in social preferences among undergraduate students is significantly larger among: (i) the 84% of participants who indicate that women are nicer in general (see Column 6), (ii) the 88% of participants who indicate that men are more selfish in general (see Column 7), and (iii) the 84% of participants who indicate that women are fairer in general (see Column 8). In the study with Prolific participants, the unincentivized follow-up survey, building off of [Falk et al. \(forthcoming\)](#), asks participants to indicate the extent to which—on a 0 (completely unwilling) to 10 (completely willing) scale—they think women and men are willing to be (i) altruistic, (ii) charitable, and (iii) fair.<sup>23</sup> Appendix Tables A.5 and A.7 add in a variable that captures the believed differences in willingness between women and men and an interaction of that variable with the believed gender gap. These results show that the believed gender gap in social preferences among Prolific participants is significantly larger among participants who believe women are more relatively willing: (i) to be altruistic (see Column 6), (ii) to be charitable (see Column 7), and (iii) to be fair (see Column 8).

## 2.5 Additional Results from the Economic Games (Stereotypes) Study

Consistent with life experiences shaping individuals’ beliefs across a range of (likely unfamiliar) contexts they encounter in our study, the results in Section 2.4 document a significant correlation between specific types of individuals and context-specific beliefs as well as the significant correlation between an individual’s broader beliefs and context-specific beliefs. To further investigate what types of life experiences shape individuals’ context-specific beliefs, we ran the Economic Games (Stereotypes) Study.

In the Economic Games (Stereotypes) Study, we only ask participants to provide beliefs about men and beliefs about women in the first-party version of the dictator game. We then ask a series of follow-up questions intended to investigate what life experiences may have contributed to their context-specific belief about how men and women make decisions in the dictator game.

We recruited 399 online participants from Prolific (who had an approval rating of 95% or greater from at least 100 prior submissions and chose the United States when asked for their nationality) to complete the Economic Games (Stereotypes) Study in April 2022. All participants received a completion payment of \$1.50. In addition, they received any additional payment allocated to them

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<sup>23</sup>We changed to these more continuous measures of broader beliefs because of the little variation in beliefs among the binary follow-up questions among undergraduate students and to document the robustness to other ways in which to elicit broader beliefs. All three questions build off of the “in general” and 11-point scale structure in [Falk et al. \(forthcoming\)](#), and the charitable question builds off of that paper directly (see footnotes of Appendix Tables A.5 and A.7 for exact wording). We also asked three more follow-up questions (and find the same significant patterns of results with these questions too) about whether participants believe women are more relatively willing: (iv) to be cooperative, (v) to be trustworthy, and (vii) to indicate that luck that creates inequity is unfair.

from one randomly selected belief out of the two belief questions they were asked. See Appendix C.3 for full instructions.

In addition to replicating the believed gender gap in socially-oriented preferences (see Column 1 of Appendix A.8), three main results follow. First, when asked to recall a specific person when they think of someone who is likely to give to others, 66% of participants recall a woman in their life with the most common answer (occurring 22% of the time) being their mother.<sup>24</sup> Second, while 83% of participants who recall a *woman* said the recalled person or others like the recalled person influenced their beliefs in the dictator game, only 45% of participants who recall a *man* said the recalled person or others like the recalled person influenced their beliefs in the dictator game. Third, as shown in Column 2 of Appendix Table A.8, individuals who recall a woman from their life are significantly more likely to think women give more than men in the dictator game.<sup>25</sup> Fourth, while 81% of participants report that experiences in contexts that are broadly or loosely similar to the dictator game have influenced their beliefs about gender differences in the dictator game, only 43% of participants report that experiments in contexts that are very similar or identical to the dictator game have influenced their beliefs about gender differences in the dictator game.<sup>26</sup> That is, consistent with [Bordalo et al. \(2022\)](#), individuals' experiences in similar—but not identical—contexts (e.g., experiences involving their mothers) appear to shape their context-specific beliefs about behavior in the dictator game.

### 3 The Applications Study

To investigate whether the believed gender gap in social preferences extends to various applications and policy-relevant questions, we ran an Applications Study. Specifically, motivated by prior work ([Fong, 2001](#); [Aguiar and Hurst, 2007](#); [Guth, Schmidt and Sutter, 2007](#); [Eckel, de Oliveira and Grossman, 2008](#); [Alesina and Giuliano, 2011](#); [Fisman, Jakielo and Kariv, 2014](#); [Durante, Putterman and van der Weele, 2014](#); [Gärtner, Mollerstrom and Seim, 2017](#); [Doepke and Kindermann, 2019](#); [Capraro, 2019](#); [Cappelen et al., 2020](#); [Stantcheva, 2020, 2021, 2022](#); [Ranehill and Weber, 2022](#)), we investigate equality attitudes about redistribution, the division of labor within a household, equal access to education, equal access to health care, and equal access to suitable and affordable housing. In addition, we investigate beliefs specifically tied to whether employers favor performance pay or equal pay.

<sup>24</sup>On the first page of the follow-up survey (see Appendix Figure C.55), we ask this question by eliciting a free response question to ensure participants' answers are not primed. On the second page of the follow-up survey (see Appendix Figure C.56), we ask participants to select from a dropdown list of how that person is related to them. We then confirm that participant's answers across these pages are consistent, or in the case of inconsistencies, correct their reported relationship. Nearly all inconsistencies arose from participants selecting how they were related to person of interest rather than selecting how the person of interest is related to them (e.g., a daughter may have selected “daughter” instead of “mother”).

<sup>25</sup>Columns 3–6 of Appendix Table A.8 also replicate the significant correlations between (i) individuals' beliefs about gender differences in the dictator game and their own gender, and (ii) individuals' beliefs about gender differences in the dictator game and their broader beliefs.

<sup>26</sup>Only 11% say neither type of experiences have influenced these beliefs.

### 3.1 Experimental Design of the Applications Study

The Applications Study involves four main parts: the equality statements part, the beliefs about equality statements part, the employer decisions part, and the beliefs about employer decisions part. We describe each of these parts below.

#### The Equality Statements Part

In the equality statements part, participants are asked to indicate whether they “mostly agree” or “mostly disagree” with each of the following 8 statements. Participants are informed that their decisions will not influence their payments from the study in any way and are asked to make decisions carefully and honestly. The statements are inspired by questionnaires of the International Social Survey Programme and prior work ([Almås, Cappelen and Tungodden, 2020](#); [Luttmer and Singhal, 2011](#); [Kuhn, 2011](#)).<sup>27</sup> The 8 statements are as follows:

- **Statement 1:** Society should aim to equalize incomes.
- **Statement 2:** The government should take measures to reduce differences in income levels.
- **Statement 3:** All people should be paid equally for the same job regardless of how well they do the job.
- **Statement 4:** Spouses should take equal responsibility for the home and family.
- **Statement 5:** Both parents should be equally involved in the upbringing of a child.
- **Statement 6:** All people should have equal access to health care.
- **Statement 7:** All people should have equal access to education.
- **Statement 8:** All people should have equal access to suitable and affordable housing.

#### The Beliefs about Equality Statements Part

In the beliefs about equality statements part of the study, participants are asked to provide two beliefs about each equality statement for a total of 16 beliefs. The two belief questions ask participants to predict the percent of women and the percent of men who choose “mostly agree” rather than “mostly disagree” when asked to indicate whether they agree with an equality statement. Answers to each belief question are provided via sliders that allow participants to select a range that covers 7-percentage points from 0% to 100%. Beliefs are incentivized for accuracy: participants are allocated \$1 in the beliefs part if they select a range on the slider that includes the true percentage in a randomly-selected belief question.

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<sup>27</sup>Statement 1 is derived from [Almås, Cappelen and Tungodden \(2020\)](#), statement 2 from [Luttmer and Singhal \(2011\)](#), statement 3 from [Kuhn \(2011\)](#), and statements 4-7 are loosely based on several questionnaires of the International Social Survey Programme on family and gender ([Shukla et al., 2021](#)), healthcare ([Ólafsdóttir et al., 2021](#)), and social inequality ([Struwig et al., 2019](#)). Statement 8 is not based on previous work but follows the structure of the other statements.

## The Employer Decisions Part

In the employer decisions part, inspired by Almås, Cappelen and Tungodden (2020), participants make a decision as an “employer.”<sup>28</sup> Each employer is matched with one or more pairs of workers. Within each pair of workers, one worker is classified as a low performer and the other as a high performer based off of their performance on a math and science test with 10 questions (ties are broken randomly). Given this, the employers are asked to choose whether to (1) pay workers equally or (2) pay the high performer more. If the employer pays workers equally, both workers in a pair are allocated \$3. If the employer pays the high performer more, then the high performer is allocated \$6 while the low performer is allocated \$0. The employers are not allocated any money in this part.<sup>29</sup>

## The Beliefs about Employer Decisions Part

In the beliefs about the employer decisions part, the participants answer two belief questions about employer decisions. These belief questions ask about the believed percent of female and male employers who choose to pay workers equally. Answers to each belief question are provided via sliders that allow employers to select a range that covers 7-percentage points from 0% to 100%. Employers are allocated \$1 if they correctly answer the randomly-selected belief question in this part.

## Implementation Details

We recruited 400 online participants from Prolific (who had an approval rating of 95% or greater from at least 100 prior submissions and chose the United States when asked for their nationality) to complete the Applications Study in December 2021. The order of the four parts was randomly determined. In addition, the order of the equality statements within the beliefs part and within the decisions part was randomly determined.<sup>30</sup>

All participants received a completion payment of \$2. In addition, they received any additional payment allocated to them in the part that was randomly selected as the part-that-counts.<sup>31</sup> For full experimental instructions, see Appendix C.4.

## 3.2 Agreement with Equality Statements in the Applications Study

In this section, we present results on the extent of agreement with the equality statements. Specifically, for each equality statement, we examine whether the rate at which a decision-maker

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<sup>28</sup>Specifically, we follow much of the baseline condition in Almås, Cappelen and Tungodden (2020) – e.g., like them, participants are matched in groups of three, two of whom are workers completing a performance task and one whose task it is to choose to allocate (\$3, \$3) or (\$6, \$0) to the workers.

<sup>29</sup>As detailed later, workers can influence whether they are matched with a female or male employer. That employers’ payments are not affected by their hiring decisions allows us to examine workers’ preferences over male versus female employers independent of any prosocial concerns towards the employers.

<sup>30</sup>Also, the order in which the belief questions appear is randomly determined such that the belief question about men always precedes the one about women, or vice versa.

<sup>31</sup>Similarly, as shown in Appendix C.5, workers complete a study with multiple parts. If their randomly selected part-that-counts corresponds to the employer’s decision, workers receive the amount the employer allocated to them.

indicates they mostly agree with the statement depends on whether the participant is a man or woman.

Table 4 presents results on the rate at which participants indicate agreement with the equality statements.  $D(F)$  shows the rate among female participants,  $D(M)$  shows the rate among male participants, and  $\Delta$  shows the difference in these rates and whether this difference is statistically significant according to a two-sided t-test. For 7 out of the 8 equality statements, there is not a statistically significant difference in how likely men and women are to indicate agreement with the equality statement. The only significant difference is that women are more likely to indicate agreement with the first equality statement, which says “Society should aim to equalize incomes.”

Table 4: Agreement with equality statements in the Applications Study

Statement	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
$D(F)$	0.703	0.760	0.328	0.984	0.995	0.974	0.984	0.969
$D(M)$	0.597	0.716	0.323	0.980	0.975	0.960	0.980	0.940
$\Delta$	0.106**	0.044	0.005	0.004	0.020	0.014	0.004	0.028
N	393	393	393	393	393	393	393	393

$D(F)$  and  $D(M)$  show the rates at which female and male participants indicate they mostly agree with the equality statement, and  $\Delta$  shows the difference in these rates and whether this difference is statistically significant according to a two-sided t-test at the following levels: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Columns 1–8 correspond to the equality statements 1–8. The data are from the Applications Study run with Prolific participants (excluding 7 participants who did not select male or female as their gender).

### 3.3 Beliefs about Equality Statements in the Applications Study

In this section, we present results on the beliefs about the equality statements. Specifically, for each statement, we examine how participants’ beliefs vary when they are asked about the likelihood that men versus women indicate agreement with that statement.

Following a similar structure as Table 4, Table 5 presents results on beliefs.  $B(F)$  indicates the average believed percent of female participants who mostly agree with the equality statement,  $B(M)$  indicates the average believed percent of male participants who mostly agree with the equality statement, and  $\Delta$  shows the difference in these beliefs and whether this difference is statistically significant (when standard errors are clustered at the participant level).

The main result from Table 5 is clear: women are expected to be more likely to indicate agreement with equality statements than men are. This difference is not context-specific. For each of the eight equality statements,  $\Delta$  is statistically significantly positive. This difference is substantial. Relative to the percent of men who are expected to indicate agreement, the percent of women who are expected to indicate agreement with an equality statement is believed to be anywhere from 8 to 21 percentage points higher, on average, across contexts.

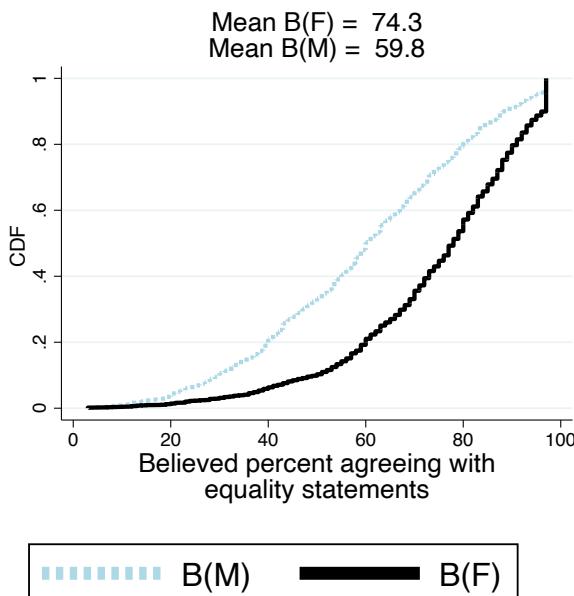
Additional results reveal similar patterns and robustness as observed in the Economic Games Studies. First, Appendix Table A.9 shows that the believed gender gap in equality preferences is robust to several restrictions on our data. Second, Figure 2 (see also Appendix Figure B.6) shows

Table 5: Beliefs about the percent of participants indicating agreement with equality statements in the Applications Study

Statement	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
B(F)	71.44	67.39	52.88	79.03	84.02	79.77	83.12	76.55
B(M)	50.99	49.41	39.14	58.03	69.70	69.25	75.31	66.56
$\Delta$	20.45***	17.98***	13.74***	21.00***	14.33***	10.52***	7.81***	9.99***
N	800	800	800	800	800	800	800	800

B(F) and B(M) show the average believed percent of female and male participants who indicate agreement with the equality statement, and  $\Delta$  shows the difference in these percentages and whether this difference is statistically significant according to a two-sided t-test with SEs clustered at the participant level at the following levels: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Columns 1–8 correspond to the beliefs about equality statements 1–8. The data are from the Applications Study run with Prolific participants.

Figure 2: Distributions of beliefs about equality statements when pooling across all statements



that the distribution of the beliefs about women first-order stochastically dominates the distribution of beliefs about men and these distributions are statistically different (Kolmogorov-Smirnov test,  $p < 0.01$ ). Third, Appendix Table A.10 shows that—in response to each statement—the vast majority of participants believe that the percent of women favoring equality is higher than the percent of men favoring equality. Fourth, Appendix Table A.11 reveals similar heterogeneity that is consistent with certain types of individuals holding these beliefs (i.e., women believe the gender gap is larger and individuals who favor equality are more likely to believe others favor equality). Fifth, Appendix Table A.12 shows that the believed gender gap in equality preferences is inaccurate.

### 3.4 Employer Decisions and Beliefs about Employer Decisions in the Applications Study

Male and female employers both favor equal pay: male employers choose equal pay 69% of the time and female employers choose equal pay 71% of the time. This difference is not statistically significant (two-sided t-test,  $p = 0.64$ ). But, we find that female employers are expected to choose equal pay more often: on average, 72% of female employers are expected to choose equal pay while only 52% of male employers are expected to choose equal pay. This 20 percentage point difference is statistically significant (two-sided t-test, SEs clustered at the participant level,  $p < 0.01$ ).

Additional results reveal similar patterns and robustness as observed in the Economic Games Study. First, Appendix Table A.13 shows that the believed gender gap in equality preferences are robust to several restrictions on our data. Second, Appendix Figure B.7 shows that the distribution of the beliefs about female employers first-order stochastically dominates the distribution of beliefs about male employers and these distributions are statistically different (Kolmogorov-Smirnov test,  $p < 0.01$ ). Third, the results persist at the participant level: 91% of participants believe the percent of female employers favoring equal pay is higher than the percent of male employers favoring equal pay, 5% of participants believe the reverse, and 4% of participants believe there is no gender difference. Fourth, Appendix Table A.14 reveals similar heterogeneity that is consistent with certain types of individuals holding these beliefs (i.e., women believe the gender gap is directionally larger and individuals who choose equal pay when they are employers are directionally more likely to believe other employers favor equality). Fifth, given that—relative to men—women only choose equal pay 2 percentage points more often but are believed to choose equal pay 20 percentage points more often, the believed gender gap in equality preferences is significantly inaccurate ( $p < 0.01$ ).

### 3.5 Additional Results from the Worker Study

Given participants in the Applications Study make decisions as employers about pairs of workers, we also ran a separate Worker Study (see Appendix C.5 for full instructions and details). In this Worker Study, we additionally examined if there is evidence—given believed differences about how female and male employers are likely to pay their workers—for workers’ preferences over male and female employers depending on whether they would benefit from equal pay. Specifically, we have workers make two types of decisions—a strategy-method decision and a direct decision—about whether they would prefer a male or female employer.

How performance influences workers’ willingness to select female employers is most cleanly observed with results from the strategy-method decision. In the strategy-method decision, workers indicate whether they would prefer to choose a male or female employer (i) in the event that they are a low performer and hence would benefit from equal pay, and (ii) in the event that they are a high performer and hence would benefit from performance pay. When making their choice in (ii)—a choice that can only be implemented in the event that they are a high performer—workers are about equally likely to choose a female or male employer: they choose a female employer 47%

of the time. But, when instead making a choice in (ii)—a choice that can only be implemented in the event that they are a low performer and hence in the event that they would benefit from equal pay—workers choose a female employer 85% of the time. That is, being a low performer causes workers to be significantly more likely—39 percentage points more likely ( $p < 0.01$ )—to choose a female employer. This behavior, moreover, aligns with the belief that low performers are more likely to benefit from female employers because female employers are more likely to choose equal pay.<sup>32</sup>

How *believed* performance correlates with workers' willingness to select female employers yields a similar pattern of results. Turning to the direct decision, we can separately consider the 38% of participants who believe they are a high performer and the 62% of participants who believe they are a low performer. Then, we find that workers are 35 percentage points ( $p < 0.01$ ) more likely to favor female employers if they *believe* they are a low performer (in which case they hire female employers 84% of the time) as compared to when they *believe* they are a high performer (in which case they hire female employers 49% of the time).

Thus, taken together, the results from the Worker Study reveal that—consistent with the belief that female employers are more likely to favor equal pay that benefits low performers—workers are more likely to prefer female employers when they are (believed) low performers as compared to when they are (believed) high performers.

## 4 Robustness Studies

To confirm the robustness of our results to separately eliciting beliefs about men and women, we ran the Economic Games (Separate Beliefs) Study. That is, while studies presented up until this point elicit beliefs about men and women together on the same page, this Economic Games (Separate Beliefs) Study only elicits beliefs about women or about men on each page.

To confirm the robustness of our results to additional design choices, we ran three studies that seek to elicit “broader beliefs.”<sup>33</sup> The Broader Beliefs (Prolific Participants) Study, the Broader Beliefs (Representative Sample) Study, and the Broader Beliefs-2 Study alleviate potential concerns that the results from the Economic Games Study reflect (i) the binary nature of the decisions, or (ii) the specific payoff amounts involved in each decision. The Broader Beliefs (Representative Sample) Study also confirms the robustness of our results to a representative sample. The Broader Beliefs-2 Study alleviates potential concerns that the results from the Application Study reflect (i) beliefs about *stated* equality preferences rather than actual equality preferences, or (ii) the discretized

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<sup>32</sup>In addition to this belief being confirmed with the incentivized belief data about employer decisions in the Applications Study as discussed in Section 3.4, this belief is also confirmed with additional un incentivized belief data from the workers. Prior to making decisions in each state of the world for their strategy-method decision, workers were asked whether they expect to earn more from male employers, to earn more from female employers, or to earn the same from both. When asked about the state in which they are the high performer, 44% of workers expect to earn more from male employers while only 11% of workers expect to earn more from female employers (and the remainder expect no difference). By contrast, when asked about the state in which they are the low performer, 54% expect to earn more from female employers while only 4% expect to earn more from male employers (and the remainder expect no difference). See Appendix Figures C.94-C.95 for how these beliefs are elicited.

<sup>33</sup>For other work that elicits broader beliefs relating to social preferences, and indeed finds evidence for believed gender differences, see [Slonim and Guillen \(2010\)](#) and [Andreoni and Petrie \(2008\)](#).

nature of equality statements in that study (i.e., since participants only indicate whether they mostly agree or mostly disagree with each statement).

In addition, the results from the Economic Games (Stereotypes) Study—previously discussed in Section 2.5—confirm the robustness of our results to substantially reducing the number of questions participants are asked (and mechanically increasing the effective incentive for accurate beliefs), since participants in that study are only asked to provide beliefs about the first-party dictator game.

## 4.1 Experimental Design of the Economic Games (Separate Beliefs) Study

The Economic Games (Separate Beliefs) Study follows the same procedure as the Economic Games (Prolific Participants) Study except for two changes. First, rather than participants facing both the beliefs part and the decisions part, participants are only asked to provide beliefs. Second, rather than participants answering the two belief questions (one about women and one about men) on the same decision screen for each scenario, participants now only answer one belief question per decision screen. Moreover, participants are randomized to either first answer all belief questions about women and then all belief questions about men, or vice versa.

### Implementation Details

For the Economic Games (Separate Beliefs) Study, we recruited 399 online participants from Prolific (who had an approval rating of 95% or greater from at least 100 prior submissions and chose the United States when asked for their nationality) to complete the Economic Games (Separate Beliefs) Study in March 2022. In addition to randomizing whether participants answer the set of all beliefs about women first or instead the set of all beliefs about men, the order of the belief questions within those sets is randomized.<sup>34</sup> All participants received a completion payment of \$4 and an additional payment of \$2 if they correctly answered the question-that-counts. For full instructions, see Appendix C.6.

## 4.2 Experimental Design of the Broader Beliefs (Prolific Participants) Study and the Broader Beliefs (Representative Sample) Study

In the Broader Beliefs (Prolific Participants) Study and the Broader Beliefs (Representative Sample) Study, participants face 14 scenarios. In each scenario, participants are asked two belief questions: one about women and one about men.

These beliefs are asked as questions that are displayed in Appendix Table A.16. We refer to scenarios 1–7 as “first-party” scenarios and scenarios 8–14 as “third-party” scenarios. Prior to providing beliefs in any of the first-party scenarios, participants are informed that they will be asked about how men and women make decisions that influence the payments of themselves and others. Prior to providing beliefs in any of the third-party scenarios, participants are informed that they will be asked about how men and women make decisions that influence the payments of others but not themselves. Aside from this background information, all contextual information about a

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<sup>34</sup>Within each set, participants face two blocks (beliefs relating to Scenarios 1–7 or Scenarios 8–14) in a random order, and the scenarios within those blocks in a random order.

scenario is detailed in the text of each belief question. This text is written such that belief questions asked in the Broader Beliefs Study scenarios 1–14 loosely capture the key features of the games involved in the Economic Games Study scenarios 1–14. Thus, we note that we sometimes refer to a Broader Beliefs Study scenario by the economic game which inspired it—even though there is not a precise mapping from the Broader Beliefs Study scenarios to decisions in economic games. Answers to each belief question are provided via sliders that allow participants to select a range that covers 7-percentage points from 0% to 100%. While participants’ answers to these questions are not incentivized, participants are asked to answer the questions carefully and honestly.

### Implementation Details

For the Broader Beliefs (Prolific Participants) Study, we recruited 400 online participants from Prolific (who had an approval rating of 95% or greater from at least 100 prior submissions and chose the United States when asked for their nationality) to complete the Broader Beliefs Study in March 2021. The order of the pairs of questions—in addition to the order in which the belief questions appear in a pair—was randomly determined. All participants received a completion payment of \$3. No additional payments were possible. For full instructions, see Appendix C.7.

For the Broader Beliefs (Representative Sample) Study, we recruited 1,001 participants to complete the Broader Beliefs Study in April 2021. In doing so, we partnered with Dynata to form a nationally representative sample (in terms of age, gender, and income).<sup>35</sup> The order of the pairs of questions—in addition to the order in which the belief questions appear in a pair—was randomly determined. We paid \$2.45 per participant recruited from Dynata as part of our representative sample, and the compensation given to these participants by Dynata did not depend on the decisions they made. For details on this procedure and a table showing that our sample in the Broader Beliefs (Representative Sample) Study is nationally representative along gender, age and income, see Appendix Table A.15. For full instructions, see Appendix C.8.

## 4.3 Experimental Design of the Broader Beliefs-2 Study

The Broader Beliefs-2 Study asks participants to provide broader beliefs about men and women that are neither tied to specific decisions that participants make (as in the Economic Games Study) nor tied to the level of agreement that participants indicate with various statements (as in the Applications Study). Rather, participants are simply presented with 16 pairs of questions about men and women.

These pairs of questions are shown in Appendix Table A.17. To assess whether the results from the Economic Games Study are more robust beyond the particular parameters in that study, the pairs of questions labeled EG 1–7 are intended to loosely correspond with scenarios 1–7 from the Economic Games Study and the pair of questions labeled EG8 is intended to capture beliefs about equality preferences in general. To assess whether the results from the Applications Study

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<sup>35</sup>Our approach follows [Snowberg and Yariv \(2021\)](#): they recruited a representative sample of  $N = 1000$  U.S. survey respondents via Dynata (previously named Survey Sampling International before merging with Research Now) who are representative of the U.S. population across age, gender and income.

are robust even when participants are asked about what they believe men and women think, rather than what the *indicated* level of agreement by men and women was, the pairs of questions labeled A1–A8 directly correspond with the equality statements 1–8 from the Applications Study. While participants’ answers to these questions are not incentivized, participants are asked to answer the questions carefully and honestly.

### Implementation Details

For the Broader Beliefs-2 Study, we recruited 400 online participants from Prolific (who had an approval rating of 95% or greater from at least 100 prior submissions and chose the United States when asked for their nationality) to complete the Broader Beliefs-2 Study in December 2021. The order of the pairs of questions—in addition to the order in which the belief questions appear in a pair—was randomly determined. All participants receive a completion payment of \$2. No additional payments were possible. For full instructions, see Appendix C.9.

## 4.4 Results from the Robustness Studies

Appendix Table A.18 presents the results for the Economic Games (Separate Beliefs) Study. In presenting the results for all beliefs, Panels 1 and 3 reveal significant evidence for the believed gender gap in social preferences in 14 out of the 14 contexts—making clear that our results are robust to whether beliefs about men and about women are elicited separately. Panels 2 and 4 further restrict to the first set of beliefs that participants face—i.e., these panels only include (i) beliefs about women among participants who are first asked to provide beliefs about women and (ii) beliefs about men among participants who are first asked to provide beliefs about men—and hence only rely on across-subject variation in beliefs about women versus men. Despite the sample being cut in half and the data being noisier since it relies on across-subject variation rather than within-subject variation, we observe significant evidence for the believed gender gap in social preferences in 12 out of the 14 contexts (and the remaining 2 contexts are directionally supportive).

Appendix Table A.19 presents the results for the Broader Beliefs (Prolific Participants) Study and the Broader Beliefs (Representative Sample) Study. We observe significant evidence for the believed gender gap in social preferences in 28 out of the 28 contexts. Thus, even when participants provide beliefs about the decisions made by men and women in general—rather than being asked about a specific binary decision with a specific payment amount—the believed gender gap in social preferences persists.

Appendix Table A.20 presents the results for the Broader Beliefs-2 Study. We observe significant evidence for the believed gender gap in social preferences in 16 out of the 16 contexts. Thus, even when participants provide beliefs about the equality preferences of men and women in general—rather than being asked to specifically predict whether men and women indicate they mostly disagree or agree with each equality statement—the believed gender gap in social preferences persists.

## 5 Conclusion

Despite little to no gender differences in observed behavior and attitudes relating to social preferences, this paper documents robust believed gender differences. Across a wide range of contexts, women are believed to be substantially and significantly more generous and more equality-oriented. We conclude with three directions for future work.

The first avenue may investigate whether the believed gender gap in social preferences contributes to other documented gender gaps in the literature. For example, consistent with the belief that female employers are more likely to choose equal pay that benefits low performers, results from our Worker Study (see Section 3.5) reveal that being a low performer increases the extent to which workers are willing to select female employers. This echos findings from prior work that show individuals are also more likely to select women to be decision-makers in ultimatum games, trust games, and dictator games (Holm and Engseld, 2005; Slonim and Garbarino, 2008; Aguiar et al., 2009). Future work may further investigate if changing beliefs about men versus women results in changes to preferences about which bosses to work for, which colleagues to work with, which employees to promote, which politicians to vote for, and so forth.

In light of gender-specific backlash in other domains (Riach and Rich, 2002; Bowles, Babcock and Lai, 2007; Rudman and Phelan, 2008), a second avenue of research may investigate whether women—since they are expected to be more generous and equality-oriented—are rewarded less and punished more when they act otherwise.<sup>36</sup> Indeed, it is possible that there is no “good” approach for women in the face of backlash. Absent acting selfishly or advocating for themselves, women may achieve worse outcomes. But, if they act selfishly and advocate for themselves, women may experience backlash.<sup>37</sup>

A third avenue may delve into why there are believed gender differences in social preferences, even in contexts in which there are little to no gender differences in actual behavior and attitudes. As in Bordalo et al. (2022), a particularly promising explanation may relate to the possibility that individuals form beliefs about a new context (e.g., an experimental game in a study) by simulating behavior based off of prior life experiences, such as from their experiences with their mothers and other women in life. Indeed, the significant correlations we observe between participants’ context-specific beliefs and their broader beliefs about men and women “in general” support this possibility, as does the significant correlation between participants’ context-specific beliefs and whether they

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<sup>36</sup>Examining how individuals are rewarded (or punished) for socially-oriented behavior (or the lack thereof) is a particularly important question given the rich literature on how observability influences socially-oriented behavior (see, e.g., Andreoni and Petrie (2004). Ariely, Bracha and Meier (2009), Andreoni and Bernheim (2009), Lacetera and Macis (2010), Exley (2017) and Bolton, Dimant and Schmidt (2021).

<sup>37</sup>For more discussion on why policies that look to “change the women” (such as by telling them to act more or less selfishly) can backfire, see Exley, Niederle and Vesterlund (2020). Alternatives to “change the women” approaches could be “change the system” approaches in which, e.g., more objective evaluation processes are adopted to mitigate the role for backlash. For examples of “change the system” approaches, see Apicella, Demiral and Mollerstrom (2017), He, Kang and Lacetera (2019), Bohnet (2016), Bohnet, van Geen and Bazerman (2016), and Kessel, Mollerstrom and van Veldhuizen (2021).

recall a woman from their lives (most commonly, their mothers) when asked to recall someone who is generous.<sup>38</sup> That stereotypes may contribute to our results also opens up questions for future work about whether—while women are expected to be more socially-oriented in the contexts we consider—men are instead expected to be more socially-oriented in some stereotypically male-typed domains. Indeed, [Musick and Wilson \(2008\)](#) discuss how men appear to volunteer more in domains related to public safety and emergency services while women appear to volunteer more in domains related to education and human services.<sup>39</sup>

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<sup>38</sup>The possibility of subsequently forming inaccurate beliefs is also supported by the fact that there is substantial heterogeneity in the extent to which individuals are socially-oriented across contexts. For example, the frequency with which the socially-oriented outcome is chosen ranges from 15% to 85% of the time in the economic games that we consider.

<sup>39</sup>[Chandar et al. \(2019\)](#) also find that tips given to Uber drivers are on average higher among men than women.

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## A Additional Tables

Table A.1: Robustness regressions of the believed percent of decision-makers choosing the socially-oriented outcome in the Economic Games Study

	All	With Controls	Attention Check	Beliefs First	Beliefs Second	Early Beliefs	Late Beliefs
	(1)	(2)	(3)	(4)	(5)	(6)	(7)
<b>Panel 1: Undergraduate Students, First-Party Scenarios</b>							
$\Delta$	8.61*** (0.42)	8.61*** (0.42)	8.88*** (0.43)	8.16*** (0.60)	9.06*** (0.60)	9.15*** (0.59)	7.96*** (0.61)
N	5348	5348	5054	2660	2688	2938	2410
<b>Panel 2: Prolific Participants, First-Party Scenarios</b>							
$\Delta$	11.97*** (0.73)	11.97*** (0.73)	12.10*** (0.73)	11.69*** (1.03)	12.22*** (1.03)	11.44*** (1.00)	12.46*** (1.05)
N	5600	5600	5558	2590	3010	2660	2940
<b>Panel 3: Undergraduate Students, Third-Party Scenarios</b>							
$\Delta$	9.03*** (0.49)	9.03*** (0.49)	8.95*** (0.49)	8.96*** (0.69)	9.11*** (0.70)	9.93*** (0.75)	8.30*** (0.65)
N	5348	5348	5054	2660	2688	2410	2938
<b>Panel 4: Prolific Participants, Third-Party Scenarios</b>							
$\Delta$	10.72*** (0.74)	10.72*** (0.74)	10.81*** (0.74)	9.06*** (0.96)	12.15*** (1.10)	13.22*** (1.16)	7.95*** (0.85)
N	5600	5600	5558	2590	3010	2940	2660
FE	yes						

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . SEs are clustered at the participant level. Results are from an OLS of the believed percent of female or male decision-makers who choose the socially-oriented outcome in a scenario.  $\Delta$  is an indicator for beliefs about female (rather than male) decision makers. The fixed effects are indicators for each scenario. Each panel presents belief data when pooling across the noted scenarios (i.e., the first-party Scenarios 1–7 or the third-party scenarios 8–14) from the noted subject pool (i.e., from the Economic Games Study run with undergraduates or with undergraduate students or with Prolific participants). Column 2 presents results when demographic controls are included for: (i) gender, age and whether a participant is an economics major in Panels 1 and 3, and (ii) gender, age and income in Panels 2 and 4. Column 3 restricts to the beliefs provided by participants who pass our attention check (see Footnote 22 for details). Column 4 restricts to beliefs provided by participants who provide beliefs before they make any decisions as decision-makers. Column 5 restricts to participants who provide beliefs after they make all decisions. Since participants are asked 28 belief questions in total, Column 6 restricts to the first 14 belief questions participants are asked and Column 7 restricts to the last 14 belief questions participants are asked.

Table A.2: In Economic Games Study, participant level classification of beliefs

Game:	All (1)	DG (2)	DG-EFF (3)	DG-ENT (4)	UG (5)	TG (6)	PD (7)	PGG (8)
<b>Panel 1: Undergraduate Students, Incentivized Beliefs about P1</b>								
Frac w/ $B(F) > B(M)$	0.73	0.74	0.70	0.75	0.77	0.75	0.73	0.68
Frac w/ $B(F) < B(M)$	0.11	0.08	0.10	0.09	0.12	0.10	0.13	0.14
Frac w/ $B(F) = B(M)$	0.16	0.18	0.20	0.16	0.11	0.15	0.14	0.18
N	2674	382	382	382	382	382	382	382
<b>Panel 2: Prolific Participants, Incentivized Beliefs about P1</b>								
Frac w/ $B(F) > B(M)$	0.74	0.77	0.76	0.73	0.73	0.73	0.74	0.75
Frac w/ $B(F) < B(M)$	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
Frac w/ $B(F) = B(M)$	0.10	0.10	0.10	0.10	0.10	0.10	0.10	0.10
N	2800	400	400	400	400	400	400	400
<b>Panel 3: Undergraduate Students, Incentivized Beliefs about NP</b>								
Frac w/ $B(F) > B(M)$	0.73	0.73	0.71	0.72	0.74	0.75	0.74	0.74
Frac w/ $B(F) < B(M)$	0.13	0.11	0.15	0.13	0.14	0.13	0.11	0.11
Frac w/ $B(F) = B(M)$	0.14	0.15	0.14	0.15	0.12	0.12	0.15	0.15
N	2674	382	382	382	382	382	382	382
<b>Panel 4: Prolific Participants, Incentivized Beliefs about NP</b>								
Frac w/ $B(F) > B(M)$	0.72	0.74	0.73	0.69	0.70	0.71	0.73	0.70
Frac w/ $B(F) < B(M)$	0.18	0.14	0.17	0.17	0.21	0.19	0.16	0.18
Frac w/ $B(F) = B(M)$	0.11	0.12	0.10	0.14	0.09	0.10	0.10	0.11
N	2800	400	400	400	400	400	400	400

This table presents results on beliefs from the Economic Games Study.  $Frac w/ B(F) > B(M)$  indicates the fraction of participants who believe the percent of female decision-makers who choose the socially-oriented outcome is greater than the percent of male decision-makers who choose the socially-oriented outcome. Similar definitions follow for  $Frac w/ B(F) = B(M)$  and  $Frac w/ B(F) > B(M)$ .

Table A.3: Results on the accuracy of the beliefs in the Economic Games Study

Game:	DG (1)	DG-EFF (2)	DG-ENT (3)	UG (4)	TG (5)	PD (6)	PGG (7)
<b>Panel 1: Undergraduate Students, First-Party Scenarios</b>							
B(F) - Truth(F)	-0.04	12.85	12.45	-18.64	6.56	9.22	3.24
B(M) - Truth(M)	-8.48	6.97	1.09	-31.77	-0.73	-8.96	-12.33
$\Delta$	8.44***	5.88***	11.36***	13.13***	7.30***	18.18***	15.56***
N	764	764	764	764	764	764	764
<b>Panel 2: Prolific Participants, First-Party Scenarios</b>							
B(F) - Truth(F)	-16.30	-5.17	0.06	-22.90	1.43	-1.31	-10.21
B(M) - Truth(M)	-15.68	-8.29	-9.71	-35.08	-11.63	-14.64	-16.97
$\Delta$	-0.63	3.12***	9.77***	12.19***	13.06***	13.34***	6.76***
N	800	800	800	800	800	800	800
<b>Panel 3: Undergraduate Students, Third-Party Scenarios</b>							
B(F) - Truth(F)	-21.29	-18.02	-6.45	-23.36	-15.36	-10.87	-5.42
B(M) - Truth(M)	-28.62	-19.26	-13.30	-37.40	-29.25	-25.45	-29.46
$\Delta$	7.34*** (0.81)	1.24 (0.87)	6.85*** (0.71)	14.04*** (0.72)	13.88*** (0.76)	14.58*** (0.74)	24.04*** (0.71)
N	790	790	790	790	790	790	790
<b>Panel 4: Prolific Participants, Third-Party Scenarios</b>							
B(F) - Truth(F)	-28.30	-22.18	-16.93	-27.32	-22.51	-17.84	-23.75
B(F) - Truth(F)	-38.84	-33.00	-26.38	-40.42	-29.02	-28.41	-34.82
$\Delta$	10.54*** (1.00)	10.82*** (0.96)	9.45*** (0.92)	13.11*** (0.93)	6.51*** (1.05)	10.57*** (0.93)	11.07*** (0.91)
N	764	764	764	764	764	764	764

$B(F)$ - $Truth(F)$  is the average believed percent of women who choose the socially-oriented outcome minus the actual percent of women who choose the socially-oriented outcome.  $B(M)$ - $Truth(M)$  is the average believed percent of men who choose the socially-oriented outcome minus the actual percent of men who choose the socially-oriented outcome.  $\Delta$  shows the difference of these differences and whether the difference of these differences is statistically significant according to a two-sided t-test at the following levels: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Columns 1–7 correspond to the decisions made in the first-party version of the noted game in Panels 1 and 2 but to the third-party versions of the noted game in Panels 3 and 4. The data are from the Economic Games Study run with undergraduate students in Panels 1 and 3 and with Prolific participants in Panels 2 and 4.

Table A.4: Heterogeneity regressions of the believed percent of decision-makers choosing the socially-oriented outcome in the first-party scenarios of the Economic Games (Undergraduate Students) Study

	Women (1)	Men (2)	All (3)	Women (4)	Men (5)	All (6)	All (7)	All (8)
<b>Undergraduate Students, First-Party Scenarios</b>								
$\Delta$	9.60*** (0.60)	7.39*** (0.59)	7.45*** (0.59)	8.54*** (0.65)	6.97*** (0.67)	6.41*** (1.23)	6.22*** (0.91)	5.77*** (0.82)
Female			-8.93*** (1.41)					
$\Delta^* \text{Female}$				2.15** (0.84)				
Socially-Oriented				8.97*** (1.36)	17.80*** (2.14)			
$\Delta^* \text{Socially-Oriented}$				3.37*** (0.88)	1.22 (0.95)			
Women nicer						-2.90 (2.51)		
$\Delta^* \text{Women nicer}$						2.45* (1.31)		
Men more selfish							-0.89 (1.80)	
$\Delta^* \text{Men more selfish}$							2.72*** (1.02)	
Women fairer								-3.86** (1.86)
$\Delta^* \text{Women fairer}$								3.38*** (0.95)
N	2898	2436	5348	2898	2436	5348	5348	5348

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . SEs are clustered at the participant level. Results are from an OLS of the believed percent of female or male decision-makers who choose the socially-oriented outcome in a scenario.  $\Delta$  is an indicator for beliefs about female (rather than male) decision-makers. *Female* is an indicator for the participant providing the beliefs being a female. *Socially-Oriented* is an indicator for the participant providing the beliefs having chosen the socially-oriented outcome when they are the decision-maker in the relevant scenario. *Women nicer*, *Men more selfish*, and *Women fairer* are indicators for selecting—when asked to make a binary choice between men and women—that women are nicer, men are more selfish, and women are fairer in the follow-up survey. The fixed effects are indicators for each scenario. This table presents belief data when pooling across the first-party Scenarios 1–7 from the Economic Games Study run with undergraduate students. Columns 1 & 4, 2 & 5, and 3 & 6–8 restrict to beliefs provided by women, men, and all participants, respectively.

Table A.5: Heterogeneity regressions of the believed percent of decision-makers choosing the socially-oriented outcome in the first-party scenarios of the Economic Games (Prolific Participants) Study

	Women (1)	Men (2)	All (3)	Women (4)	Men (5)	All (6)	All (7)	All (8)
<b>Prolific Participants, First-Party Scenarios</b>								
$\Delta$	13.04*** (1.03)	10.65*** (1.03)	10.72*** (1.02)	9.12*** (1.09)	11.42*** (1.14)	11.97*** (0.65)	11.97*** (0.65)	11.97*** (0.66)
Female			-5.27*** (1.65)					
$\Delta^*$ Female			2.32 (1.45)					
Socially-Oriented				9.42*** (1.70)	16.31*** (2.04)			
$\Delta^*$ Socially-Oriented				7.50*** (1.62)	-1.57 (1.74)			
Women more altruistic						-1.23*** (0.29)		
$\Delta^*$ Women more altruistic						2.83*** (0.35)		
Women more charitable							-1.22*** (0.27)	
$\Delta^*$ Women more charitable							2.52*** (0.31)	
Women fairer								-1.29*** (0.33)
$\Delta^*$ Women fairer								2.85*** (0.37)
N	3024	2520	5600	3024	2520	5600	5600	5600

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . SEs are clustered at the participant level. Results are from an OLS of the believed percent of female or male decision-makers who choose the socially-oriented outcome in a scenario.  $\Delta$  is an indicator for beliefs about female (rather than male) decision-makers. *Female* is an indicator for the participant providing the beliefs being a female. *Socially-Oriented* is an indicator for the participant providing the beliefs having chosen the socially-oriented outcome when they are the decision-maker in the relevant scenario. *Women more altruistic*, *Women more charitable*, and *Women fairer* reflect the demeaned difference between the ratings given to women and men—on a 1 (completely unwilling) to 10 (completely willing) scale—when asked about their willingness to “be altruistic”, to “share with others without expecting anything in return when it comes to charity”, or “be fair” in the follow-up survey, respectively. The fixed effects are indicators for each scenario. This table presents belief data when pooling across the first-party Scenarios 1–7 from Prolific participants. Columns 1 & 4, 2 & 5, and 3 & 6–8 restrict to beliefs provided by women, men, and all participants, respectively.

Table A.6: Heterogeneity regressions of the believed percent of decision-makers choosing the socially-oriented outcome in the third-party scenarios of the Economic Games (Undergraduate Students) Study

	Women (1)	Men (2)	All (3)	Women (4)	Men (5)	All (6)	All (7)	All (8)
<b>Undergraduate Students, Third-Party Scenarios</b>								
$\Delta$	9.98*** (0.69)	7.88*** (0.70)	7.92*** (0.69)	9.20*** (1.16)	7.28*** (0.93)	5.19*** (1.31)	4.53*** (1.14)	6.77*** (1.41)
Female			-7.15*** (1.97)					
$\Delta^* \text{Female}$				2.06** (0.97)				
Socially-Oriented					14.03*** (1.93)	16.96*** (2.23)		
$\Delta^* \text{Socially-Oriented}$					1.22 (1.27)	0.90 (1.08)		
Women nicer						0.80 (3.54)		
$\Delta^* \text{Women nicer}$							4.26*** (1.41)	
Men more selfish							-2.43 (3.29)	
$\Delta^* \text{Men more selfish}$							5.12*** (1.26)	
Women fairer								-3.52 (2.81)
$\Delta^* \text{Women fairer}$								2.68* (1.50)
N	2898	2436	5348	2898	2436	5348	5348	5348

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . SEs are clustered at the participant level. Results are from an OLS of the believed percent of female or male decision-makers who choose the socially-oriented outcome in a scenario.  $\Delta$  is an indicator for beliefs about female (rather than male) decision-makers. *Female* is an indicator for the participant providing the beliefs being a female. *Socially-Oriented* is an indicator for the participant providing the beliefs having chosen the socially-oriented outcome when they are the decision-maker in the relevant scenario. *Women nicer*, *Men more selfish*, and *Women fairer* are indicators for selecting—when asked to make a binary choice between men and women—that women are nicer, men are more selfish, and women are fairer in the follow-up survey. The fixed effects are indicators for each scenario. This table presents belief data when pooling across the third-party Scenarios 8–14 from the Economic Games Study run with undergraduates students. Columns 1 & 4, 2 & 5, and 3 & 6–8 restrict to beliefs provided by women, men, and all participants, respectively.

Table A.7: Heterogeneity regressions of the believed percent of decision-makers choosing the socially-oriented outcome in the third-party scenarios of the Economic Games (Prolific Participants) Study

	Women (1)	Men (2)	All (3)	Women (4)	Men (5)	All (6)	All (7)	All (8)
<b>Prolific Participants, Third-Party Scenarios</b>								
$\Delta$	11.71*** (1.05)	9.40*** (1.05)	9.56*** (1.03)	5.96*** (1.72)	9.12*** (1.33)	10.72*** (0.68)	10.72*** (0.69)	10.72*** (0.69)
Female			-7.20*** (1.86)					
Female,B(F)				2.15 (1.47)				
Socially-Oriented					8.54*** (1.97)	15.29*** (2.12)		
$\Delta^*$ Socially-Oriented					7.79*** (1.84)	0.38 (1.69)		
Women more altruistic						-0.91** (0.36)		
$\Delta^*$ Women more altruistic						2.51*** (0.39)		
Women more charitable							-0.98*** (0.31)	
$\Delta^*$ Women more charitable							2.04*** (0.30)	
Women fairer								-1.30*** (0.41)
$\Delta^*$ Women fairer								2.55*** (0.39)
N	3024	2520	5600	3024	2520	5600	5600	5600

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . SEs are clustered at the participant level. Results are from an OLS of the believed percent of female or male decision-makers who choose the socially-oriented outcome in a scenario.  $\Delta$  is an indicator for beliefs about female (rather than male) decision-makers. *Female* is an indicator for the participant providing the beliefs being a female. *Socially-Oriented* is an indicator for the participant providing the beliefs having chosen the socially-oriented outcome when they are the decision-maker in the relevant scenario. *Women more altruistic*, *Women more charitable*, and *Women fairer* reflect the demeaned difference between the ratings given to women and men—on a 1 (completely unwilling) to 10 (completely willing) scale—when asked about their willingness to “be altruistic”, to “share with others without expecting anything in return when it comes to charity”, or “be fair” in the follow-up survey, respectively. The fixed effects are indicators for each scenario. This table presents belief data when pooling across the third-party Scenarios 8–14 from Prolific participants. Columns 1 & 4, 2 & 5, and 3 & 6–8 restrict to beliefs provided by women, men, and all participants, respectively.

Table A.8: Regressions of the believed percent of decision-makers choosing the socially-oriented outcome in the first-party dictator game of the Economic Games (Stereotypes) Study

	Women (1)	Men (2)	All (3)	Women (4)	Men (5)	All (6)
<b>Prolific Participants, First-Party Dictator Game</b>						
$\Delta$	14.15*** (0.88)	10.45*** (1.54)	12.35*** (1.09)	14.15*** (0.79)	14.15*** (0.75)	14.15*** (0.81)
Recall a woman		-0.79 (2.16)				
$\Delta^*$ Recall a woman		5.62*** (1.87)				
Female			-4.24** (1.92)			
$\Delta^*$ Female			3.64** (1.75)			
Women more altruistic				-1.57*** (0.51)		
$\Delta^*$ Women more altruistic				3.62*** (0.52)		
Women more charitable					-1.88*** (0.40)	
$\Delta^*$ Women more charitable					3.81*** (0.36)	
Women fairer						-1.83*** (0.48)
$\Delta^*$ Women fairer						3.29*** (0.46)
Constant	31.89*** (0.97)	32.41*** (1.85)	33.99*** (1.46)	31.89*** (0.96)	31.89*** (0.94)	31.89*** (0.95)
N	798	798	798	798	798	798

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . SEs are clustered at the participant level. Results are from an OLS of the believed percent of female or male decision-makers who choose the socially-oriented outcome in the first-part dictator game.  $\Delta$  is an indicator for beliefs about female (rather than male) decision-makers. *Recall a woman* is an indicator for participants who recall a woman when asked to think of a specific person who is likely to give to others. *Female* in an indicator for the participant providing the beliefs being a female. *Socially-Oriented* in an indicator for the participant providing the beliefs having chosen the socially-oriented outcome when they are the decision-maker in the relevant scenario. *Women more altruistic*, *Women more charitable*, and *Women fairer* reflect the demeaned difference between the ratings given to women and men—on a 1 (completely unwilling) to 10 (completely willing) scale—when asked about their willingness to “be altruistic”, to “share with others without expecting anything in return when it comes to charity”, or “be fair” in the follow-up survey, respectively. The fixed effects are indicators for each scenario. This table presents belief data rom Prolific participants in the Economic Games (Stereotypes) Study.

Table A.9: Robustness regressions of the believed percent of decision-makers favoring equality in the Applications Study

	All (1)	With Controls (2)	Attention Check (3)	Beliefs First (4)	Beliefs Second (5)	Early Beliefs (6)	Late Beliefs (7)
$\Delta$	14.48*** (0.47)	14.48*** (0.48)	14.48*** (0.48)	13.02*** (0.67)	15.65*** (0.66)	14.27*** (0.62)	14.65*** (0.70)
N	6400	6400	6384	2864	3536	2928	3472
FE	yes	yes	yes	yes	yes	yes	yes

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . SEs are clustered at the participant level. Results are from an OLS of the believed percent of female or male participants who indicate agreement with an equality statement.  $\Delta$  is an indicator for beliefs about female (rather than male) participants. The fixed effects are indicators for each statement. This table presents beliefs about equality statements when pooling across all equality statements in the Applications Study. Column 2 presents results when demographic controls are included for gender, age and income. Column 3 restricts to the beliefs provided by participants who pass our attention check (see Footnote 22 for details). Column 4 restricts to beliefs provided by participants who provide beliefs before they answer the equality statements. Column 5 restricts to participants who provide beliefs after they answer the equality statements. Since participants also provide beliefs about employers in a different part of the study, Column 6 restricts to participants who are first asked to provide beliefs about equality statements and Column 7 restricts to participants who are first asked to provide beliefs about employers.

Table A.10: In Applications Study, participant level classification of beliefs

	All	Equality Statement							
		1	2	3	4	5	6	7	8
Frac with $B(F) > B(M)$	0.84	0.92	0.92	0.84	0.88	0.80	0.80	0.74	0.81
Frac with $B(F) = B(M)$	0.09	0.04	0.04	0.07	0.05	0.12	0.14	0.17	0.13
Frac with $B(F) < B(M)$	0.07	0.05	0.04	0.09	0.07	0.08	0.07	0.09	0.07
N	3200	400	400	400	400	400	400	400	400

This table presents results on beliefs about equality statements from the Applications Study. *Frac w/  $B(F) > B(M)$*  indicates the fraction of participants who believe the percent of women who favor equality is greater than the percent of men who favor equality. Similar definitions follow for *Frac w/  $B(F) = B(M)$*  and *Frac w/  $B(F) < B(M)$* .

Table A.11: Heterogeneity regressions of the believed percent of participants favoring equality in the Applications Study

	Women (1)	Men (2)	All (3)	Women (4)	Men (5)
$\Delta$	17.42*** (0.67)	11.54*** (0.62)	11.76*** (0.62)	18.24*** (1.29)	13.36*** (1.03)
Female			-3.90*** (1.23)		
B(Female)*Female			5.66*** (0.91)		
Favors Equality				16.15*** (1.74)	16.56*** (1.82)
B(Female)*Favors Equality				-0.98 (1.29)	-2.26** (1.07)
N	3072	3216	6400	3072	3216
FE	yes	yes	yes	yes	yes

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . SEs are clustered at the participant level. Results are from an OLS of the believed percent of female or male decision-makers who choose the socially-oriented outcome in a scenario.  $\Delta$  is an indicator for beliefs about female (rather than male) decision-makers. *Female* in an indicator for the participant providing the beliefs being a female. *Favors Equality* in an indicator for the participant indicating that they favor equality in the relevant statement. This table presents beliefs about equality statements when pooling across all equality statements in the Applications Study. Columns 1 & 4, 2 & 5, and 3 restrict to beliefs provided by women, men, and all participants, respectively.

Table A.12: Results on the accuracy of the beliefs about equality statements in the Applications Study

Equality Statement	1	2	3	4	5	6	7	8
B(F)-Truth(F)	1.12	-8.65	20.07	-19.41	-15.46	-17.62	-15.31	-20.32
B(M)-Truth(M)	-8.71	-22.23	6.80	-39.98	-27.82	-26.77	-22.69	-27.46
$\Delta$	9.84*** (0.81)	13.58*** (0.75)	13.26*** (0.75)	20.57*** (0.93)	12.36*** (0.80)	9.14*** (0.55)	7.38*** (0.49)	7.14*** (0.53)
N	800	800	800	800	800	800	800	800

$B(F)\text{-}Truth(F)$  is the average believed percent of women who favor equality minus the actual percent of women who favor equality.  $B(M)\text{-}Truth(M)$  is the average believed percent of men who favor equality minus the actual percent of men who favor equality.  $\Delta$  shows the difference of these differences and whether the difference of these differences is statistically significant according to a two-sided t-test at the following levels: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . This table presents beliefs about Equality statements 1–8 in Columns 1–8.

Table A.13: Robustness regressions of the believed percent of employers choosing Equal Pay in the Applications Study

	All (1)	With Controls (2)	Attention Check (3)	Beliefs First (4)	Beliefs Second (5)	Early Beliefs (6)	Late Beliefs (7)
$\Delta$	19.790*** (0.830)	19.790*** (0.838)	19.739*** (0.831)	18.529*** (1.249)	21.129*** (1.080)	21.664*** (1.238)	17.568*** (1.051)
Constant	51.792*** (0.958)	56.212*** (2.754)	51.827*** (0.959)	52.495*** (1.402)	51.046*** (1.300)	48.728*** (1.288)	55.426*** (1.390)
N	800	800	798	412	388	434	366

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . SEs are clustered at the participant level. Results are from an OLS of the believed percent of female or male employers who choose equal pay.  $\Delta$  is an indicator for beliefs about female (rather than male) participants. This table presents beliefs about the employer decisions in the Applications Study. Column 2 presents results when demographic controls are included for gender, age and income. Column 3 restricts to the beliefs provided by participants who pass our attention check (see Footnote 22 for details). Column 4 restricts to beliefs provided by participants who provide beliefs before they make decisions as employers. Column 5 restricts to participants who provide beliefs after they make decisions as employers. Since participants also provide beliefs about equality statements in a different part of the study, Column 6 restricts to participants who are first asked to provide beliefs about employers and Column 7 restricts to participants who are first asked to provide beliefs about equality statements.

Table A.14: Heterogeneity regressions of the believed percent of employers choosing equal pay in the Applications Study

	Women (1)	Men (2)	All (3)	Women (4)	Men (5)
$\Delta$	23.792*** (1.209)	16.124*** (1.118)	16.096*** (1.085)	21.291*** (2.196)	18.313*** (2.127)
Female				-5.110*** (1.905)	
$\Delta^* \text{Female}$				7.696*** (1.623)	
Equal pay					5.057 (3.082)    7.705*** (2.745)
$\Delta^* \text{Equal Pay}$					3.505 (2.627)    -3.210 (2.493)
Constant	49.135*** (1.402)	54.080*** (1.321)	54.245*** (1.291)	45.527*** (2.601)	48.828*** (2.233)
N	384	402	800	384	402

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . SEs are clustered at the participant level. Results are from an OLS of the believed percent of female or male employers who choose equal pay.  $\Delta$  is an indicator for beliefs about female (rather than male) participants. This table presents beliefs about the employer decisions in the Applications Study.  $\Delta$  is an indicator for beliefs about female (rather than male) decision-makers. *Female* is an indicator for the participant providing the beliefs being a female. *Equal Pay* is an indicator for the participant choosing equal pay when they make decisions as an employer. Columns 1 & 4, 2 & 5, and 3 restrict to beliefs provided by women, men, and all participants, respectively.

Table A.15: Representative Population Sample and Nationally Representative Characteristics

	Study sample (%)	Population (%)
<b>Gender</b>		
Male	49.3	48.7
Female	50.6	51.3
<b>Age</b>		
18 to 24 years	12.6	12.2
25 to 34 years	17.2	17.9
35 to 44 years	18.1	16.3
45 to 54 years	15.7	16.7
55 to 64 years	16.1	16.6
65 years and over	20.4	20.2
<b>Household income in 2020</b>		
\$14,999 or less	9.8	10.3
\$15,000 to \$24,999	9.8	8.9
\$25,000 to \$49,999	21.2	21.2
\$50,000 to \$74,999	17.0	17.2
\$75,000 to \$99,999	13.1	12.7
\$100,000 to \$149,999	15.1	15.1
\$150,000 to \$199,999	6.7	6.8
\$200,000 or more	7.4	7.7

Following [Snowberg and Yariv \(2021\)](#), we partnered with Dynata to recruit a nationally representative sample along three demographic categories: gender, age, and income.<sup>40</sup> The first column shows the percentage of participants recruited in Study 4 according to each of these demographic categories, while the second column shows the target percentages. To obtain nationally representative target percentages, we used the American Community Survey (ACS) estimates from 2019. See ACS Table DP05 rows 27-28 for the gender estimates. See ACS Table DP03 rows 57-66 for the income estimates and note that we collapsed some buckets to match the income buckets available for Dynata participants. See Table DP05 for the age estimates. To recruit this sample, we provided Dynata with these target demographics, and they then recruited their participants through generic email invitations containing the survey URL and no information regarding the nature of the study. Dynata provided their participants with incentives equal to approximately \$0.50.

Table A.16: Scenarios in the Broader Beliefs Study Version

	<b>Game</b>	<b>Question</b>
1	DG	When they receive more money by making unfair decisions, what percent of <b>men (women)</b> make unfair decisions?
2	DG-EFF	When they receive more money by maximizing the size of the pot rather than splitting the pot equally, what percent of <b>men (women)</b> choose to maximize the size of the pot?
3	DG-ENT	When they may be a low performer or high performer, what percent of <b>men (women)</b> choose for high performers to be paid more than low performers?
4	UG	When they may receive more money by making unfair decisions but their decisions can be vetoed, what percent of <b>men (women)</b> make unfair decisions?
5	TG	When they may receive more money by distrusting others, what percent of <b>men (women)</b> distrust others?
6	PD	When they receive more money by making uncooperative decisions, what percent of <b>men (women)</b> make uncooperative decisions?
7	PGG	When they receive more money by not contributing to a public good that would benefit everyone, what percent of <b>men (women)</b> do not contribute to a public good?
8	DG	When their decisions do not influence how much money they receive, what percent of <b>men (women)</b> make unfair decisions?
9	DG-EFF	When their decisions do not influence how much money they receive, what percent of <b>men (women)</b> choose to maximize the size of the pot rather than split the pot equally?
10	DG-ENT	When their decisions do not influence how much money they earn, what percent of <b>men (women)</b> choose for high performers to be paid more than low performers?
11	UG	When their decisions do not influence how much money they receive but their decisions can be vetoed, what percent of <b>men (women)</b> make unfair decisions?
12	TG	When their decisions do not influence how much money they receive, what percent of <b>men (women)</b> distrust others?
13	PD	When their decisions do not influence how much money they receive, what percent of <b>men (women)</b> make uncooperative decisions?
14	PGG	When their decisions do not influence how much money they receive, what percent of <b>men (women)</b> do not contribute to a public good that would benefit everyone?

This table shows the question asked about men (women) in each scenario in the Broader Belief Study.

Table A.17: Questions in the Broader Beliefs-2 Study Version

Scenario	Question
EG1	What percent of <b>men (women)</b> make decisions that achieve equality?
EG2	What percent of <b>men (women)</b> care more about splitting the pot equally than maximizing the size of the pot?
EG3	What percent of <b>men (women)</b> favor equal pay more than performance pay?
EG4	When their decisions can be vetoed, what percent of <b>men (women)</b> try to make decisions that achieve equality?
EG5	When equal outcomes are more likely if one trusts others, but trusting others can also backfire, what percent of <b>men (women)</b> trust others?
EG6	When equal outcomes are more likely if one cooperates with others, what percent of <b>men (women)</b> cooperate with others?
EG7	When equal outcomes are more likely if one contributes to a public good that benefits everyone, what percent of <b>men (women)</b> contribute to a public good?
EG8	What percent of <b>men (women)</b> care about equality?
A1	What percent of <b>men (women)</b> think society should aim to equalize incomes?
A2	What percent of <b>men (women)</b> think the government should take measures to reduce differences in income levels?
A3	What percent of <b>men (women)</b> think all people should be paid equally for the same job regardless of how well they do the job?
A4	What percent of <b>men (women)</b> think spouses should take equal responsibility for the home and family?
A5	What percent of <b>men (women)</b> think both parents should be equally involved in the upbringing of a child?
A6	What percent of <b>men (women)</b> think all people should have equal access to health care?
A7	What percent of <b>men (women)</b> think all people should have equal access to education?
A8	What percent of <b>men (women)</b> think all people should have equal access to suitable and affordable housing?

This table shows the question asked about men (women) in the Broader Beliefs-2 Study/

Table A.18: Beliefs about the percent of decision-makers choosing the socially-oriented outcome in the Economic Games (Separate Beliefs) Study

Game:	DG (1)	DG-EFF (2)	DG-ENT (3)	UG (4)	TG (5)	PD (6)	PGG (7)
<b>Panel 1: All Decisions, Beliefs about First-Party Scenarios</b>							
B(F)	40.07	36.20	34.66	50.82	40.24	41.98	42.93
B(M)	28.25	25.79	26.13	42.56	29.14	30.80	30.73
$\Delta$	11.82*** (1.08)	10.41*** (1.02)	8.53*** (1.05)	8.26*** (1.23)	11.10*** (1.22)	11.18*** (1.23)	12.20*** (1.26)
N	798	798	798	798	798	798	798
<b>Panel 2: First Set of Decisions, Beliefs about First-Party Scenarios</b>							
B(F)	38.31	33.81	31.78	51.34	37.78	40.48	41.77
B(M)	28.27	25.39	28.24	46.04	31.31	32.93	33.31
$\Delta$	10.05*** (2.22)	8.42*** (2.11)	3.54 (2.20)	5.30** (2.49)	6.46*** (2.22)	7.55*** (2.23)	8.47*** (2.36)
N	371	364	365	373	377	378	371
<b>Panel 3: All Decisions, Beliefs about Third-Party Scenarios</b>							
B(F)	58.55	55.07	48.14	61.65	54.55	53.21	55.28
B(M)	46.12	43.66	38.52	52.47	45.04	44.87	45.09
$\Delta$	12.44*** (1.30)	11.41*** (1.33)	9.62*** (1.26)	9.19*** (1.15)	9.51*** (1.31)	8.34*** (1.19)	10.20*** (1.29)
N	798	798	798	798	798	798	798
<b>Panel 4: First Set of Decisions, Beliefs about Third-Party Scenarios</b>							
B(F)	61.69	55.15	48.02	60.01	55.82	53.09	55.23
B(M)	49.08	44.84	39.66	55.89	47.66	47.50	46.75
$\Delta$	12.61*** (2.69)	10.31*** (2.81)	8.36*** (2.42)	4.12 (2.56)	8.16*** (2.62)	5.59** (2.48)	8.47*** (2.68)
N	371	366	365	374	374	384	358

This table presents results on beliefs from the Economic Games (Separate Beliefs) Study.  $B(M)$  indicates the average belief provided by participants when they are asked to predict the percent of male decision-makers who choose the socially-oriented outcome,  $B(F)$  indicates the average belief provided by participants when they are asked to predict the percent of female decision-makers who choose the socially-oriented outcome, and  $\Delta$  shows the difference in these beliefs and whether this difference is statistically significant at the following levels according to an OLS of the percent belief on the gender of the decision-maker with standard errors clustered at the participant level: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Columns 1–7 correspond to the broader beliefs about decisions in the first-party version of the noted game in Panels 1 and 2 but to the third-party versions of the noted game in Panels 3 and 4. While Panels 1 and 3 show all belief data, Panels 2 and 4 restrict to each participant's first set of beliefs—i.e., they only include (i) beliefs about women among participants who are first asked about beliefs about women and (ii) beliefs about men among participants who are first asked about beliefs about men.

Table A.19: Broader beliefs about the percent of decision-makers favoring the socially-oriented outcome in the Broader Beliefs (Prolific Participants) Study and in the Broader Beliefs (Representative Sample) Study

Game:	DG (1)	DG-EFF (2)	DG-ENT (3)	UG (4)	TG (5)	PD (6)	PGG (7)
<b>Panel 1: Prolific Participants, Beliefs about First-Party Scenarios</b>							
B(F)	45.74*** (1.05)	37.30*** (0.97)	33.20*** (0.91)	53.82*** (1.06)	36.07*** (0.99)	45.53*** (1.00)	49.85*** (1.07)
B(M)	32.39*** (1.01)	26.26*** (0.89)	25.29*** (0.81)	40.84*** (1.06)	29.21*** (0.94)	32.06*** (0.98)	37.42*** (1.04)
$\Delta$	13.35*** (0.94)	11.05*** (0.87)	7.91*** (0.73)	12.98*** (0.85)	6.86*** (0.87)	13.47*** (0.92)	12.42*** (0.91)
N	798	798	798	798	798	798	798
<b>Panel 2: Representative Sample, Beliefs about First-Party Scenarios</b>							
B(F)	46.22*** (0.73)	39.89*** (0.68)	35.54*** (0.66)	47.99*** (0.73)	40.46*** (0.71)	44.49*** (0.72)	47.05*** (0.73)
B(M)	37.95*** (0.69)	33.04*** (0.66)	32.14*** (0.66)	41.91*** (0.69)	37.30*** (0.70)	37.29*** (0.68)	41.02*** (0.71)
$\Delta$	8.26*** (0.69)	6.85*** (0.72)	3.40*** (0.66)	6.08*** (0.70)	3.16*** (0.69)	7.20*** (0.69)	-6.03*** (0.70)
N	2002	2002	2002	2002	2002	2002	2002
<b>Panel 3: Prolific Participants, Beliefs about Third-Party Scenarios</b>							
B(F)	65.05*** (1.07)	53.53*** (1.12)	34.50*** (0.99)	66.86*** (1.05)	52.81*** (1.14)	66.75*** (1.02)	62.34*** (1.18)
B(M)	55.94*** (1.14)	41.85*** (1.14)	26.10*** (0.89)	58.15*** (1.15)	49.15*** (1.07)	56.12*** (1.16)	52.97*** (1.22)
$\Delta$	9.11*** (0.79)	11.69*** (0.98)	8.40*** (0.76)	8.71*** (0.78)	3.66*** (0.97)	10.63*** (0.88)	9.36*** (0.93)
N	798	798	798	798	798	798	798
<b>Panel 4: Representative Sample, Beliefs about Third-Party Scenarios</b>							
B(F)	51.54*** (0.77)	44.15*** (0.73)	37.18*** (0.68)	51.59*** (0.77)	45.11*** (0.74)	51.18*** (0.76)	49.71*** (0.78)
B(M)	46.59*** (0.74)	38.28*** (0.69)	32.97*** (0.66)	46.87*** (0.73)	43.51*** (0.72)	44.83*** (0.72)	45.57*** (0.72)
$\Delta$	4.95*** (0.68)	5.87*** (0.72)	4.21*** (0.63)	4.72*** (0.65)	1.60** (0.71)	6.35*** (0.69)	4.14*** (0.68)
N	2002	2002	2002	2002	2002	2002	2002

This table presents results on beliefs from the Broader Belief (Prolific Participants) Study and the Broader Belief (Representative) Study, which includes data from Prolific participants in Study 3 and a representative sample recruited by Dynata in Study 4.  $B(M)$  indicates the average belief provided by participants when they are asked to predict the percent of male decision-makers who choose the socially-oriented outcome,  $B(F)$  indicates the average belief provided by participants when they are asked to predict the percent of female decision-makers who choose socially-oriented outcome, and  $\Delta$  shows the difference in these beliefs and whether this difference is statistically significant at the following levels according to an OLS of the percent belief on the gender of the decision-maker with standard errors clustered at the participant level: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Columns 1–7 correspond to the broader beliefs about decisions in the first-party version of the noted game in Panels 1 and 2 but to the third-party versions of the noted game in Panels 3 and 4.

Table A.20: Regressions of the believed percent of men and women favoring equality in the Broader Beliefs-2 Study

	EG1	EG2	EG3	EG4	EG5	EG6	EG7	EG8
B(F)	65.07	60.28	68.64	69.71	57.76	71.04	67.72	78.42
B(M)	52.86	46.90	48.12	55.66	54.32	66.26	60.96	56.59
$\Delta$	12.21***	13.38***	20.52***	14.04***	3.44***	4.78***	6.76***	21.84***
N	800	800	800	800	800	800	800	800
	A1	A2	A3	A4	A5	A6	A7	A8
B(F)	75.95	74.60	64.48	76.78	80.06	83.54	85.30	77.56
B(M)	54.57	54.53	48.17	54.90	63.06	77.25	77.75	69.32
$\Delta$	21.38***	20.08***	16.32***	21.89***	17.00***	6.29***	7.55***	8.24***
N	800	800	800	800	800	800	800	800

B(F) and B(M) show the average believed percent of women and men who favor the type of equality described, and  $\Delta$  shows the difference in these percentages and whether this difference is statistically significant according to a two-sided t-test with SEs clustered at the participant level at the following levels: \*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$ . Each set of estimates corresponds to beliefs elicited in the noted pair of questions. The data are from the Broader Beliefs-2 Study run with Prolific participants.

## B Additional Figures

Figure B.1: Distributions of incentivized beliefs about P1 among undergraduate students

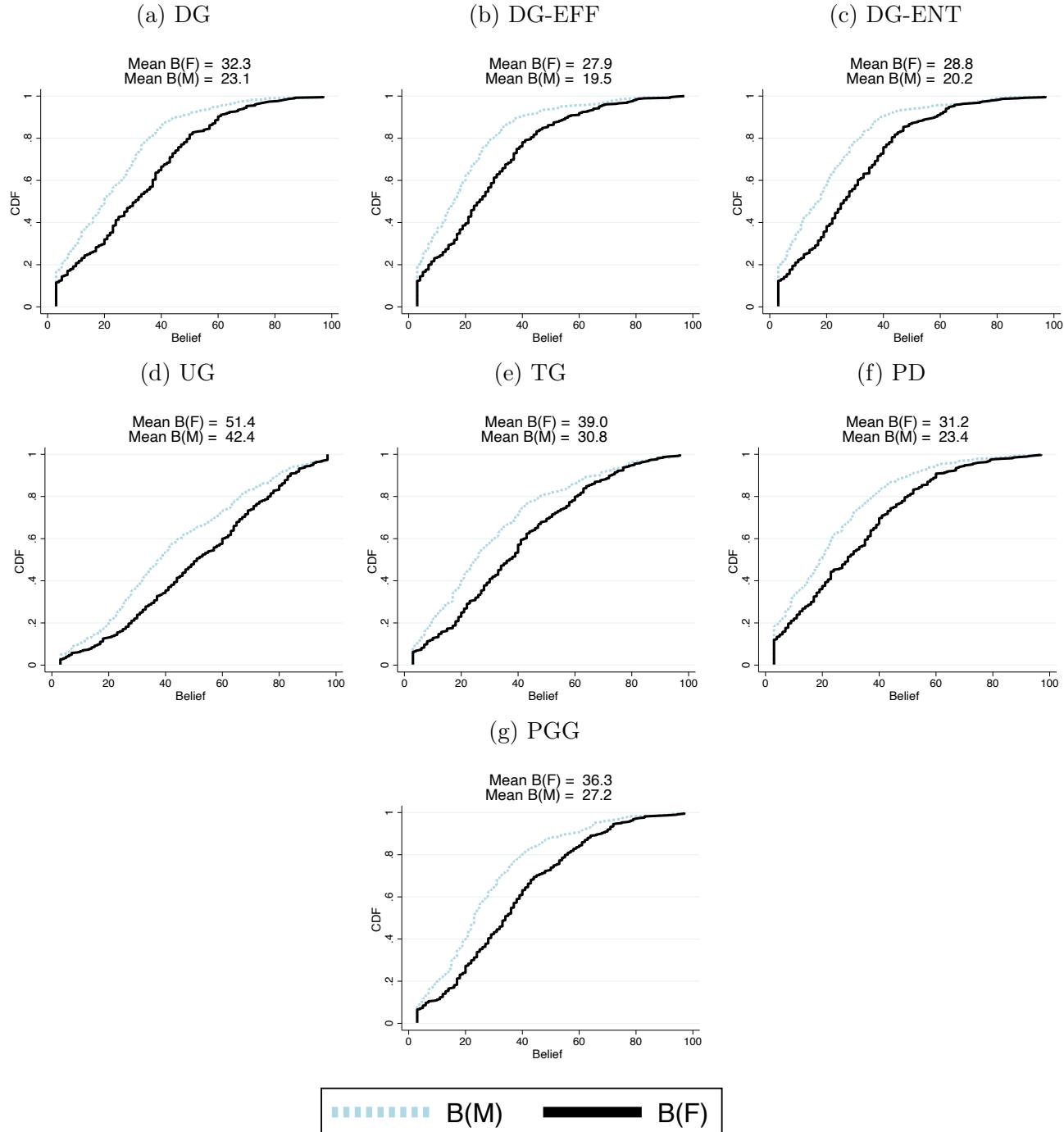


Figure B.2: Distribution of incentivized beliefs about P1 among Prolific participants

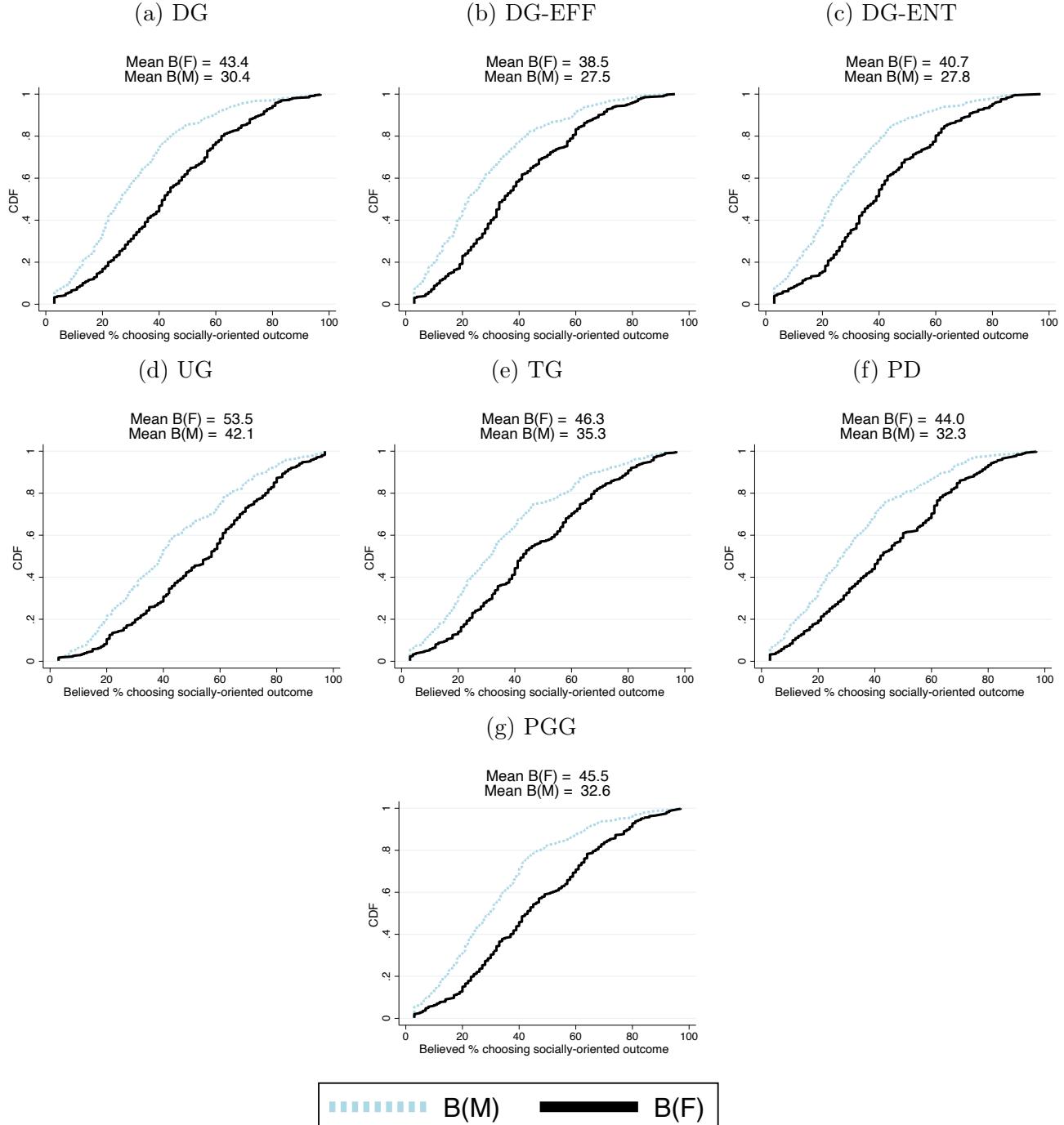


Figure B.3: Distribution of incentivized beliefs about NP among undergraduate students

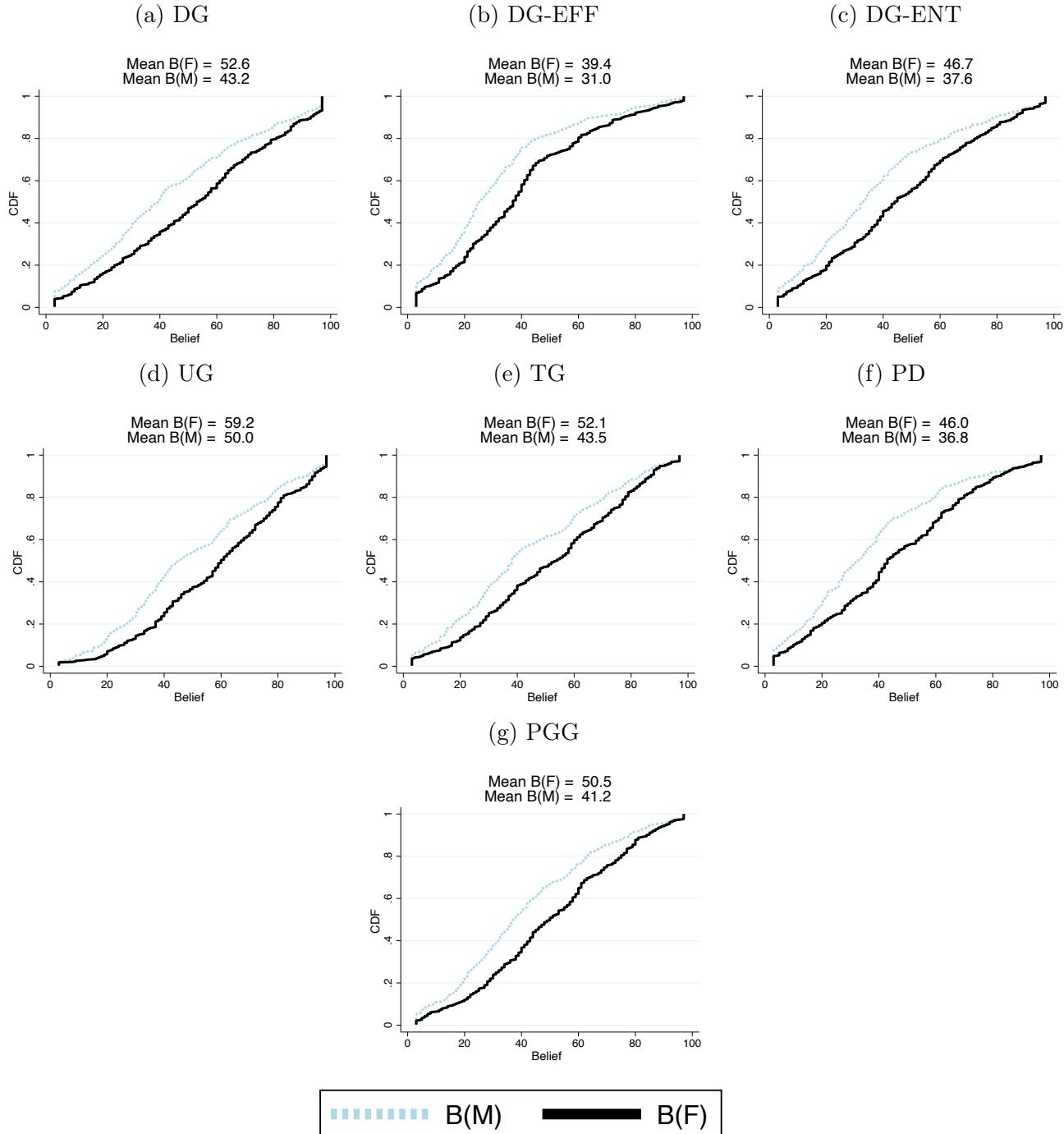


Figure B.4: Distribution of incentivized beliefs about NP among Prolific participants

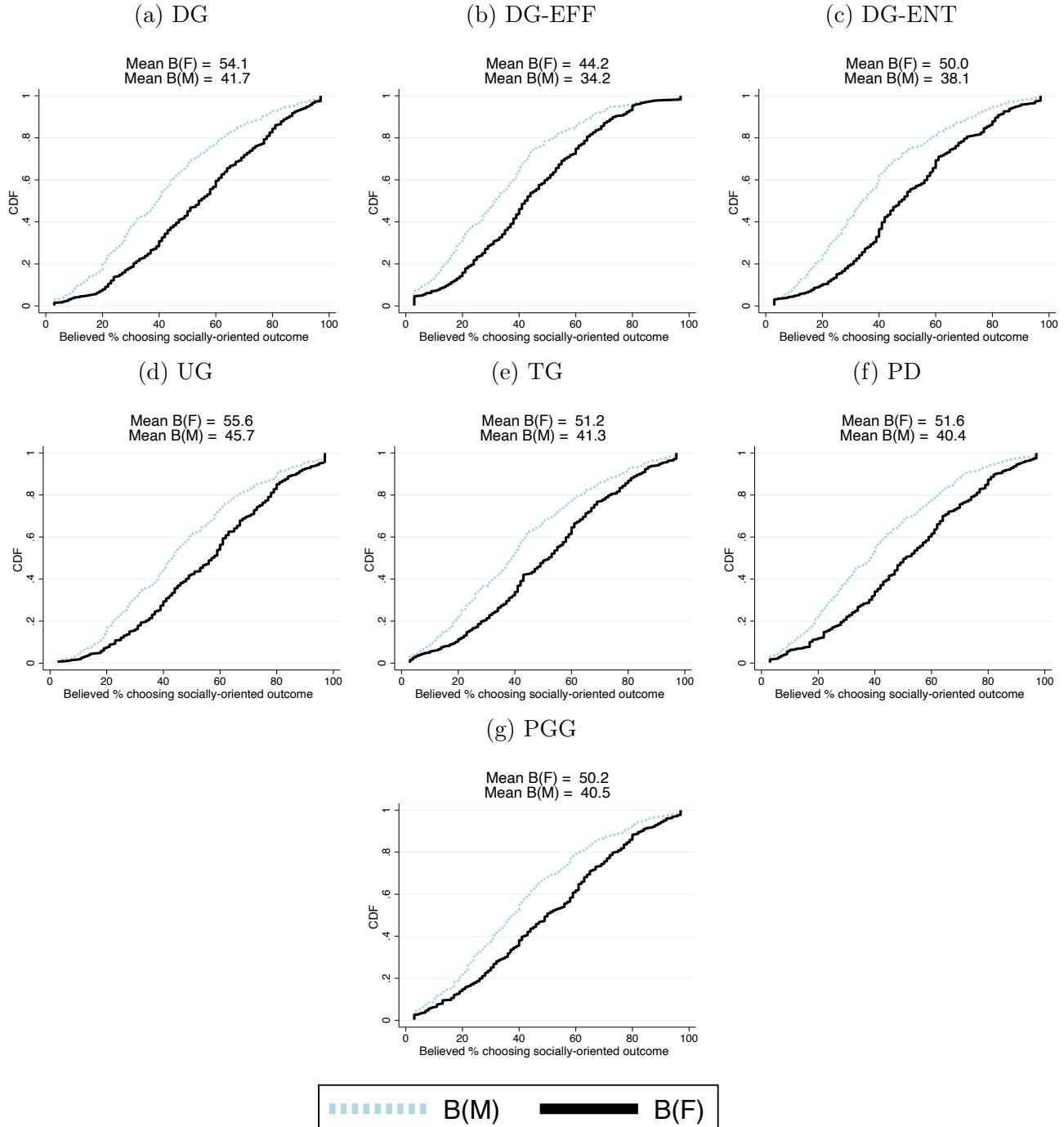


Figure B.5: Distributions of participants' number of times (out of the 14 games) that they believed female decision-makers are more socially-oriented

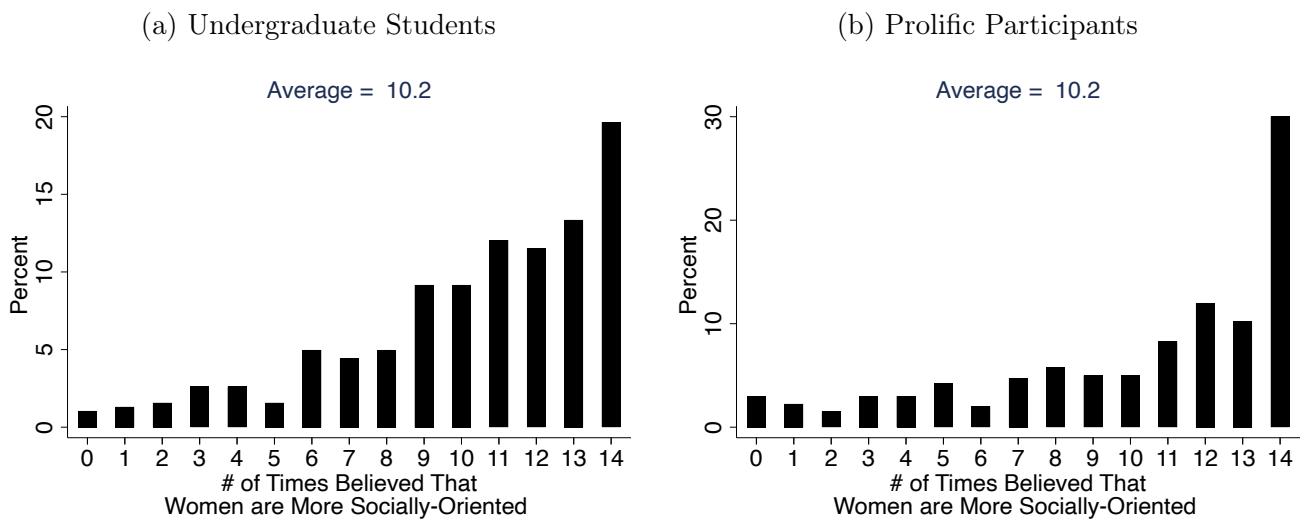


Figure B.6: Distributions of beliefs about equality statements

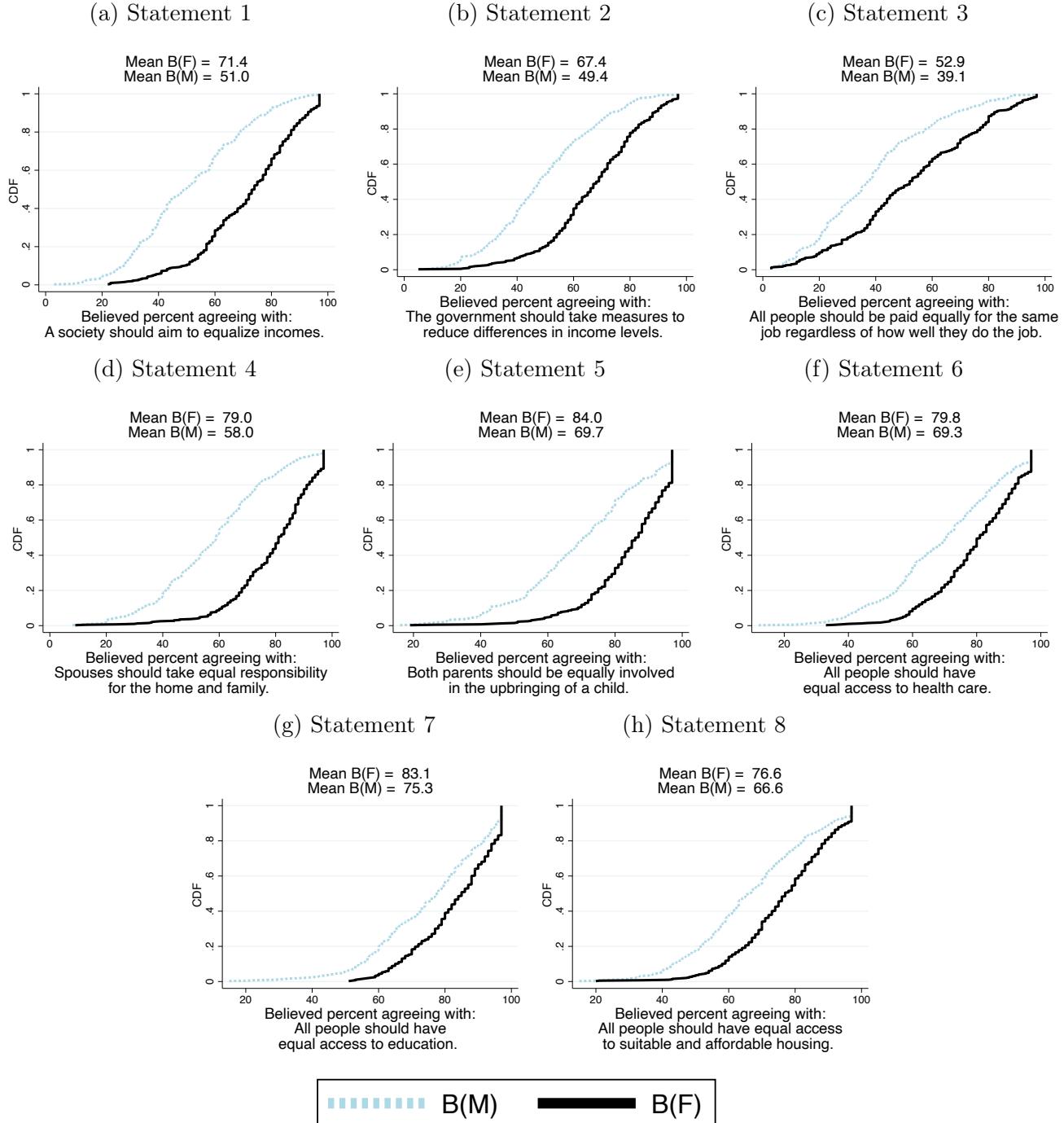
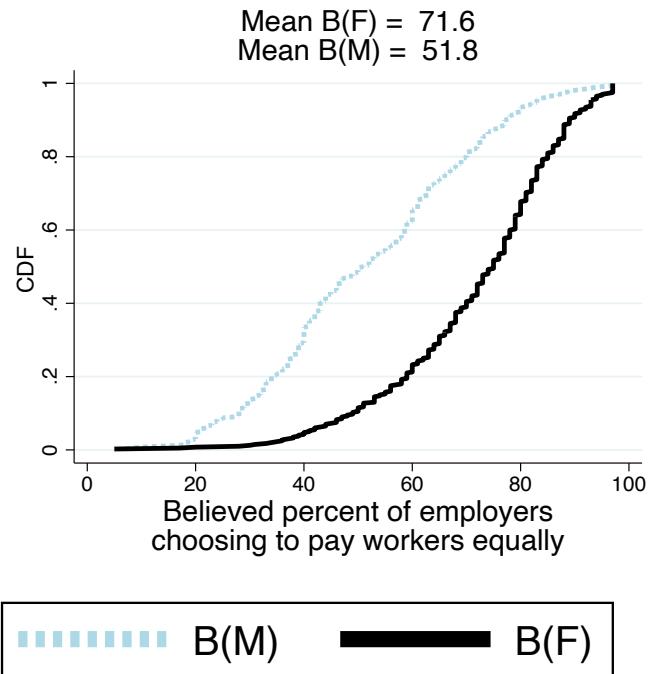


Figure B.7: Distributions of beliefs about employers choosing equal pay



## C Experimental Instructions

This paper involved five studies. Sections C.1 and C.2 present the full instructions for the Economic Games (Undergraduate Students) Study and the Economic Games (Prolific Participants) Study, respectively. Section C.3 presents the full instructions for the Economic Games (Stereotypes) Study. Section C.4 presents the full instructions for the Applications Study. Section C.5 presents the full instructions for the Worker Study. Section C.6 presents the full instructions for the Economic Games (Separate Beliefs) Study. Sections C.7, C.8, and C.9 present the full instructions for the Broader Beliefs (Prolific Participants) Study, Broader Beliefs (Representative Sample), and Broader Beliefs-2 Study, respectively.

### C.1 Experimental Instructions for Economics Games (Undergraduate Students) Study

After consenting to participate in the study, participants are informed of the £7 study completion fee and of the opportunity to earn additional payment. Figure C.1 shows how this payment information is explained and the corresponding comprehension question that each participant must answer correctly in order to proceed.

Participants are then randomly assigned to first answer the set of beliefs questions or the set of decisions questions. After participants finish the first set of questions they are randomly assigned to, they complete the remaining set of questions. The instructions for the two sets of questions are shown in Figures C.2 and C.21, respectively.

Participants answer a total of 28 beliefs questions. The instructions for the beliefs questions, alongside payment information and comprehension questions on the same page, are shown in Figures C.2-C.3. Each page of questions presents a pair of economic decisions, asking about male participants and female participants. For each belief question, participants select their answer on a slider with a 7-point range. Once participants move the slider, the text underneath updates to reflect the slider position and reads “Your answer: L% - U%” where L and U are the lower and upper bounds on the slider position. Figure C.4 shows an example of the beliefs slider output. Participants are randomly assigned to see the male question before the female question or the female question before the male question which, once assigned, is kept consistent throughout all the beliefs questions.

Participants are randomly assigned to first answer the set of beliefs questions about Player 1 or the Neutral Player. Figure C.5 shows the instructions about Player 1 and Figures C.6-C.12 show the corresponding set of beliefs questions about Player 1. Figure C.13 shows the instructions about the Neutral Player and Figures C.14-C.20 show the corresponding set of beliefs questions about the Neutral Player. Within each set of beliefs questions, the order of the question pages is randomized.

Participants make a total of 22 decisions. The instructions for the decisions questions, alongside comprehension questions, are shown in Figure C.21. Participants make decisions in all player roles – as Player 1, as the Neutral Player, as Player 2 interacting with Player 1, and as Player 2 interacting with the Neutral Player. Participants are randomly assigned the order of roles to make decisions.

Figure C.22 shows the decisions instructions for Player 1 and Figures C.23-C.29 show the corresponding set of questions. Figure C.30 shows the decisions instructions for the Neutral Player and Figures C.31-C.37 show the corresponding set of questions. Figure C.38 shows the decisions instructions that Player 2 makes when interacting with Player 1 and Figures C.39-C.42 show the corresponding set of questions. Figure C.43 shows the decisions instructions that Player 2 makes when interacting with the Neutral Player and Figures C.44-C.47 show the corresponding set of questions. Within each set of decisions questions, the order of the question pages is randomized.

Finally, participants complete a short follow-up survey that collects additional control and demographic information.

## Figure C.1: Payment Information

**Study Overview:** To complete this study, you must complete 2 parts and then a short follow-up survey. We estimate that it will take you about 45 minutes to complete this study.

**Payment:** For completing this study, you are guaranteed to receive at least £7. In addition, you may receive additional payment up to £20. All payments will be made to your student bank account directly from the University of Exeter's finance services within two to three weeks of completing the survey.

More specifically, one part will be randomly selected as the part-that-counts. Any additional payments you receive in the part-that-counts will be given to you, and any additional payments other participants receive in the part-that-counts will be given to them.

Note that all other participants in this study will involve other undergraduate students who complete this study.

**Understanding Question:** Which of the following statements is true?

For completing this study, I will receive £7 for sure, and I do NOT have a chance of receiving a higher amount.

For completing this study, I will receive at least £7. I will also receive the amount I earn in the part-that-counts, which may result in me receiving an additional payment up to £20.

For completing this study, I will receive at least £7. The total amount I earn depends on my decisions in all parts in this study.



Figure C.2: Beliefs Instructions



In this part, you will be asked about the decisions made in 14 different scenarios by other participants who complete this study (not including you). Specifically, for each of these scenarios, you will be asked two questions. One question will ask you what percent of female participants make a specific decision in that scenario, and the other question will ask you what percent of male participants make a specific decision in that scenario.

Your answer to each question will involve choosing a range of percentages. If the range you choose in a question includes the right answer, you will receive 10 points in that question. If the range you choose in a question does not include the right answer, you will receive 0 points in that question.

If this part is randomly selected as the part-that-counts, one of the 28 questions will be randomly selected as the question-that-counts. Each point given to you in the question-that-counts will result in you receiving £1 as additional payment. Thus, if your answer is right in the question-that-counts, you will receive £10 as additional payment.

To help you answer these questions, when you are asked what percent of female or male participants make a specific decision in a scenario, you will be provided with exactly the same information as they are provided when they make their decisions in that scenario. Also, prior to making their decisions, note that these participants are informed of the following:

*In this part, you will be randomly assigned to a group with two other participants who complete this study. Each member of the group will be randomly assigned to be Player 1, Player 2, or the Neutral Player. You will never learn any information about the identity of your group members. For example, you will never learn their name, their age, or their gender.*

*You and your group members will make various decisions in 14 different scenarios. In each scenario, some number of points may be given to Player 1 and Player 2 but no points will be given to the Neutral Player. In half of these scenarios, the number of points will be influenced by the decisions made by Player 1, and sometimes, the decisions made by Player 2. In the other half of these scenarios, the number of points will be influenced by the decisions made by the Neutral Player, and sometimes, the decisions made by Player 2.*

*Since you may be randomly assigned to be Player 1, Player 2, or the Neutral Player, you will be asked to make decisions in all scenarios in which Player 1 influences the number of points given, in which Player 2 influences the number of points given, and in which Neutral Player influences the number of points given. You will not make decisions about scenarios where you don't influence the number of points given.*

*In total, this means that you will be asked to make 22 decisions in this part.*

*If this part is randomly selected as the part-that-counts, one of the 14 scenarios will be randomly selected as the scenario-that-counts. Each point given to you in the scenario-that-counts will result in you receiving £1 as additional payment. Each point given to your group members in the scenario-that-counts will result in them receiving £1 as additional payments.*

Figure C.3: Beliefs Instructions Comprehension Questions

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**Understanding Question:** In each question, I will receive...

10 points regardless of how I answer the question.

10 points if I answer the question right and 0 points otherwise.

0 points if I answer the question correctly and 10 if I answer the question otherwise.

**Understanding Question:** In this part is randomly selected as the part-that-counts, as additional payment, I will receive...

nothing for each point given to me

£1 for each point given to me in the question-that-counts.

£1 for each point given to me in all questions.



Figure C.4: Beliefs, Example Slider Output

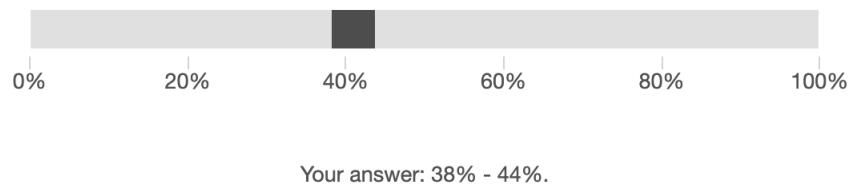
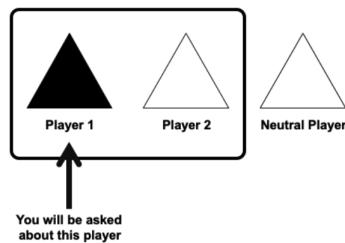


Figure C.5: Beliefs, Player 1 Instructions

**Additional Instructions**

There are 7 scenarios in which the number of points given to Player 1 and Player 2 is influenced by the **decisions made by Player 1**. For each of these scenarios you will be asked two questions. One question will ask you about the decisions made by "female Player 1s," which refers to the decisions made by the female participants when they make decisions as Player 1. The other question will ask you about the decisions made by "male Player 1s," which refers to the decisions made by the male participants when they make decisions as Player 1.

To make this clear, the black triangle below shows which player you will be asked about, and the block box below shows which players' points will be influenced by the decisions in that scenario.



**Understanding Question:** In each of the next 14 questions, you will be asked about the decisions made by which player?

Player 1

Player 2

Neutral Player

**Understanding Question:** In each of the next 14 questions, you will be asked about a player who influenced the number of points given to...

Two group members (but not themselves)

Themselves only

One of their group members and themselves



Figure C.6: Beliefs, Player 1, Dictator Game

Consider a scenario in which:

Player 1 either keeps more or splits.

- **If Player 1 keeps more,** Player 1 receives 10 points and Player 2 receives 0 points
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points

**Part X, Question Y out of 28:** Given that Player 1 receives the most points by keeping more, what percentage of **male** Player 1s do you think choose to keep more?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 receives the most points by keeping more, what percentage of **female** Player 1s do you think choose to keep more?



(The continue arrow will enable after you move the slider to your decision)



Figure C.7: Beliefs, Player 1, Dictator Game with Efficiency Concerns

Consider a scenario in which:

Player 1 either keeps more or splits.

- If Player 1 keeps more, Player 1 receives 15 points and Player 2 receives 0 points.
- If Player 1 splits, Player 1 receives 5 points and Player 2 receives 5 points.

**Part X, Question Y out of 28:** Given that there are a higher number of total points and Player 1 receives the most points by keeping more, what percentage of **male** Player 1s do you think choose to keep more?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that there are a higher number of total points and Player 1 receives the most points by keeping more, what percentage of **female** Player 1s do you think choose to keep more?



(The continue arrow will enable after you move the slider to your decision)



Figure C.8: Beliefs, Player 1, Dictator Game with Entitlement Concerns

Consider a scenario in which:

Player 1 either rewards themselves when they perform better, or splits:

- **If Player 1 rewards themselves when they perform better,** Player 1 receives 10 points and Player 2 receives 0 points if Player 1 is the only one who answers a question correctly; in all other cases, Player 1 receives 5 points and Player 2 receives 5 points. The question will be as follows: What is the next number in the following series: 4, 6, 9, 6, 14, 6, ...? The available answers to this question will be as follows: 6, 17, 19 and 21.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

**Part X, Question Y out of 28:** Given that Player 1 receives the most points by rewarding themselves when they perform better, what percentage of **male** Player 1s do you think choose to reward themselves when they perform better?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 receives the most points by rewarding themselves when they perform better, what percentage of **female** Player 1s do you think choose to reward themselves when they perform better?



(The continue arrow will enable after you move the slider to your decision)



Figure C.9: Beliefs, Player 1, Ultimatum Game

Consider a scenario in which:

Player 1 either keeps more or splits, and if Player 1 keeps more, Player 2 either accepts or rejects their choice.

- **If Player 1 keeps more and Player 2 accepts their choice,** Player 1 receives 9 points and Player 2 receives 1 point.
- **If Player 1 keeps more and Player 2 rejects their choice,** Player 1 receives 0 points and Player 2 receives 0 points.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

**Part X, Question Y out of 28:** Given that Player 1 receives the most points by keeping more, but only if Player 2 accepts, what percentage of **male** Player 1s do you think choose to keep more?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 receives the most points by keeping more, but only if Player 2 accepts, what percentage of **female** Player 1s do you think choose to keep more?



(The continue arrow will enable after you move the slider to your decision)



Figure C.10: Beliefs, Player 1, Trust Game

Consider a scenario in which:

Player 1 either trusts or distrusts, and if Player 1 trusts, Player 2 either rewards or punishes their trust.

- **If Player 1 distrusts,** Player 1 receives 10 points and Player 2 receives 0 points.
- **If Player 1 trusts and Player 2 rewards their trust,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 trusts and Player 2 punishes their trust,** Player 1 receives 0 points and Player 2 receives 20 points.

**Part X, Question Y out of 28:** Given that Player 1 is guaranteed the most points by distrusting, what percentage of **male** Player 1s do you think choose to distrust?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 is guaranteed the most points by distrusting, what percentage of **female** Player 1s do you think choose to distrust?



(The continue arrow will enable after you move the slider to your decision)



Figure C.11: Beliefs, Player 1, Prisoner's Dilemma

Consider a scenario in which:

Both Player 1 and Player 2 have the option to either cooperate or defect.

- **If Player 1 cooperates and Player 2 defects,** Player 1 receives 0 points and Player 2 receives 15 points.
- **If Player 1 cooperates and Player 2 cooperates,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 defects and Player 2 defects,** Player 1 receives 5 points and Player 2 receives 5 points.
- **If Player 1 defects and Player 2 cooperates,** Player 1 receives 15 points and Player 2 receives 0 points.

**Part X, Question Y out of 28:** Given that Player 1 receives a higher number of points by defecting, what percentage of **male** Player 1s do you think choose to defect?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 receives a higher number of points by defecting, what percentage of **female** Player 1s do you think choose to defect?



(The continue arrow will enable after you move the slider to your decision)



Figure C.12: Beliefs, Player 1, Public Goods Game

Consider a scenario in which:

Both Player 1 and Player 2 have the option either to contribute or to not contribute.

- **If Player 1 contributes and Player 2 does not contribute,** Player 1 receives 8 points and Player 2 receives 18 points.
- **If Player 1 contributes and Player 2 contributes,** Player 1 receives 16 points and Player 2 receives 16 points.
- **If Player 1 does not contribute and Player 2 does not contribute,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 does not contribute and Player 2 contributes,** Player 1 receives 18 points and Player 2 receives 8 points.

**Part X, Question Y out of 28:** Given that Player 1 receives a higher number of points by not contributing, what percentage of **male** Player 1s do you think choose to not contribute?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 receives a higher number of points by not contributing, what percentage of **female** Player 1s do you think choose to not contribute?



(The continue arrow will enable after you move the slider to your decision)

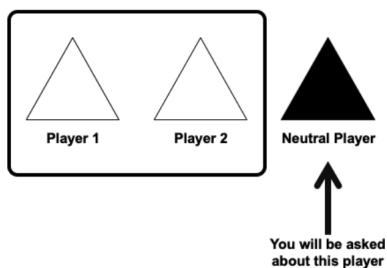


Figure C.13: Beliefs, Neutral Player Instructions

**Additional Instructions**

There are 7 scenarios in which the number of points given to Player 1 and Player 2 is influenced by the decisions made by the **Neutral Player**. For each of these scenarios you will be asked two questions. One question will ask you about the decisions made by "female Neutral Players," which refers to the decisions made by the female participants when they make decisions as the Neutral Player. The other question will ask you about the decisions made by "male Neutral Players," which refers to the decisions made by the male participants when they make decisions as the Neutral Player.

To make this clear, the black triangle below shows which player you will be asked about, and the block box below shows which players' points will be influenced by the decisions in that scenario.



**Understanding Question:** In each of the next 14 questions, you will be asked about the decisions made by which player?

Player 1

Player 2

Neutral Player

**Understanding Question:** In each of the next 14 questions, you will be asked about a player who influenced the number of points given to...

Two group members (but not themselves)

Themselves only

One of their group members and themselves



Figure C.14: Beliefs, Neutral Player, Dictator Game

Consider a scenario in which:

Player 1 either keeps more or splits.

- **If Player 1 keeps more,** Player 1 receives 10 points and Player 2 receives 0 points
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points

**Part X, Question Y out of 28:** Given that Player 1 receives the most points by keeping more, what percentage of **male** Neutral Players do you think choose to have Player 1 keep more?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 receives the most points by keeping more, what percentage of **female** Neutral Players do you think choose to have Player 1 keep more?



(The continue arrow will enable after you move the slider to your decision)



Figure C.15: Beliefs, Neutral Player, Dictator Game with Efficiency Concerns

Consider a scenario in which:

Player 1 either keeps more or splits.

- If Player 1 keeps more, Player 1 receives 15 points and Player 2 receives 0 points.
- If Player 1 splits, Player 1 receives 5 points and Player 2 receives 5 points.

**Part X, Question Y out of 28:** Given that there are a higher number of total points and Player 1 receives the most points by keeping more, what percentage of **male** Neutral Players do you think choose to have Player 1 keep more?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that there are a higher number of total points and Player 1 receives the most points by keeping more, what percentage of **female** Neutral Players do you think choose to have Player 1 keep more?



(The continue arrow will enable after you move the slider to your decision)



Figure C.16: Beliefs, Neutral Player, Dictator Game with Entitlement Concerns

Consider a scenario in which:

Player 1 either rewards themselves when they perform better, or splits:

- If Player 1 rewards themselves when they perform better, Player 1 receives 10 points and Player 2 receives 0 points if Player 1 is the only one who answers a question correctly; in all other cases, Player 1 receives 5 points and Player 2 receives 5 points. The question will be as follows: What is the next number in the following series: 4, 6, 9, 6, 14, 6, ...? The available answers to this question will be as follows: 6, 17, 19 and 21.
- If Player 1 splits, Player 1 receives 5 points and Player 2 receives 5 points.

**Part X, Question Y out of 28:** Given that Player 1 receives the most points by rewarding themselves when they perform better, what percentage of **male** Neutral Players do you think choose to have Player 1 reward themselves when they perform better?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 receives the most points by rewarding themselves when they perform better, what percentage of **female** Neutral Players do you think choose to have Player 1 reward themselves when they perform better?



(The continue arrow will enable after you move the slider to your decision)



Figure C.17: Beliefs, Neutral Player, Ultimatum Game

Consider a scenario in which:

Player 1 either keeps more or splits, and if Player 1 keeps more, Player 2 either accepts or rejects their choice.

- **If Player 1 keeps more and Player 2 accepts their choice,** Player 1 receives 9 points and Player 2 receives 1 point.
- **If Player 1 keeps more and Player 2 rejects their choice,** Player 1 receives 0 points and Player 2 receives 0 points.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

**Part X, Question Y out of 28:** If Player 1 keeps more, given that points only result from Player 1's decision if Player 2 accepts their choice, what percentage of **male** Neutral Players do you think choose to have Player 1 keep more?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** If Player 1 keeps more, given that points only result from Player 1's decision if Player 2 accepts their choice, what percentage of **female** Neutral Players do you think choose to have Player 1 keep more?



(The continue arrow will enable after you move the slider to your decision)



Figure C.18: Beliefs, Neutral Player, Trust Game

Consider a scenario in which:

Player 1 either trusts or distrusts, and if Player 1 trusts, Player 2 either rewards or punishes their trust.

- **If Player 1 distrusts,** Player 1 receives 10 points and Player 2 receives 0 points.
- **If Player 1 trusts and Player 2 rewards their trust,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 trusts and Player 2 punishes their trust,** Player 1 receives 0 points and Player 2 receives 20 points.

**Part X, Question Y out of 28:** Given that Player 1 is guaranteed the most points by distrusting, what percentage of **male** Neutral Players do you think choose to have Player 1 distrust?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 is guaranteed the most points by distrusting, what percentage of **female** Neutral Players do you think choose to have Player 1 distrust?



(The continue arrow will enable after you move the slider to your decision)



Figure C.19: Beliefs, Neutral Player, Prisoner's Dilemma Game

Consider a scenario in which:

Both Player 1 and Player 2 have the option to either cooperate or defect.

- **If Player 1 cooperates and Player 2 defects,** Player 1 receives 0 points and Player 2 receives 15 points.
- **If Player 1 cooperates and Player 2 cooperates,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 defects and Player 2 defects,** Player 1 receives 5 points and Player 2 receives 5 points.
- **If Player 1 defects and Player 2 cooperates,** Player 1 receives 15 points and Player 2 receives 0 points.

**Part X, Question Y out of 28:** Given that Player 1 receives a higher number of points by defecting, what percentage of **male** Neutral Players do you think choose to have Player 1 defect?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 receives a higher number of points by defecting, what percentage of **female** Neutral Players do you think choose to have Player 1 defect?



(The continue arrow will enable after you move the slider to your decision)



Figure C.20: Beliefs, Neutral Player, Public Goods Game

Consider a scenario in which:

Both Player 1 and Player 2 have the option either to contribute or to not contribute.

- If Player 1 contributes and Player 2 does not contribute, Player 1 receives 8 points and Player 2 receives 18 points.
- If Player 1 contributes and Player 2 contributes, Player 1 receives 16 points and Player 2 receives 16 points.
- If Player 1 does not contribute and Player 2 does not contribute, Player 1 receives 10 points and Player 2 receives 10 points.
- If Player 1 does not contribute and Player 2 contributes, Player 1 receives 18 points and Player 2 receives 8 points.

**Part X, Question Y out of 28:** Given that Player 1 receives a higher number of points by not contributing, what percentage of **male** Neutral Players do you think choose to have Player 1 not contribute?



(The continue arrow will enable after you move the slider to your decision)

**Part X, Question Y out of 28:** Given that Player 1 receives a higher number of points by not contributing, what percentage of **female** Neutral Players do you think choose to have Player 1 not contribute?



(The continue arrow will enable after you move the slider to your decision)



Figure C.21: Decisions Instructions

In this part, you will be randomly assigned to a group with two other participants who complete this study. Each member of the group will be randomly assigned to be Player 1, Player 2, or the Neutral Player. You will never learn any information about the identity of your group members. For example, you will never learn their name, their age, or their gender.

You and your group members will make various decisions in 14 different scenarios. In each scenario, some number of points may be given to Player 1 and Player 2 but no points will be given to the Neutral Player. In half of these scenarios, the number of points will be influenced by the decisions made by Player 1, and sometimes, the decisions made by Player 2. In the other half of these scenarios, the number of points will be influenced by the decisions made by the Neutral Player, and sometimes, the decisions made by Player 2.

Since you may be randomly assigned to be Player 1, Player 2, or the Neutral Player, you will be asked to make decisions in all scenarios in which Player 1 influences the number of points given, in which Player 2 influences the number of points given, and in which Neutral Player influences the number of points given. You will not make decisions about scenarios where you don't influence the number of points given.

In total, this means that you will be asked to make 22 decisions in this part.

If this part is randomly selected as the part-that-counts, one of the 14 scenarios will be randomly selected as the scenario-that-counts. Each point given to you in the scenario-that-counts will result in you receiving £1 as additional payment. Each point given to your group members in the scenario-that-counts will result in them receiving £1 as additional payments.

**Understanding Question:** If this part is randomly selected as the part-that-counts, as additional payment, I will receive...

nothing for each point given to me

£1 for each point given to me in the scenario-that-counts.

£1 for each point given to me in all scenarios.



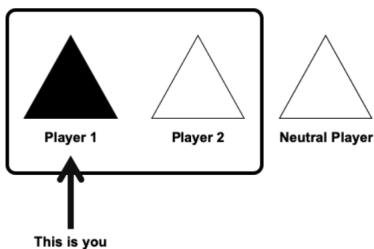
Figure C.22: Decisions, Player 1 Instructions

**Additional Instructions**

There are 7 scenarios in which the number of points given to Player 1 and Player 2 is influenced by the decisions made by Player 1.

Given this, in the next 7 decisions, you will be asked to **make a decision as Player 1** in each of these 7 scenarios. If you are randomly assigned to be Player 1, these decisions will influence how many points are given to Player 1 (you) and Player 2 in each of those scenarios.

To make this clear, the black triangle below shows which player you are, and the block box below shows which players' points will be influenced by your decisions.



**Understanding Question:** In the next 7 decisions, you will be asked to make decisions in the event that you are randomly assigned to be...

Player 1

Player 2

Neutral Player

**Understanding Question:** In the event that you are randomly assigned to be Player 1, in the next 7 decisions, you will influence the number of points given to...

My two group members (but not me)

Me only

One of my group members and me



Figure C.23: Decisions, Player 1, Dictator Game

In this scenario:

Player 1 either keeps more or splits.

- **If Player 1 keeps more,** Player 1 receives 10 points and Player 2 receives 0 points
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points

In the event that you are assigned to be Player 1 and to make your own decision, please make the following decision as **Player 1** in this scenario:

**Part X, Decision Y out of 22:** Given that you receive the most points by keeping more, what do you want to do?

Keep more

Split



Figure C.24: Decisions, Player 1, Dictator Game with Efficiency Concerns

In this scenario:

Player 1 either keeps more or splits.

- **If Player 1 keeps more,** Player 1 receives 15 points and Player 2 receives 0 points.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

In the event that you are assigned to be Player 1 and to make your own decision, please make the following decision as **Player 1** in this scenario:

**Part X, Decision Y out of 22:** Given that there are a higher number of total points and you receive the most points by keeping more, what do you want to do?

Keep more

Split



Figure C.25: Decisions, Player 1, Dictator Game with Entitlement Concerns

In this scenario:

Player 1 either rewards themselves when they perform better, or splits:

- **If Player 1 rewards themselves when they perform better,** Player 1 receives 10 points and Player 2 receives 0 points if Player 1 is the only one who answers a question correctly; in all other cases, Player 1 receives 5 points and Player 2 receives 5 points. The question will be as follows: What is the next number in the following series: 4, 6, 9, 6, 14, 6, ...? The available answers to this question will be as follows: 6, 17, 19 and 21.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

Before making your decision in this scenario, please answer the question referenced above:

*What is the next number in the following series?*

4, 6, 9, 6, 14, 6, ...

6

17

19

21

In the event that you are assigned to be Player 1 and to make your own decision, please make the following decision as **Player 1** in this scenario:

**Part X, Decision Y out of 22:** Given that you receive the most points by rewarding yourself when you perform better, what do you want to do?

Reward myself when I perform better

Split



Figure C.26: Decisions, Player 1, Ultimatum Game

In this scenario:

Player 1 either keeps more or splits, and if Player 1 keeps more, Player 2 either accepts or rejects their choice.

- **If Player 1 keeps more and Player 2 accepts their choice,** Player 1 receives 9 points and Player 2 receives 1 point.
- **If Player 1 keeps more and Player 2 rejects their choice,** Player 1 receives 0 points and Player 2 receives 0 points.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

In the event that you are assigned to be Player 1 and to make your own decision, please make the following decision as **Player 1** in this scenario:

**Part X, Decision Y out of 22:** Given that you receive the most points by keeping more, but only if Player 2 accepts, what do you want to do?

Keep more

Split



Figure C.27: Decisions, Player 1, Trust Game

In this scenario:

Player 1 either trusts or distrusts, and if Player 1 trusts, Player 2 either rewards or punishes their trust.

- **If Player 1 distrusts,** Player 1 receives 10 points and Player 2 receives 0 points.
- **If Player 1 trusts and Player 2 rewards their trust,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 trusts and Player 2 punishes their trust,** Player 1 receives 0 points and Player 2 receives 20 points.

In the event that you are assigned to be Player 1 and to make your own decision, please make the following decision as **Player 1** in this scenario:

**Part X, Decision Y out of 22:** Given that you are guaranteed the most points by distrusting, what do you want to do?

Distrust

Trust



Figure C.28: Decisions, Player 1, Prisoner's Dilemma Game

In this scenario:

Both Player 1 and Player 2 have the option to either cooperate or defect.

- **If Player 1 cooperates and Player 2 defects,** Player 1 receives 0 points and Player 2 receives 15 points.
- **If Player 1 cooperates and Player 2 cooperates,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 defects and Player 2 defects,** Player 1 receives 5 points and Player 2 receives 5 points.
- **If Player 1 defects and Player 2 cooperates,** Player 1 receives 15 points and Player 2 receives 0 points.

In the event that you are assigned to be Player 1 and to make your own decision, please make the following decision as **Player 1** in this scenario:

**Part X, Decision Y out of 22:** Given that you receive a higher number of points by defecting, what do you want to do?

Defect

Cooperate



Figure C.29: Decisions, Player 1, Public Goods Game

In this scenario:

Both Player 1 and Player 2 have the option either to contribute or to not contribute.

- **If Player 1 contributes and Player 2 does not contribute,** Player 1 receives 8 points and Player 2 receives 18 points.
- **If Player 1 contributes and Player 2 contributes,** Player 1 receives 16 points and Player 2 receives 16 points.
- **If Player 1 does not contribute and Player 2 does not contribute,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 does not contribute and Player 2 contributes,** Player 1 receives 18 points and Player 2 receives 8 points.

In the event that you are assigned to be Player 1 and to make your own decision, please make the following decision as **Player 1** in this scenario:

**Part X, Decision Y out of 22:** Given that you receive a higher number of points by not contributing, what do you want to do?

Do not contribute	Contribute
-------------------	------------

→

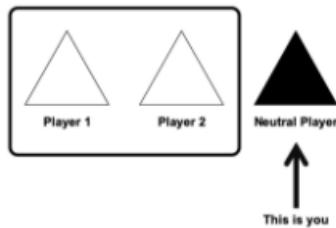
Figure C.30: Decisions, Neutral Player Instructions

**Additional Instructions**

There are 7 scenarios in which the number of points given to Player 1 and Player 2 is influenced by the decisions made by the Neutral Player.

Given this, in the next 7 decisions, you will be asked to **make a decision as the Neutral Player** in each of these 7 scenarios. If you are randomly assigned to be the Neutral Player, these decisions will influence how many points are given to Player 1 and Player 2 in each of those scenarios.

To make this clear, the black triangle below shows which player you are, and the block box below shows which players' points will be influenced by your decisions.



**Understanding Question:** In the next 7 decisions, you will be asked to make decisions in the event that you are randomly assigned to be...

Player 1

Player 2

Neutral Player

**Understanding Question:** In the event that you are randomly assigned to be the Neutral Player, in the next 7 decisions, you will influence the number of points given to...

My two group members (but not me)

Me only

One of my group members and me



Figure C.31: Decisions, Neutral Player, Dictator Game

In this scenario:

Player 1 either keeps more or splits.

- **If Player 1 keeps more,** Player 1 receives 10 points and Player 2 receives 0 points
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points

In the event that you are assigned to be the Neutral Player and to make the decision for Player 1, please make the following decision as **the Neutral Player** in this scenario:

**Part X, Decision Y out of 22:** Given that Player 1 receives the most points by keeping more, what do you (as the Neutral Player) want Player 1 to do?

Have Player 1 keep more

Have Player 1 split



Figure C.32: Decisions, Neutral Player, Dictator Game with Efficiency Concerns

In this scenario:

Player 1 either keeps more or splits.

- **If Player 1 keeps more,** Player 1 receives 15 points and Player 2 receives 0 points.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

In the event that you are assigned to be the Neutral Player and to make the decision for Player 1, please make the following decision as **the Neutral Player** in this scenario:

**Part X, Decision Y out of 22:** Given that there are a higher number of total points and Player 1 receives the most points by keeping more, what do you (as the Neutral Player) want Player 1 to do?

Have Player 1 keep more

Have Player 1 split



Figure C.33: Decisions, Neutral Player, Dictator Game with Entitlement Concerns

In this scenario:

Player 1 either rewards themselves when they perform better, or splits:

- **If Player 1 rewards themselves when they perform better,** Player 1 receives 10 points and Player 2 receives 0 points if Player 1 is the only one who answers a question correctly; in all other cases, Player 1 receives 5 points and Player 2 receives 5 points. The question will be as follows: What is the next number in the following series: 4, 6, 9, 6, 14, 6, ...? The available answers to this question will be as follows: 6, 17, 19 and 21.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

In the event that you are assigned to be the Neutral Player and to make the decision for Player 1, please make the following decision as **the Neutral Player** in this scenario:

**Part X, Decision Y out of 22:** Given that Player 1 receives the most points by rewarding themselves when they perform better, what do you (as the Neutral Player) want Player 1 to do?

Have Player 1 reward themselves when they perform better	Have Player 1 split
--	---------------------

→

Figure C.34: Decisions, Neutral Player, Ultimatum Game

In this scenario:

Player 1 either keeps more or splits, and if Player 1 keeps more, Player 2 either accepts or rejects their choice.

- **If Player 1 keeps more and Player 2 accepts their choice,** Player 1 receives 9 points and Player 2 receives 1 point.
- **If Player 1 keeps more and Player 2 rejects their choice,** Player 1 receives 0 points and Player 2 receives 0 points.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

In the event that you are assigned to be the Neutral Player and to make the decision for Player 1, please make the following decision as **the Neutral Player** in this scenario:

**Part X, Decision Y out of 22:** Given that Player 1 receives the most points by keeping more, but only if Player 2 accepts, what do you (as the Neutral Player) want Player 1 to do?

Have Player 1 keep more

Have Player 1 split



Figure C.35: Decisions, Neutral Player, Trust Game

In this scenario:

Player 1 either trusts or distrusts, and if Player 1 trusts, Player 2 either rewards or punishes their trust.

- **If Player 1 distrusts,** Player 1 receives 10 points and Player 2 receives 0 points.
- **If Player 1 trusts and Player 2 rewards their trust,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 trusts and Player 2 punishes their trust,** Player 1 receives 0 points and Player 2 receives 20 points.

In the event that you are assigned to be the Neutral Player and to make the decision for Player 1, please make the following decision as **the Neutral Player** in this scenario:

**Part X, Decision Y out of 22:** Given that Player 1 is guaranteed the most points by distrusting, what do you (as the Neutral Player) want Player 1 to do?

Have Player 1 distrust

Have Player 1 trust



Figure C.36: Decisions, Neutral Player, Prisoner's Dilemma Game

In this scenario:

Both Player 1 and Player 2 have the option to either cooperate or defect.

- **If Player 1 cooperates and Player 2 defects,** Player 1 receives 0 points and Player 2 receives 15 points.
- **If Player 1 cooperates and Player 2 cooperates,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 defects and Player 2 defects,** Player 1 receives 5 points and Player 2 receives 5 points.
- **If Player 1 defects and Player 2 cooperates,** Player 1 receives 15 points and Player 2 receives 0 points.

In the event that you are assigned to be the Neutral Player and to make the decision for Player 1, please make the following decision as **the Neutral Player** in this scenario:

**Part X, Decision Y out of 22:** Given that Player 1 receives a higher number of points by defecting, what do you (as the Neutral Player) want Player 1 to do?

Have Player 1 defect

Have Player 1 cooperate



Figure C.37: Decisions, Neutral Player, Public Goods Game

In this scenario:

Both Player 1 and Player 2 have the option either to contribute or to not contribute.

- **If Player 1 contributes and Player 2 does not contribute,** Player 1 receives 8 points and Player 2 receives 18 points.
- **If Player 1 contributes and Player 2 contributes,** Player 1 receives 16 points and Player 2 receives 16 points.
- **If Player 1 does not contribute and Player 2 does not contribute,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 does not contribute and Player 2 contributes,** Player 1 receives 18 points and Player 2 receives 8 points.

In the event that you are assigned to be the Neutral Player and to make the decision for Player 1, please make the following decision as **the Neutral Player** in this scenario:

**Part X, Decision Y out of 22:** Given that Player 1 receives a higher number of points by not contributing, what do you (as the Neutral Player) want Player 1 to do?

Do not have Player 1 contribute

Have Player 1 contribute



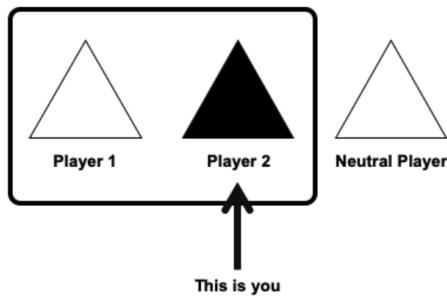
Figure C.38: Decisions, Player 2 interacting with Player 1 Instructions

#### Additional Instructions

There are 7 scenarios in which the number of points given to Player 1 and Player 2 is influenced by the decisions made by Player 1. In 4 of these scenarios, the number of points given to Player 1 and Player 2 is also influenced by the decisions made by Player 2.

Given this, in the next 4 decisions, you will be asked to **make a decision as Player 2** in each of these 4 scenarios. If you are randomly assigned to be Player 2, these decisions will influence how many points are given to Player 1 and Player 2 (you) in each of those scenarios.

To make this clear, the black triangle below shows which player you are, and the block box below shows which players' points will be influenced by your decisions.



**Understanding Question:** In the next 4 decisions, you will be asked to make decisions in the event that you are randomly assigned to be...

Player 1

Player 2

Neutral Player

**Understanding Question:** In the event that you are randomly assigned to be Player 2, in the next 4 decisions, you will influence the number of points given to...

My two group members (but not me)

Me only

One of my group members and me



Figure C.39: Decisions, Player 2 interacting with Player 1, Ultimatum Game

In this scenario:

Player 1 either keeps more or splits, and if Player 1 keeps more, Player 2 either accepts or rejects their choice.

- **If Player 1 keeps more and Player 2 accepts their choice,** Player 1 receives 9 points and Player 2 receives 1 point.
- **If Player 1 keeps more and Player 2 rejects their choice,** Player 1 receives 0 points and Player 2 receives 0 points.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

In the event that another participant is Player 1 who makes their own decision and you are assigned to be Player 2, please make the following decision as **Player 2** in this scenario:

**Part X, Decision Y out of 22:** If Player 1 keeps more, given that points only result from Player 1's decision if you accept, what do you want to do?

Reject

Accept



Figure C.40: Decisions, Player 2 interacting with Player 1, Trust Game

In this scenario:

Player 1 either trusts or distrusts, and if Player 1 trusts, Player 2 either rewards or punishes their trust.

- **If Player 1 distrusts,** Player 1 receives 10 points and Player 2 receives 0 points.
- **If Player 1 trusts and Player 2 rewards their trust,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 trusts and Player 2 punishes their trust,** Player 1 receives 0 points and Player 2 receives 20 points.

In the event that another participant is Player 1 who makes their own decision and you are assigned to be Player 2, please make the following decision as **Player 2** in this scenario:

**Part X, Decision Y out of 22:** If Player 1 trusts, given that you receive the most points by punishing their trust, what do you want to do?

Punish their trust

Reward their trust



Figure C.41: Decisions, Player 2 interacting with Player 1, Prisoner's Dilemma Game

In this scenario:

Both Player 1 and Player 2 have the option to either cooperate or defect.

- **If Player 1 cooperates and Player 2 defects,** Player 1 receives 0 points and Player 2 receives 15 points.
- **If Player 1 cooperates and Player 2 cooperates,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 defects and Player 2 defects,** Player 1 receives 5 points and Player 2 receives 5 points.
- **If Player 1 defects and Player 2 cooperates,** Player 1 receives 15 points and Player 2 receives 0 points.

In the event that another participant is Player 1 who makes their own decision and you are assigned to be Player 2, please make the following decision as **Player 2** in this scenario:

**Part X, Decision Y out of 22:** Given that you receive a higher number of points by defecting, what do you want to do?

Defect

Cooperate



Figure C.42: Decisions, Player 2 interacting with Player 1, Public Goods Game

In this scenario:

Both Player 1 and Player 2 have the option either to contribute or to not contribute.

- **If Player 1 contributes and Player 2 does not contribute,** Player 1 receives 8 points and Player 2 receives 18 points.
- **If Player 1 contributes and Player 2 contributes,** Player 1 receives 16 points and Player 2 receives 16 points.
- **If Player 1 does not contribute and Player 2 does not contribute,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 does not contribute and Player 2 contributes,** Player 1 receives 18 points and Player 2 receives 8 points.

In the event that another participant is Player 1 who makes their own decision and you are assigned to be Player 2, please make the following decision as **Player 2** in this scenario:

**Part X, Decision Y out of 22:** Given that you receive a higher number of points by not contributing, what do you want to do?

Do not contribute

Contribute



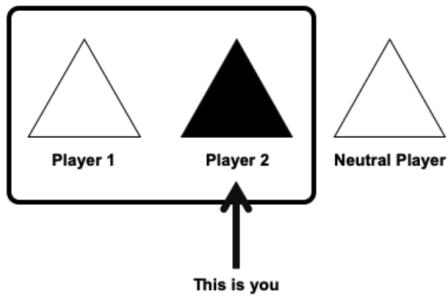
Figure C.43: Decisions, Player 2 interacting with the Neutral Player Instructions

#### Additional Instructions

There are 7 scenarios in which the number of points given to Player 1 and Player 2 is influenced by the decisions made by the Neutral Player. In 4 of these scenarios, the number of points given to Player 1 and Player 2 is also influenced by the decisions made by Player 2.

Given this, in the next 4 decisions, you will be asked to **make a decision as Player 2** in each of these 4 scenarios. If you are randomly assigned to be Player 2, these decisions will influence how many points are given to Player 1 and Player 2 (you) in each of those scenarios.

To make this clear, the black triangle below shows which player you are, and the block box below shows which players' points will be influenced by your decisions.



**Understanding Question:** In the next 4 decisions, you will be asked to make decisions in the event that you are randomly assigned to be...

Player 1

Player 2

Neutral Player

**Understanding Question:** In the event that you are randomly assigned to be Player 2, in the next 4 decisions, you will influence the number of points given to...

My two group members (but not me)

Me only

One of my group members and me



Figure C.44: Decisions, Player 2 interacting with the Neutral Player, Ultimatum Game

In this scenario:

Player 1 either keeps more or splits, and if Player 1 keeps more, Player 2 either accepts or rejects their choice.

- **If Player 1 keeps more and Player 2 accepts their choice,** Player 1 receives 9 points and Player 2 receives 1 point.
- **If Player 1 keeps more and Player 2 rejects their choice,** Player 1 receives 0 points and Player 2 receives 0 points.
- **If Player 1 splits,** Player 1 receives 5 points and Player 2 receives 5 points.

In the event that another participant is the Neutral Player who makes the decision for Player 1 and you are assigned to be Player 2, please make the following decision as **Player 2** in this scenario:

**Part X, Decision Y out of 22:** If the Neutral Player has Player 1 keep more, given that points only result from the Neutral Player's decision if you accept, what do you want to do?

Reject

Accept



Figure C.45: Decisions, Player 2 interacting with the Neutral Player, Trust Game

In this scenario:

Player 1 either trusts or distrusts, and if Player 1 trusts, Player 2 either rewards or punishes their trust.

- **If Player 1 distrusts,** Player 1 receives 10 points and Player 2 receives 0 points.
- **If Player 1 trusts and Player 2 rewards their trust,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 trusts and Player 2 punishes their trust,** Player 1 receives 0 points and Player 2 receives 20 points.

In the event that another participant is the Neutral Player who makes the decision for Player 1 and you are assigned to be Player 2, please make the following decision as **Player 2** in this scenario:

**Part X, Decision Y out of 22:** If the Neutral Player has Player 1 trust, given that you receive the most points by punishing their trust, what do you want to do?

Punish their trust

Reward their trust



Figure C.46: Decisions, Player 2 interacting with the Neutral Player, Prisoner's Dilemma Game

In this scenario:

Both Player 1 and Player 2 have the option to either cooperate or defect.

- **If Player 1 cooperates and Player 2 defects,** Player 1 receives 0 points and Player 2 receives 15 points.
- **If Player 1 cooperates and Player 2 cooperates,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 defects and Player 2 defects,** Player 1 receives 5 points and Player 2 receives 5 points.
- **If Player 1 defects and Player 2 cooperates,** Player 1 receives 15 points and Player 2 receives 0 points.

In the event that another participant is the Neutral Player who makes the decision for Player 1 and you are assigned to be Player 2, please make the following decision as **Player 2** in this scenario:

**Part X, Decision Y out of 22:** Given that the Neutral Player decides whether Player 1 defects or cooperates, and given that you receive a higher number of points by defecting, what do you want to do?

Defect

Cooperate



Figure C.47: Decisions, Player 2 interacting with the Neutral Player, Public Goods Game

In this scenario:

Both Player 1 and Player 2 have the option either to contribute or to not contribute.

- **If Player 1 contributes and Player 2 does not contribute,** Player 1 receives 8 points and Player 2 receives 18 points.
- **If Player 1 contributes and Player 2 contributes,** Player 1 receives 16 points and Player 2 receives 16 points.
- **If Player 1 does not contribute and Player 2 does not contribute,** Player 1 receives 10 points and Player 2 receives 10 points.
- **If Player 1 does not contribute and Player 2 contributes,** Player 1 receives 18 points and Player 2 receives 8 points.

In the event that another participant is the Neutral Player who makes the decision for Player 1 and you are assigned to be Player 2, please make the following decision as **Player 2** in this scenario:

**Part X, Decision Y out of 22:** Given that the Neutral Player decides whether Player 1 contributes or does not contribute, and given that you receive a higher number of points by not contributing, what do you want to do?

Do not contribute

Contribute



## C.2 Experimental Instructions for Economics Games (Prolific Participants) Study

After consenting to participate in the study, participants are informed of the \$4 study completion fee and of the opportunity to earn additional payment. Figure C.48 shows how this payment information is explained and the corresponding comprehension question that each subject must answer correctly in order to proceed.

Unless otherwise noted, the remainder of the Economics Games (Prolific Participants) Study is identical to the Economics Games (Undergraduate Students) Study. Readers are referred to Section C.1 for details. The only differences are in the instructions (see Figure C.49 and Figure C.50 for the beliefs and decisions instructions respectively) and the text before the decision questions. In the Player 1, Player 2, and Neutral Player decision questions, the text after the description of the scenario instead reads “Please make the following decision as [Player 1, Player 2, the Neutral Player].” Figures C.49 and C.50 show how this payment information is explained and the corresponding comprehension question that each participant must answer correctly in order to proceed.

Finally, participants complete a short follow-up survey that collects additional control and demographic information.

Figure C.48: Payment

**Study Overview:** To complete this study, you must complete 2 parts and then a short follow-up survey.

**Payment:** For completing this study, you are guaranteed to receive \$8 within 24 hours. In addition, one part will be randomly selected as the part-that-counts. Any additional payment you receive in the part-that-counts will be given to you as a bonus payment within 2 weeks. Any additional payments that other participants receive in the part-that-counts will be given to them as a bonus payment.

Note that all other participants in this study will be other Prolific workers who complete this study.

**Understanding Question:** Which of the following statements is true?

For completing this study, I will receive \$8 within 24 hours, but I do NOT have a chance of receiving any additional bonus payment.

For completing this study, I will receive \$8 within 24 hours, and I will also receive the amount I earn in the part-that-counts as additional bonus payment.

For completing this study, I will receive \$8 within 24 hours, and I will also receive the total amount I earn in all parts as additional bonus payment.



Figure C.49: Beliefs Instructions

In this part, you will be asked about the decisions made in 14 different scenarios by other participants who complete this study (not including you). Specifically, for each of these scenarios, you will be asked two questions. One question will ask you what percent of female participants make a specific decision in that scenario, and the other question will ask you what percent of male participants make a specific decision in that scenario.

If this part is randomly selected as the part-that-counts, one of the 28 questions will be randomly selected as the question-that-counts. If your answer is right in the question-that-counts, you will receive \$2 as additional payment.

**To maximize your chance of additional payment, answer the questions in this part carefully and honestly.**

**Understanding Question:** If this part is randomly selected as the part-that-counts, as additional payment, I will receive...

nothing,

\$2 if my answer in the question-that-counts is right.

\$2 regardless of my answer in the question-that-counts.



Figure C.50: Decisions Instructions

In this part, you will be randomly assigned to a group with two other participants who complete this study. Each member of the group will be randomly assigned to be Player 1, Player 2, or the Neutral Player. You will never learn any information about the identity of your group members. For example, you will never learn their name, their age, or their gender.

You and your group members will make various decisions in 14 different scenarios. In each scenario, some number of points may be given to Player 1 and Player 2 but no points will be given to the Neutral Player.

Since you may be randomly assigned to be Player 1, Player 2, or the Neutral Player, you will be asked to make decisions in all scenarios in which that player influences the number of points given. In total, this means that you will be asked to make 22 decisions in this part.

If this part is randomly selected as the part-that-counts, one of the 14 scenarios will be randomly selected as the scenario-that-counts. Each point given to you in the scenario-that-counts will result in you receiving 10 cents as additional payment. Each point given to your group members in the scenario-that-counts will result in them receiving 10 cents as additional payments.

**Understanding Question:** If this part is randomly selected as the part-that-counts, as additional payment, I will receive...

nothing for each point given to me.

10 cents for each point given to me in the scenario-that-counts.

10 cents for each point given to me in all scenarios.



### C.3 Experimental Instructions for Economic Games (Stereotypes) Study

After consenting to participate in the study, participants are informed of the \$1.50 study completion fee and of the opportunity to earn additional payment. Figure C.51 shows how this payment information is explained and the corresponding comprehension question that each participant must answer correctly in order to proceed.

Participants answer a total of two beliefs questions about Player 1 in a Dictator Game. The instructions for the beliefs questions, alongside payment information and comprehension questions on the same page, are shown in Figures C.52-C.53. The single page of questions presents a pair of economic decisions, asking about male participants and female participants. For each belief question, participants select their answer on a slider with a 7-point range. Once participants move the slider, the text underneath updates to reflect the slider position and reads “Your answer: L% - U%” where L and U are the lower and upper bounds on the slider position. Figure C.4 shows an example of the beliefs slider output. Participants are randomly assigned to see the male question before the female question or the female question before the male question.

Next, participants complete a short unincentivized follow-up survey that asks the participant about a prosocial person that they know. The stereotype questions participants are asked are shown in Figures C.55-C.57. On the second and third pages of the follow-up survey (Figures C.56-C.57), the text “women are more likely to give to others than men” matches the participants’ reported beliefs from the two beliefs questions. If the participant indicated that they believed that men and women were equally likely to give, the text instead reads “men and women are equally likely to give to others” (with the order of the genders in the sentence randomized to match the order of the gender in the beliefs question). Finally participants complete the short follow-up survey by answering questions that collect addition control and demographic information.

## Figure C.51: Study Overview

**Study Overview:** To complete this study, you will be asked two questions and then a short follow-up survey. Specifically, you will be asked about the decisions made in a scenario by other participants who completed a prior version of this study. One question will ask you what percent of female participants made a specific decision in that scenario, and the other question will ask you what percent of male participants made a specific decision in that scenario.

**Payment:** For completing this study, you are guaranteed to receive \$1.50 within 24 hours. In addition, one of the 2 questions will be randomly selected as the question-that-counts. If your answer is right in the question-that-counts, you will receive \$2 as additional payment. Any additional payment you receive will be given to you as a bonus payment within 2 weeks.

**To maximize your chance of additional payment, answer the questions carefully and honestly.**

**Understanding Question:** As additional payment, I will receive...

nothing.

\$2 if my answer in the question-that-counts is right.

\$2 regardless of my answer in the question-that-counts.



Figure C.52: Beliefs Instructions

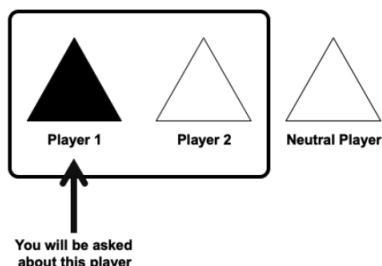
**Additional Instructions**

In the prior study, participants were randomly assigned to a group of three. Each member of the group was randomly assigned to be Player 1, Player 2, or the Neutral Player.

In the scenario you will be asked about, the number of points given to Player 1 and Player 2 is influenced by the **decision made by Player 1**, and the Neutral Player does not receive any points. Note that Player 1 knew that there was some chance their decision would be implemented for payments, and in that case, each group member would receive 10 cents for each point they were given.

You will be asked two questions about the decision made by Player 1s.

To make this clear, the black triangle below shows which player you will be asked about, and the black box below shows which players' points will be influenced by the decisions in that scenario.



**Understanding Question:** You will be asked about the decision made by which player?

Player 1

Player 2

Neutral Player

Figure C.53: Beliefs Instructions, cont.

**Understanding Question:** You will be asked about a player who influenced the number of points given to...

Two group members (but not themselves)

Themselves only

One of their group members and themselves



Figure C.54: Beliefs, Player 1, Dictator Game

Consider the scenario in which:

Player 1 either keeps for themselves or gives to others.

- **If Player 1 keeps for themselves,** Player 1 receives 10 points and Player 2 receives 0 points.
- **If Player 1 gives to others,** Player 1 receives 5 points and Player 2 receives 5 points.

**Question 1 out of 2:** Given that Player 1 receives the most points by keeping for themselves, what percentage of **female** Player 1s do you think chose to keep for themselves?



(The continue arrow will enable after you move the slider to your decision)

**Question 2 out of 2:** Given that Player 1 receives the most points by keeping for themselves, what percentage of **male** Player 1s do you think chose to keep for themselves?



(The continue arrow will enable after you move the slider to your decision)



Figure C.55: Follow-up Survey, Page 1

**When you think of someone who is likely to give to others, who do you think of?**  
*Please be as detailed as possible.*

**When you think of a specific person who is likely to give to others and who you personally know, who do you think of?**

*Please describe your relationship to this person (but do not provide any personally identifiable information about them, such as their full name). Also, if you mentioned a specific person you know in the previous question, you may repeat your answer here.*



Figure C.56: Follow-up Survey, Page 2, Women Are More Likely To Give Belief

On the previous page, you were asked to describe a specific person who is likely to give and who you personally know. Please consider that person for the following questions.

**Please select the gender of that person.**

Man	Woman	They identify as:
<input type="checkbox"/>	<input type="checkbox"/>	<input type="text"/>

**Please select your relationship to that person.**

Mother
Father
Sister
Brother
Wife
Husband
Other family member
Friend
Colleague
Acquaintance
Religious figure or leader
Public figure, famous person, celebrity
Other
<input type="text"/>

**Have your experiences with that person or others like them contributed to your belief, reported in response to the 2 main questions in this survey, that women are more likely to give to others than men?**

Not at all	Somewhat	Very much
<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



Figure C.57: Follow-up survey, Page 3, Women Are More Likely To Give Belief

[Redacted]

In the 2 main questions in this study, you were asked about how likely men and women were to either keep money for themselves or give money to others.

You reported that you believe: **women are more likely to give to others than men.**

Please consider this belief in the questions below.

**Which of the following has contributed more to your belief that women are more likely to give to others than men?**

Experience with men and women in various contexts that are **broadly or loosely similar** to the context described in the 2 main questions in this study.

Experience with men and women in contexts **identical or very similar** to the context described in the 2 main questions in this study

Both of the above have equally contributed to my belief

Neither of the above have contributed to my belief



## C.4 Experimental Instructions for Applications Study

After consenting to participate in the study, participants are informed of the \$2 study completion fee and of the opportunity to earn additional payment. Figure C.58 shows how this payment information is explained and the corresponding comprehension question that each participant must answer correctly in order to proceed. The Applications study involves four main parts: the equality statements part, the beliefs about equality statements part, the employers part, and the beliefs about employers part. The four parts are presented in a randomized order and within each part the order of the questions is randomized.

In the *equality statements* part, participants answer a total of eight equality statement questions. Figure C.59 shows how this payment information is explained and the corresponding comprehension question that each participant must answer correctly in order to proceed. Figures C.60–C.67 show the eight equality statement screens.

In the *beliefs about equality statements* part, participants answer a total of 16 beliefs about equality statements. Each page of questions presents a pair of beliefs about equality statements, asking about male participants and female participants. Participants are randomly assigned to see the male question before the female question or the female question before the male question which, once assigned, is kept consistent throughout the whole experiment. For each belief question, participants select their answer on a slider with a 7-point range (for an example of how the slider changes once participants select an answer see Figure C.4). Figure C.68 shows how this payment information is explained and the corresponding comprehension question that each participant must answer correctly in order to proceed. Figures C.69–C.76 show the eight beliefs about equality statement screens.

In the *employers* part, participants make one employer decision. Figures C.77–C.78 shows how the employer decision payment information is explained and the corresponding comprehension questions that each participant must answer correctly in order to proceed. Figure C.79 shows the employer decision screen.

In the *beliefs about employers* part, participants answer one beliefs about employers question. Figure C.80 shows how the beliefs about employers payment information is explained and the corresponding comprehension question that each participant must answer correctly in order to proceed. Figure C.81 shows the beliefs about employers screen which follows the same structure as the beliefs about equality statement questions described above.

Finally, participants complete a short follow-up survey that collects additional control and demographic information.

Figure C.58: Payment Information

**Study Overview:** This study will consist of instructions, 4 parts and a short follow-up survey. Following each set of instructions, you will be asked understanding questions. You must answer these understanding questions correctly in order to proceed to complete the study.

**Payment:** For completing this study, you are guaranteed to receive \$2 within 24 hours. In addition, one part out of the 4 parts will be randomly selected as the part-that-counts. Any amount you earn in the part-that-counts will be distributed to you as a bonus payment.

**Understanding Question:** Which of the following statements is true?

For completing this study, I will receive \$2 within 24 hours, but I do NOT have a chance of receiving any additional bonus payment.

For completing this study, I will receive \$2 within 24 hours, and I will also receive the amount I earn in the part-that-counts as additional bonus payment.

For completing this study, I will receive \$2 within 24 hours, and I will also receive the total amount I earn across all parts as additional bonus payment.



Figure C.59: Equality Statement Instructions

**Instructions for Part X out of 4**

In this part, you will be asked 8 questions.

How you answer these questions will not influence your payments from this study in any way.

**Please answer these questions carefully and honestly.**

**Understanding Question:** How should you answer the questions in this part?

Randomly

Carefully and honestly

It doesn't matter



Figure C.60: Equality Statement - 1

**Question Y out of 8:**

For each statement, please indicate whether you mostly disagree or mostly agree:

**A society should aim to equalize incomes.**

I mostly disagree

I mostly agree



Figure C.61: Equality Statement - 2

**Question Y out of 8:**

For each statement, please indicate whether you mostly disagree or mostly agree:

**The government should take measures to reduce differences in income levels.**

I mostly disagree

I mostly agree



Figure C.62: Equality Statement - 3

**Question Y out of 8:**

For each statement, please indicate whether you mostly disagree or mostly agree:

**All people should be paid equally for the same job regardless of how well they do the job.**

I mostly disagree

I mostly agree



Figure C.63: Equality Statement - 4

**Question Y out of 8:**

For each statement, please indicate whether you mostly disagree or mostly agree:

**Spouses should take equal responsibility for the home and family.**

I mostly disagree

I mostly agree



Figure C.64: Equality Statement - 5

**Question Y out of 8:**

For each statement, please indicate whether you mostly disagree or mostly agree:

**Both parents should be equally involved in the upbringing of a child.**

I mostly disagree

I mostly agree



Figure C.65: Equality Statement - 6

**Question Y out of 8:**

For each statement, please indicate whether you mostly disagree or mostly agree:

**All people should have equal access to health care.**

I mostly disagree

I mostly agree



Figure C.66: Equality Statement - 7

**Question Y out of 8:**

For each statement, please indicate whether you mostly disagree or mostly agree:

**All people should have equal access to education.**

I mostly disagree

I mostly agree



Figure C.67: Equality Statement - 8

**Question Y out of 8:**

For each statement, please indicate whether you mostly disagree or mostly agree:

**All people should have equal access to suitable and affordable housing.**

I mostly disagree

I mostly agree



Figure C.68: Beliefs About Equality Statements Instructions

**Instructions for Part X out of 4**

In this part, you will be asked 16 questions about the answers provided by other Prolific participants who complete this study.

One of the 16 questions will be randomly selected as the question-that-counts. If your answer is right in the question-that-counts, you will earn \$1 in this part.

**To maximize your chance of additional payment, please answer the questions in this part carefully and honestly.**

**Understanding Question:** How much money will you earn in that part?

\$1 for each question that I answer correctly

\$1 if I answer the question-that-counts correctly

\$0



Figure C.69: Beliefs About Equality Statements - 1

**Question Y out of 16:**

Among the group of **women** who complete this study, what percentage do you think mostly agree (rather than mostly disagree) with the following statement:

**A society should aim to equalize incomes.**



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 16:**

Among the group of **men** who complete this study, what percentage you think mostly agree (rather than mostly disagree) with the following statement:

**A society should aim to equalize incomes.**



(The continue arrow will enable after you move the slider to your decision)



Figure C.70: Beliefs About Equality Statements - 2

**Question Y out of 16:**

Among the group of **women** who complete this study, what percentage do you think mostly agree (rather than mostly disagree) with the following statement:

**The government should take measures to reduce differences in income levels.**



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 16:**

Among the group of **men** who complete this study, what percentage you think mostly agree (rather than mostly disagree) with the following statement:

**The government should take measures to reduce differences in income levels.**



(The continue arrow will enable after you move the slider to your decision)



Figure C.71: Beliefs About Equality Statements - 3

**Question Y out of 16:**

Among the group of **women** who complete this study, what percentage do you think mostly agree (rather than mostly disagree) with the following statement:

**All people should be paid equally for the same job regardless of how well they do the job.**



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 16:**

Among the group of **men** who complete this study, what percentage you think mostly agree (rather than mostly disagree) with the following statement:

**All people should be paid equally for the same job regardless of how well they do the job.**



(The continue arrow will enable after you move the slider to your decision)



Figure C.72: Beliefs About Equality Statements - 4

**Question Y out of 16:**

Among the group of **women** who complete this study, what percentage do you think mostly agree (rather than mostly disagree) with the following statement:

**Spouses should take equal responsibility for the home and family.**



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 16:**

Among the group of **men** who complete this study, what percentage you think mostly agree (rather than mostly disagree) with the following statement:

**Spouses should take equal responsibility for the home and family.**



(The continue arrow will enable after you move the slider to your decision)



Figure C.73: Beliefs About Equality Statements - 5

**Question Y out of 16:**

Among the group of **women** who complete this study, what percentage do you think mostly agree (rather than mostly disagree) with the following statement:

**Both parents should be equally involved in the upbringing of a child.**



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 16:**

Among the group of **men** who complete this study, what percentage you think mostly agree (rather than mostly disagree) with the following statement:

**Both parents should be equally involved in the upbringing of a child.**



(The continue arrow will enable after you move the slider to your decision)



Figure C.74: Beliefs About Equality Statements - 6

**Question Y out of 16:**

Among the group of **women** who complete this study, what percentage do you think mostly agree (rather than mostly disagree) with the following statement:

**All people should have equal access to health care.**



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 16:**

Among the group of **men** who complete this study, what percentage you think mostly agree (rather than mostly disagree) with the following statement:

**All people should have equal access to health care.**



(The continue arrow will enable after you move the slider to your decision)



Figure C.75: Beliefs About Equality Statements - 7

**Question Y out of 16:**

Among the group of **women** who complete this study, what percentage do you think mostly agree (rather than mostly disagree) with the following statement:

**All people should have equal access to education.**



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 16:**

Among the group of **men** who complete this study, what percentage you think mostly agree (rather than mostly disagree) with the following statement:

**All people should have equal access to education.**



(The continue arrow will enable after you move the slider to your decision)



Figure C.76: Beliefs About Equality Statements - 8

**Question Y out of 16:**

Among the group of **women** who complete this study, what percentage do you think mostly agree (rather than mostly disagree) with the following statement:

**All people should have equal access to suitable and affordable housing.**



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 16:**

Among the group of **men** who complete this study, what percentage you think mostly agree (rather than mostly disagree) with the following statement:

**All people should have equal access to suitable and affordable housing.**



(The continue arrow will enable after you move the slider to your decision)



Figure C.77: Employer Decision Instructions

**Instructions for Part X out of 4**

You will be asked to make one decision as an **employer**. To help inform your decision, please review the following information.

**Your Workers**

You may be matched with one or more pairs of workers. All of your possible workers will be Prolific participants who complete a study with 5 parts, knowing that how much money they earn in the randomly selected part-that-counts will determine how much money they receive as a bonus payment. In one of the parts, they earn 10 cents for each question they answer correctly on a test. On the test, they are asked 10 questions. Each question tests their math and science skills. Performance on this test is often used as a measure of cognitive ability by academic researchers.

**The High and Low Performer**

In each pair of workers, one worker will be classified as the high performer and the other worker will be classified as the low performer. Specifically, in each pair of workers:

- If the workers answer a different number of questions correctly on the test, the worker who answers **more questions correctly** on the test will be classified as the **high performer**, and the worker who answers **fewer questions correctly** on the test will be classified as the **low performer**.
- If the workers answer the same number of questions correctly on the test, each worker is equally likely to be randomly selected to be classified as the high or low performer.

**Your Decision**

In your decision, you must choose whether to (1) pay workers equally or (2) pay the high performer more. Your decision will determine how much your workers (i.e., any pairs of workers you are matched with) earn in one part of the study they take. Specifically, for each pair of your workers:

- If you choose to **pay workers equally**, then both of **your workers will earn \$3**.
- If you choose to **pay the high performer more**, then the **high performer will earn \$6**, but the **low performer will earn \$0**. That is, in this case, a worker will only earn money if they are the high performer.

While your decision will influence how much money your workers earn in one part of the study they take, your decision will NOT influence how much money you receive from this study.

**Please make your decision carefully and honestly.**

Figure C.78: Employer Decision Instructions Continued

**Understanding Question:** If a worker answers **more questions correctly** than the other worker in a pair, they will be classified as...

- the low performer
- the high performer
- the low or high performer depending on the outcome of a coin flip

**Understanding Question:** If you choose to **pay workers equally**, how much money will your workers earn in the relevant part of the study?

- Whoever is the high performer will earn \$6 while whoever is the low performer will earn \$0
- They will both earn \$6
- They will both earn \$3

**Understanding Question:** If you choose to **pay the high performer more**, how much money will your workers earn in the relevant part of the study?

- Whoever is the high performer will earn \$6 while whoever is the low performer will earn \$0
- They will both earn \$6
- They will both earn \$3

**Understanding Question:** Will your decision influence how much money you receive from this study?

- Yes
- Maybe
- No



Figure C.79: Employer Decision

**Your Decision:** I would like to...

Pay workers equally

Pay the high performer more



Figure C.80: Beliefs About Employers Instructions

**Instructions for Part X out of 4**

In this part, you will be asked 2 questions about the decisions made by other Prolific participants when they make decisions as employers in this study. One of the 2 questions will be randomly selected as the question-that-counts. If your answer is right in the question-that-counts, you will earn \$1 in this part. **To maximize your chance of additional payment, please answer the questions in this part carefully and honestly.**

To help inform your answers to these questions, please review the following information.

**Workers**

Employers may be matched with one or more pairs of workers. All of the possible workers will be Prolific participants who complete a study with 5 parts, knowing that how much money they earn in the randomly selected part-that-counts will determine how much money they receive as a bonus payment. In one of the parts, they earn 10 cents for each question they answer correctly on a test. On the test, they are asked 10 questions. Each question tests their math and science skills. Performance on this test is often used as a measure of cognitive ability by academic researchers.

**The High and Low Performer**

In each pair of workers, one worker will be classified as the high performer and the other worker will be classified as the low performer. Specifically, in each pair of workers:

- If the workers answer a different number of questions correctly on the test, the worker who answers **more questions correctly** on the test will be classified as the **high performer**, and the worker who answers **fewer questions correctly** on the test will be classified as the **low performer**.
- If the workers answer the same number of questions correctly on the test, each worker is equally likely to be randomly selected to be classified as the high or low performer.

**Employers**

Employers must choose whether to (1) pay workers equally or (2) pay the high performer more. Each employer's decision will determine how much their workers (i.e., any pairs of workers they are matched with) earn in one part of the study they take. Specifically, for each pair of workers:

- If their employer chooses to **pay workers equally**, then both of **those workers will earn \$3**.
- If their employer chooses to **pay the high performer more**, then the **high performer will earn \$6**, but the **low performer will earn \$0**. That is, in this case, a worker will only earn money if they are the high performer.

While each employer's decision will influence how much money their workers earn in one part of the study they take, each employer's decision will NOT influence how much money they receive from this study.

**Understanding Question:** How much money will you earn in that part?

\$1 for each question that I answer correctly

\$1 if I answer the question-that-counts correctly

\$0



Figure C.81: Beliefs About Employers

**Question Y out of 2:** Among the group of **female** employers who complete this study, what percentage do you think choose to **pay workers equally**?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 2:** Among the group of **male** employers who complete this study, what percentage do you think choose to **pay workers equally**?



(The continue arrow will enable after you move the slider to your decision)



## C.5 Experimental Instructions for Worker Study

After consenting to participate in the study, participants are informed of the \$3 study completion fee and of the opportunity to earn additional payment. Figure C.82 shows how this payment information is explained and the corresponding comprehension question that each participant must answer correctly in order to proceed.

In Part 1, participants first answer a 10-item test on math and science to determine whether they are a low or high performer. Figure C.83 shows the instructions and comprehension question that each participant must answer correctly in order to proceed. Figure C.84 shows an example test question. The order of the test question pages is randomized.

Participants are then asked to complete Parts 2–5. Figures C.85–C.87 show the set of instructions for these four remaining parts and the comprehension questions that they must correctly answer to proceed. Two of the remaining parts involve beliefs, and two of the remaining parts involve decisions. Participants always answer the belief parts before the decision parts.

The two belief parts occur in a random order. In the *absolute-belief* part, participants are asked about their absolute belief (see Figure C.88). In the *relative-belief* part, participants are asked about their relative belief (see Figure C.89).

The two decision parts occur in a random order. In the *direct decision* part, participants first answer an unincentivized question about whether they would expect to earn more money from female or male employers. To facilitate understanding, the wording of this question depends on their answer in the relative-belief part (see Figure C.90 if they indicated that they believe they are a low performer and see Figure C.91 if they indicated that they believe they are a high performer). Then, participants make their direct decision (see Figure C.92).

In the *strategy-method* decision part, participants make a *strategy-method decision*—i.e., they indicate whether they want (i) a female or male employer in the event they are a low performer, and (ii) a female or male employer in the event they are a high performer. Prior to making the strategy-method decision, they are provided additional instructions shown in Figure C.93. Then, they make their strategy-method decision over two pages that appear in random order. One page asks them to make their decision in the event they are they low performer (see Figure C.94). The other page asks them to make their decision in the event they are the high performer (see Figure C.95).

Finally, participants complete a short follow-up survey that collects additional control and demographic information.

## Figure C.82: Payment Information

**Study Overview:** This study will consist of instructions, 5 parts and a short follow-up survey. Following each set of instructions, you will be asked understanding questions. You must answer these understanding questions correctly in order to proceed to complete the study.

**Payment:** For completing this study, you are guaranteed to receive \$3 within 24 hours. In addition, one part out of the 5 parts will be randomly selected as the part-that-counts. Any amount you earn in the part-that-counts will be distributed to you as a bonus payment.

**Understanding Question:** Which of the following statements is true?

For completing this study, I will receive \$3 within 24 hours, but I do NOT have a chance of receiving any additional bonus payment.

For completing this study, I will receive \$3 within 24 hours, and I will also receive the amount I earn in the part-that-counts as additional bonus payment.

For completing this study, I will receive \$3 within 24 hours, and I will also receive the total amount I earn across all parts as additional bonus payment.



Figure C.83: Test Instructions

**Instructions for Part 1 out of 5:**

In part 1, you will complete a test. On the test, you will be asked 10 questions. Each question will test your math and science skills. Performance on this test is often used as a measure of cognitive ability by academic researchers.

You will be presented with each of the 10 questions on separate pages. You will be given 30 seconds to answer each question, although you may push the arrow button at the bottom of the page to move on to the next question before the 30 seconds are up.

In part 1, you will earn 10 cents for each question you answer correctly. Therefore, you may earn up to \$1 in this part.

**Understanding Question:** The amount of money you earn in part 1...

will not depend on how many questions you answer correctly on the test

will be lower if you answer more questions correctly on the test

will be higher if you answer more questions correctly on the test



Figure C.84: Example Test Question

**Question Y out of 10:**

Which of the following is a solution to the inequality  $2x + y \leq -10$ ?

(0, 0)

(10, 2)

(10, 10)

(-10, -10)



Figure C.85: Instructions

**Instructions for Parts 2 - 5**

In parts 2 and 3, you will be asked questions that may relate to the information below. In each of these parts, if you correctly answer the question in that part, you will earn \$1 in that part.

In parts 4 and 5, you will make decisions that will relate to the information below. How your decisions will influence how much you earn in each of those parts is explained below.

Thus, please review the following information carefully.

**Co-Worker**

You will be matched with a co-worker. Your co-worker will be randomly selected from the set of possible co-workers. All of your possible co-workers will also be Prolific participants who complete the same test in part 1 as you did.

**The High and Low Performer**

If you answered **more questions correctly** on the test in part 1 than your co-worker did, you will be classified as the **high performer**.

If you answered **fewer questions correctly** on the test in part 1 than your co-worker did, you will be classified as the **low performer**.

If you answered the same number of questions correctly on the test in part 1 as your co-worker did, you are equally likely to be randomly selected to be classified as the high or low performer.

**Your Employer**

In parts 4 and 5, you and your co-worker will each be asked to choose whether you want your employer in that part to be randomly selected from the set of all **female** or the set of all **male** Prolific participants who complete the employer version of this study. In each of these parts, there is a 50% chance that your employer will be selected according to what you choose and a 50% chance that your employer will instead be selected according to what your co-worker chooses. Since your employer is randomly selected in this way in each of these parts, it is very likely that your employer in part 4 will be different than your employer in part 5.

In the employer version of this study, employers decide whether to (1) pay workers equally or (2) pay the high performer more. Your employers' decisions will determine how much you and your co-worker earn in parts 4 and 5. Specifically, in each of these parts:

- If your employer in that part chooses to **pay workers equally**, then **you and your co-worker will both earn \$3** in that part.

- If your employer in that part chooses to **pay the high performer more**, then **the high performer will earn \$6**, but the **low performer will earn \$0** in that part. That is, in this case, you will only earn money in that part if you are the high performer.

However, whether you choose the set of all female employers or the set of all male employers in part 4 and/or in part 5 will NOT influence how much money the employers earn.

Figure C.86: Instructions continued

**Understanding Question:** Consider either part 2 or 3. How much money will you earn in that part?

\$1 for sure

\$1 if I answer the question correctly in that part

\$0

**Understanding Question:** If you answered **more questions correctly** than your co-worker, you will be classified as...

the low performer

the high performer

**Understanding Question:** Consider either part 4 or part 5. If your employer in that part chooses to **pay workers equally** regardless of performance, how much money will you and your co-worker earn in that part?

Whoever is the high performer will earn \$6 while whoever is the low performer will earn \$0

We will both earn \$6

We will both earn \$3

**Understanding Question:** Consider either part 4 or part 5. If your employer in that part chooses to **pay the high performer more**, how much money will you and your co-worker earn in that part?

Whoever is the high performer will earn \$6 while whoever is the low performer will earn \$0

We will both earn \$6

We will both earn \$3

Figure C.87: Instructions continued

**Understanding Question:** Consider either part 4 or part 5. Will your decision in that part influence which employer is selected in that part?

Definitely yes

Maybe -- my decision and my co-worker's decision are equally likely to influence how my employer is selected

Definitely no

**Understanding Question:** Consider either part 4 or part 5. Will your decision in that part influence how much money the employers earn?

Definitely yes

Maybe -- my decision and my co-worker's decision are equally likely to influence how much money my employer earns

Definitely no



Figure C.88: Absolute-Belief

**Part X Question:** Out of the 10 questions you were asked on the test in part 1, how many do you think you answered correctly?



Figure C.89: Relative-Belief

**Part X Question:** When compared to your co-worker, do you think you are the low performer or the high performer?

The Low Performer

The High Performer



Figure C.90: Direct Decision, Low Performer

Before making your decision below, please answer the following question. Your answer to this question will not influence how much money you earn.

Since you previously indicated that you think are the low performer, you should expect to earn more money if your employer chooses to pay workers equally (rather than pay the high performer more). Given this, who do you think is likely to pay you more?

female employers because they are more likely to pay workers equally

male employers because they are more likely to pay workers equally

Neither female nor male employers because they are both equally likely to pay workers equally

Figure C.91: Direct Decision, High Performer

Before making your decision below, please answer the following question. Your answer to this question will not influence how much money you earn.

Since you previously indicated that you think you are the high performer, you should expect to earn more money if your employer chooses to pay the high performer more (rather than pay the workers equally). Given this, who do you think is likely to pay you more?

male employers because they are more likely to pay the high performer more

female employers because they are more likely to pay the high performer more

Neither male nor female employers because they are both equally likely to pay the high performer more

Figure C.92: Direct Decision

**Part X Decision:** I would like for my employer to be randomly selected from the set of all...

(Recall that this decision will NOT influence how much money the employers earn)

female employers

male employers



Figure C.93: Strategy-Method Decision Additional Instructions

**Additional Instructions for Part X**

In this part, you will be asked to make your decision under two scenarios: a scenario in which you are the low performer and a scenario in which you are the high performer.

If you are the low performer, then the decision you make in the scenario in which you are the low performer will be implemented in this part.

If you are the high performer, then the decision you make in the scenario in which you are the high performer will be implemented in this part.

**Understanding Question:** If you are the low performer, which of your decisions will be implemented in this part?

It will be randomly determined

The decision I make in the scenario in which I am a low performer

The decision I make in the scenario in which I am a high performer

**Understanding Question:** If you are the high performer, which of your decisions will be implemented in this part?

It will be randomly determined

The decision I make in the scenario in which that I am a low performer

The decision I make in the scenario in which that I am a high performer



Figure C.94: Low Performer Strategy-Method Decision

Below, please consider the scenario in which you are the **low performer**.

Before making your decision below, please answer the following question. Your answer to this question will not influence how much money you earn.

If you are the low performer, you will earn more money if your employer chooses to pay the workers equally (rather than pay the high performer more). Given this, in this scenario, who do you think is likely to pay you more?

female employers because they are more likely to pay workers equally

male employers because they are more likely to pay workers equally

Neither female nor male employers because they are both equally likely to pay workers equally

**Part X Decision (Scenario Y out of 2): In the scenario in which I am the **low performer**, I would like for my employer to be randomly selected from the set of all...**

(Recall that this decision will NOT influence how much money the employers earn)

female employers

male employers



Figure C.95: High Performer Strategy-Method Decision

Below, please consider the scenario in which you are the **high performer**.

Before making your decision below, please answer the following question. Your answer to this question will not influence how much money you earn.

If you are the high performer, you will earn more money if your employer chooses to pay the high performer more (rather than pay the workers equally). Given this, in this scenario, who do you think is likely to pay you more?

female employers because they are more likely to pay the high performer more

male employers because they are more likely to pay the high performer more

Neither female nor male employers because they are both equally likely to pay the high performer more

**Part X Decision (Scenario Y out of 2): In the scenario in which I am the **high performer**, I would like for my employer to be randomly selected from the set of all...**

(Recall that this decision will NOT influence how much money the employers earn)

female employers

male employers



## C.6 Experimental Instructions for Economic Games (Separate Beliefs)

After consenting to participate in the study, participants are informed of the \$4 study completion fee and of the opportunity to earn additional payment. Figure C.96 shows how this payment information is explained and the corresponding comprehension question that each participant must answer correctly in order to proceed. Participants are then randomly assigned to first answer the set of 14 beliefs questions about women and then the set of 14 beliefs questions about men, or vice versa.

The instructions for the first set of 14 questions (assuming they are about women), alongside the comprehension question, are shown in Figure C.97. Within the first set of 14 questions, participants are randomly assigned to first answer the set of beliefs questions about Player 1 or the Neutral Player. The instructions for Player 1, alongside comprehension questions, are shown in Figure C.98. The instructions for the Neutral Player, alongside comprehension questions, are shown in Figure C.99.

Figure C.100 shows an example of one of the 14 belief questions about women. Note that the text preceding this belief question is identical to the text in Figure C.6 of *Economic Games (Undergraduate Students) Study*. This is true for all 14 belief questions about women, and we thus refer the reader to Figures C.6-C.12 and Figures C.14-C.20 to see the relevant text for the remaining 13 belief questions about women.

The instructions for the second set of 14 questions (assuming they are about men), alongside the comprehension question, are shown in Figure C.101. Within the first set of 14 questions, participants are randomly assigned to first answer the set of beliefs questions about Player 1 or the Neutral Player. The instructions for Player 1, alongside comprehension questions, are shown in Figure C.102. The instructions for the Neutral Player, alongside comprehension questions, are shown in Figure C.103. Figure C.104 show an example of one of the 14 belief questions about men. Note that the text preceding this belief question is identical to the text in Figure C.6 of *Economic Games (Undergraduate Students) Study*. This is true for all 14 belief questions about men, and we thus refer the reader to Figures C.6-C.12 and Figures C.14-C.20 to see the relevant text for the remaining 13 belief questions about men.

Finally, participants complete a short follow-up survey that collects additional control and demographic information.

Figure C.96: Study Overview

**Study Overview:** To complete this study, you must complete 2 parts and then a short follow-up survey.

**Payment:** For completing this study, you are guaranteed to receive \$4 within 24 hours. In addition, one part will be randomly selected as the part-that-counts. Any additional payment you receive in the part-that-counts will be given to you as a bonus payment within 2 weeks. Any additional payments that other participants receive in the part-that-counts will be given to them as a bonus payment.

**Understanding Question:** Which of the following statements is true?

For completing this study, I will receive \$4 within 24 hours, but I do NOT have a chance of receiving any additional bonus payment.

For completing this study, I will receive \$4 within 24 hours, and I will also receive the amount I earn in the part-that-counts as additional bonus payment.

For completing this study, I will receive \$4 within 24 hours, and I will also receive the total amount I earn in all parts as additional bonus payment.



Figure C.97: Part 1 Instructions, When Belief Questions About Women Are Asked First

In part 1, you will be asked about the decisions made in 14 different scenarios by other participants who completed a prior study. All participants in this prior study were other Prolific workers. Specifically, for each scenario, you will be asked what percent of **female** participants made a specific decision in that scenario. Part 1 will involve 14 questions labeled as Questions 1-14.

If this part is randomly selected as the part-that-counts, one of the 14 questions will be randomly selected as the question-that-counts. If your answer is right in the question-that-counts, you will receive \$2 as additional payment.

**To maximize your chance of additional payment, answer the questions in this part carefully and honestly.**

**Understanding Question:** If this part is randomly selected as the part-that-counts, as additional payment, I will receive...

nothing.

\$2 if my answer in the question-that-counts is right.

\$2 regardless of my answer in the question-that-counts.

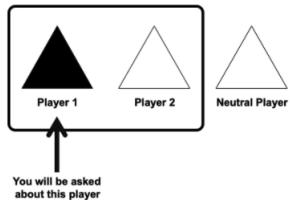


Figure C.98: Beliefs, Player 1 Instructions, When Belief Questions About Women Are Asked First

**Additional Instructions**

There are 7 scenarios in which the number of points given to Player 1 and Player 2 is influenced by the **decisions made by Player 1**. For each of these scenarios you will be asked one question about the decisions made by **female** Player 1s.

To make this clear, the black triangle below shows which player you will be asked about, and the black box below shows which players' points will be influenced by the decisions in that scenario.



**Understanding Question:** You will be asked about the decisions made by which player?

- Player 1
- Player 2
- Neutral Player

**Understanding Question:** You will be asked about a player who influenced the number of points given to...

- Two group members (but not themselves)
- Themselves only
- One of their group members and themselves

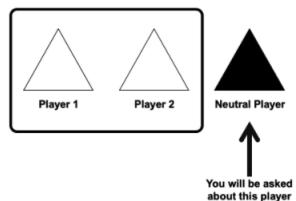


Figure C.99: Beliefs, Neutral Player Instructions, When Belief Questions About Women Are Asked First

**Additional Instructions**

There are 7 scenarios in which the number of points given to Player 1 and Player 2 is influenced by the decisions made by the **Neutral Player**. For each of these scenarios you will be asked one question about the decisions made by **female** Neutral Players.

To make this clear, the black triangle below shows which player you will be asked about, and the black box below shows which players' points will be influenced by the decisions in that scenario.



**Understanding Question:** You will be asked about the decisions made by which player?

Player 1

Player 2

Neutral Player

**Understanding Question:** You will be asked about a player who influenced the number of points given to...

Two group members (but not themselves)

Themselves only

One of their group members and themselves



Figure C.100: Beliefs, Player 1, Dictator Game, Question About Women

Consider a scenario in which:

Player 1 either keeps more or splits.

- If Player 1 keeps more, Player 1 receives 10 points and Player 2 receives 0 points.
- If Player 1 splits, Player 1 receives 5 points and Player 2 receives 5 points.

**Question 13 out of 14:** Given that Player 1 receives the most points by keeping more, what percentage of female Player 1s do you think choose to keep more?



(The continue arrow will enable after you move the slider to your decision)



Figure C.101: Part 2 Instructions, When Belief Questions About Men Are Asked Second

You have now completed part 1.

In part 2, you will be asked about the decisions made in 14 different scenarios by other participants who completed a prior study. All participants in this prior study were other Prolific workers. Specifically, for each scenario, you will be asked what percent of **male** participants made a specific decision in that scenario. Part 2 will involve 14 questions labeled as Questions 15-28.

If this part is randomly selected as the part-that-counts, one of the 14 questions will be randomly selected as the question-that-counts. If your answer is right in the question-that-counts, you will receive \$2 as additional payment.

**To maximize your chance of additional payment, answer the questions in this part carefully and honestly.**

**Understanding Question:** If this part is randomly selected as the part-that-counts, as additional payment, I will receive...

nothing.

\$2 if my answer in the question-that-counts is right.

\$2 regardless of my answer in the question-that-counts.

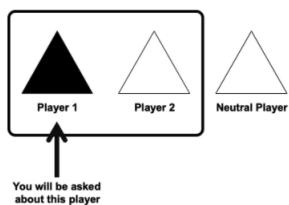


Figure C.102: Beliefs, Player 1 Instructions, When Belief Questions About Men Are Asked Second

**Additional Instructions**

There are 7 scenarios in which the number of points given to Player 1 and Player 2 is influenced by the **decisions made by Player 1**. For each of these scenarios you will be asked one question about the decisions made by **male** Player 1s.

To make this clear, the black triangle below shows which player you will be asked about, and the black box below shows which players' points will be influenced by the decisions in that scenario.



**Understanding Question:** You will be asked about the decisions made by which player?

Player 1

Player 2

Neutral Player

**Understanding Question:** You will be asked about a player who influenced the number of points given to...

Two group members (but not themselves)

Themselves only

One of their group members and themselves

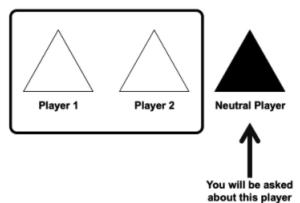


Figure C.103: Beliefs, Neutral Player Instructions, When Belief Questions About Men Are Asked Second

**Additional Instructions**

There are 7 scenarios in which the number of points given to Player 1 and Player 2 is influenced by the decisions made by the **Neutral Player**. For each of these scenarios you will be asked one question about the decisions made by **male** Neutral Players.

To make this clear, the black triangle below shows which player you will be asked about, and the black box below shows which players' points will be influenced by the decisions in that scenario.



**Understanding Question:** You will be asked about the decisions made by which player?

- Player 1
- Player 2
- Neutral Player

**Understanding Question:** You will be asked about a player who influenced the number of points given to...

- Two group members (but not themselves)
- Themselves only
- One of their group members and themselves



Figure C.104: Beliefs, Player 1, Dictator Game, Question About Men

Consider a scenario in which:

Player 1 either keeps more or splits.

- If Player 1 keeps more, Player 1 receives 10 points and Player 2 receives 0 points.
- If Player 1 splits, Player 1 receives 5 points and Player 2 receives 5 points.

**Part 2, Question 23 out of 28:** Given that Player 1 receives the most points by keeping more, what percentage of male Player 1s do you think choose to keep more?



(The continue arrow will enable after you move the slider to your decision)



## C.7 Experimental Instructions for Broader Beliefs (Prolific Participants) Study

After consenting to participate in the study, participants are informed of the \$3 study completion fee. Figure C.105 shows how this payment information is explained.

Participants answer a total of 28 broader beliefs questions. Each page of questions presents one set of beliefs as a pair, to ask about males and females. Participants are randomly assigned to see the male question before the female question or the female question before the male question which, once assigned, is kept consistent throughout the whole experiment. For each broader belief question, participants select their answer on a slider with a 7-point range (for an example of how the slider changes once participants select an answer see Figure C.4).

Participants are randomly assigned to first answer the set of questions about the decisions of other players when their decisions impact themselves (self/others) or when their decisions do not impact themselves (others). Within each set of broader beliefs questions, the order of question pages is randomized.

In the *self/others* part, participants answer 14 beliefs questions about self/others. Figure C.106 shows the beliefs instructions and the corresponding comprehension question that each participant must answer correctly in order to proceed. Figures C.107-C.113 show the corresponding set of questions.

In the *others* part, participants answer 14 beliefs questions about others. Figure C.114 shows the beliefs instructions and the corresponding comprehension question that each participant must answer correctly in order to proceed. Figures C.115-C.121 show the corresponding set of questions.

Finally, participants complete a short follow-up survey that collects additional control and demographic information.

Figure C.105: Payment Information

**Study Overview:** To complete this study, you must answer 28 questions and then a short follow-up survey. **Please answer these questions carefully and honestly.**

**Payment:** For completing this study, you are guaranteed to receive \$3 within 24 hours.



Figure C.106: Beliefs Self/Others Instructions

**Additional Instructions**

In the next 14 questions, you will be asked about how men and women make decisions that **influence the payments of themselves and others**.

**Please answer these questions carefully and honestly.**

**Understanding Question:** In the next 14 questions, you will be asked about how men and women make decisions that influence the payments of...

themselves only

themselves and others

others only



Figure C.107: Beliefs, Self/Others, Dictator Game

**Question Y out of 28:**

When they receive more money by making unfair decisions, what percent of **men** make unfair decisions?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When they receive more money by making unfair decisions, what percent of **women** make unfair decisions?



(The continue arrow will enable after you move the slider to your decision)



Figure C.108: Beliefs, Self/Others, Dictator Game with Efficiency Concerns

**Question Y out of 28:**

When they receive more money by maximizing the size of the pot rather than splitting the pot equally, what percent of **men** choose to maximize the size of the pot?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When they receive more money by maximizing the size of the pot rather than splitting the pot equally, what percent of **women** choose to maximize the size of the pot?



(The continue arrow will enable after you move the slider to your decision)



Figure C.109: Beliefs, Self/Others, Dictator Game with Entitlement Concerns

**Question Y out of 28:**

When they may be a low performer or high performer, what percent of **men** choose for high performers to be paid more than low performers?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When they may be a low performer or high performer, what percent of **women** choose for high performers to be paid more than low performers?



(The continue arrow will enable after you move the slider to your decision)



Figure C.110: Beliefs, Self/Others, Ultimatum Game

**Question Y out of 28:**

When they may receive more money by making unfair decisions but their decisions can be vetoed, what percent of **men** make unfair decisions?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When they may receive more money by making unfair decisions but their decisions can be vetoed, what percent of **women** make unfair decisions?



(The continue arrow will enable after you move the slider to your decision)



Figure C.111: Beliefs, Self/Others, Trust Game

**Question Y out of 28:**

When they may receive more money by distrusting others, what percent of **men** distrust others?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When they may receive more money by distrusting others, what percent of **women** distrust others?



(The continue arrow will enable after you move the slider to your decision)



Figure C.112: Beliefs, Self/Others, Prisoner's Dilemma Game

**Question Y out of 28:**

When they receive more money by making uncooperative decisions, what percent of **men** make uncooperative decisions?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When they receive more money by making uncooperative decisions, what percent of **women** make uncooperative decisions?



(The continue arrow will enable after you move the slider to your decision)



Figure C.113: Beliefs, Self/Others, Public Goods Game

**Question Y out of 28:**

When they receive more money by not contributing to a public good that would benefit everyone, what percent of **men** do not contribute to a public good?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When they receive more money by not contributing to a public good that would benefit everyone, what percent of **women** do not contribute to a public good?



(The continue arrow will enable after you move the slider to your decision)



Figure C.114: Beliefs, Others Instructions

**Additional Instructions**

In the next 14 questions, you will be asked about how men and women make decisions that **influence the payments of others but not themselves**.

**Please answer these questions carefully and honestly.**

**Understanding Question:** In the next 14 questions, you will be asked about how men and women make decisions that influence the payments of...

themselves only

themselves and others

others only



Figure C.115: Beliefs, Others, Dictator Game

**Question Y out of 28:**

When their decisions do not influence how much money they receive, what percent of **men** make unfair decisions?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When their decisions do not influence how much money they receive, what percent of **women** make unfair decisions?



(The continue arrow will enable after you move the slider to your decision)



Figure C.116: Beliefs, Others, Dictator Game with Efficiency Concerns

**Question Y out of 28:**

When their decisions do not influence how much money they receive, what percent of **men** choose to maximize the size of the pot rather than split the pot equally?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When their decisions do not influence how much money they receive, what percent of **women** choose to maximize the size of the pot rather than split the pot equally?



(The continue arrow will enable after you move the slider to your decision)



Figure C.117: Beliefs, Others, Dictator Game with Entitlement Concerns

**Question Y out of 28:**

When their decisions do not influence how much money they earn, what percent of **men** choose for high performers to be paid more than low performers?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When their decisions do not influence how much money they earn, what percent of **women** choose for high performers to be paid more than low performers?



(The continue arrow will enable after you move the slider to your decision)



Figure C.118: Beliefs, Others, Ultimatum Game

**Question Y out of 28:**

When their decisions do not influence how much money they receive but their decisions can be vetoed, what percent of **men** make unfair decisions?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When their decisions do not influence how much money they receive but their decisions can be vetoed, what percent of **women** make unfair decisions?



(The continue arrow will enable after you move the slider to your decision)



Figure C.119: Beliefs, Others, Trust Game

**Question Y out of 28:**

When their decisions do not influence how much money they receive, what percent of **men** distrust others?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When their decisions do not influence how much money they receive, what percent of **women** distrust others?



(The continue arrow will enable after you move the slider to your decision)



Figure C.120: Beliefs, Others, Prisoner's Dilemma Game

**Question Y out of 28:**

When their decisions do not influence how much money they receive, what percent of **men** make uncooperative decisions?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When their decisions do not influence how much money they receive, what percent of **women** make uncooperative decisions?



(The continue arrow will enable after you move the slider to your decision)



Figure C.121: Beliefs, Others, Public Goods Game

**Question Y out of 28:**

When their decisions do not influence how much money they receive, what percent of **men** do not contribute to a public good that would benefit everyone?



(The continue arrow will enable after you move the slider to your decision)

**Question Y out of 28:**

When their decisions do not influence how much money they receive, what percent of **women** do not contribute to a public good that would benefit everyone?



(The continue arrow will enable after you move the slider to your decision)



## C.8 Experimental Instructions for Broader Beliefs (Representative Sample)

Broader Beliefs (Representative Sample) was run on a representative sample of US Adults through a partnership with Dynata. The Broader Beliefs (Representative Sample) is identical to Broader Beliefs (Online) Study with the exception of the payment information which was co-ordinated by Dynata and shown to participants in the invitation email. All email invitations sent by Dynata were generic, containing just the survey URL and no information regarding the nature of the study or what the qualifying conditions for participation are. Participants received the equivalent of approximately \$0.50 for completing this study.

Figure C.122 shows the overview screenshot from Broader Beliefs (Representative Sample) shown in the beginning of the survey instead of the payment information. Readers are referred to Section C.7 for details about the study.

Finally, participants complete a short follow-up survey that collects additional control and demographic information.

Figure C.122: Study Overview

### **Study Overview**

To complete this study, you must answer 28 questions and then a short follow-up survey.

**Please answer these questions carefully and honestly.**



## C.9 Experimental Instructions for Broader Beliefs-2 Study

After consenting to participate in the study, participants are informed of the \$2 study completion fee and of the opportunity to earn additional payment. Figure C.123 shows how this payment information is explained and the corresponding comprehension question that each participant must answer correctly in order to proceed.

Participants answer a total of 32 broader beliefs questions. Each page of questions presents one set of beliefs as a pair, to ask about males and females. Participants are randomly assigned to see the male question before the female question or the female question before the male question which, once assigned, is kept consistent throughout the whole experiment. For each belief question, participants select their answer on a slider with a 7-point range (for an example of how the slider changes once participants select an answer see Figure C.4). Within each set of broader beliefs questions, the order of the question pages is randomized.

The question pages labeled *Economic Game* in Figures C.124-C.130 are intended to loosely correspond with scenarios 1 – 7 from the Economic Games Studies and the question page in Figure C.131 is intended to capture beliefs about equality preferences in general. The question pages labeled *Application* in Figures C.132-C.139 directly correspond with the equality statements 1– 8 from the Applications (Online) Study.

Finally, participants complete a short follow-up survey that collects additional control and demographic information.

Figure C.123: Study Overview

Overview

**Study Overview:** To complete this study, you must answer 32 questions and then a short follow-up survey. **Please answer these questions carefully and honestly.**

**Payment:** For completing this study, you are guaranteed to receive \$2 within 24 hours. How you answer the questions in this study will not influence your payments from this study in any way.

**Understanding Question:** How should you answer questions in this study?

Randomly

Carefully and honestly

It doesn't matter

→

Figure C.124: Broader Beliefs - Economic Game 1

**Question X out of 32:**

What percent of **women** make decisions that achieve equality?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** make decisions that achieve equality?



(The continue arrow will enable after you move the slider to your decision)



Figure C.125: Broader Beliefs - Economic Game 2

**Question X out of 32:**

What percent of **women** care more about splitting the pot equally than maximizing the size of the pot?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** care more about splitting the pot equally than maximizing the size of the pot?



(The continue arrow will enable after you move the slider to your decision)



Figure C.126: Broader Beliefs - Economic Game 3

**Question X out of 32:**

What percent of **women** favor equal pay more than performance pay?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** favor equal pay more than performance pay?



(The continue arrow will enable after you move the slider to your decision)



Figure C.127: Broader Beliefs - Economic Game 4

**Question X out of 32:**

When their decisions can be vetoed, what percent of **women** try to make decisions that achieve equality?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

When their decisions can be vetoed, what percent of **men** try to make decisions that achieve equality?



(The continue arrow will enable after you move the slider to your decision)



Figure C.128: Broader Beliefs - Economic Game 5

**Question X out of 32:**

When equal outcomes are more likely if one trusts others---but trusting others can also backfire---what percent of **women** trust others?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

When equal outcomes are more likely if one trusts others---but trusting others can also backfire---what percent of **men** trust others?



(The continue arrow will enable after you move the slider to your decision)



Figure C.129: Broader Beliefs - Economic Game 6

**Question X out of 32:**

When equal outcomes are more likely if one cooperates with others, what percent of **women** cooperate with others?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

When equal outcomes are more likely if one cooperates with others, what percent of **men** cooperate with others?



(The continue arrow will enable after you move the slider to your decision)



Figure C.130: Broader Beliefs - Economic Game 7

**Question X out of 32:**

When equal outcomes are more likely if one contributes to a public good that benefits everyone, what percent of **women** contribute to a public good?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

When equal outcomes are more likely if one contributes to a public good that benefits everyone, what percent of **men** contribute to a public good?



(The continue arrow will enable after you move the slider to your decision)



Figure C.131: Broader Beliefs - Economic Game 8

**Question X out of 32:**

What percent of **women** care about equality?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** care about equality?



(The continue arrow will enable after you move the slider to your decision)



Figure C.132: Broader Beliefs - Application 1

**Question X out of 32:**

What percent of **women** think society should aim to equalize incomes?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** think society should aim to equalize incomes?



(The continue arrow will enable after you move the slider to your decision)



Figure C.133: Broader Beliefs - Application 2

**Question X out of 32:**

What percent of **women** think the government should take measures to reduce differences in income levels?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** think the government should take measures to reduce differences in income levels?



(The continue arrow will enable after you move the slider to your decision)



Figure C.134: Broader Beliefs - Application 3

**Question X out of 32:**

What percent of **women** think all people should be paid equally for the same job regardless of how well they do the job?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** think all people should be paid equally for the same job regardless of how well they do the job?



(The continue arrow will enable after you move the slider to your decision)



Figure C.135: Broader Beliefs - Application 4

**Question X out of 32:**

What percent of **women** think spouses should take equal responsibility for the home and family?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** think spouses should take equal responsibility for the home and family?



(The continue arrow will enable after you move the slider to your decision)



Figure C.136: Broader Beliefs - Application 5

**Question X out of 32:**

What percent of **women** think both parents should be equally involved in the upbringing of a child?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** think both parents should be equally involved in the upbringing of a child?



(The continue arrow will enable after you move the slider to your decision)



Figure C.137: Broader Beliefs - Application 6

**Question X out of 32:**

What percent of **women** think all people should have equal access to health care?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** think all people should have equal access to health care?



(The continue arrow will enable after you move the slider to your decision)



Figure C.138: Broader Beliefs - Application 7

**Question X out of 32:**

What percent of **women** think all people should have equal access to education?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** think all people should have equal access to education?



(The continue arrow will enable after you move the slider to your decision)



Figure C.139: Broader Beliefs - Application 8

**Question X out of 32:**

What percent of **women** think all people should have equal access to suitable and affordable housing?



(The continue arrow will enable after you move the slider to your decision)

**Question X out of 32:**

What percent of **men** think all people should have equal access to suitable and affordable housing?



(The continue arrow will enable after you move the slider to your decision)

