Strategic Incompetence and Gender Stereotypes*

Sorravich Kingsuwankul† Christina Rott‡ Janneke Oostrom§

Job Market Paper

Version: November 7, 2025

Click here for the latest draft

Abstract

We examine how individuals strategically claim incompetence to avoid undesirable tasks in group settings, such as non-promotable tasks or household chores. Using a laboratory experiment, we exogenously vary the gender stereotype associated with a task to study its impact on self-reported ability and task allocation. Our findings show that individuals downplay their competence to successfully evade task assignment. When tasks are gender-stereotyped, gender gaps in strategic incompetence emerge with experience. These gaps seem to be driven by self-stereotyping when individuals become aware of gender stereotypes: individuals internalize stereotype beliefs about gendered ability, adjusting their private self-assessments downward when their gender is perceived as less competent. Our results underscore the importance of stereotype awareness and highlight how strategic incompetence can perpetuate workplace gender disparities by reinforcing unequal task allocation.

Keywords: Communication, Gender, Stereotypes, Beliefs, Lab experiment
JEL: C91, D83, J16

*Acknowledgements: The authors are grateful to Katharina Bruett, Klarita Gerxhani, Astrid Hopfensitz, Bernd Irlenbusch, Nicolas Jacquemet, Dorothea Kuebler, Warn Lekfuangfu, Diego Marino Fages, Eugenio Verrina, Lise Vesterlund, Marie Claire Villeval, Goerg von Weizaecker, and Andreas Ziegler for their very helpful comments. The authors thank participants at presentations at the Experimental Seminar at SBE Vrije Universiteit Amsterdam, Economics seminar at the University of Portsmouth, the BBE Seminar in Berlin, IMEBESS in Valencia, ESA World meeting in Beijing, ASFEE in Nancy, TIBER Symposium in Tilburg, ESA European Meeting in Brno, and Matterhorn Symposium in Brig, for useful comments. We are thankful to GATE-Lab, and to Quentin Thevenet and Chaya Senichaut for their assistance. All mistakes remain our own.

†School of Business and Economics, Vrije Universiteit Amsterdam, HV Amsterdam, The Netherlands; Tinbergen Institute, MS Amsterdam, Netherlands. Email: s.kingsuwankul@vu.nl

‡School of Business and Economics, Vrije Universiteit Amsterdam, HV Amsterdam, The Netherlands; Tinbergen Institute, MS Amsterdam, Netherlands. Email: c.e.rott@vu.nl

§Tilburg School of Social and Behavioral Sciences, Tilburg University, Tilburg, The Netherlands. Email: j.k.oostrom@tilburguniversity.edu

1 Introduction

Workplace inequalities can stem from employee characteristics, beliefs, and preferences or biased hiring and promotion decisions; but they can also emerge from workplace dynamics such as systemically biased assignments of undesirable low-promotability tasks (Babcock et al., 2017a). These tasks are often tedious and time-consuming, offer low visibility, and contribute minimally to career advancement. They are, however, valuable for the functioning of an organization, essential for collective success, and typically benefit many employees when completed. When such tasks are disproportionately distributed, accumulated, and carried out by certain groups of individuals, the impact can be significant, as they divert time and effort away from high-promotability tasks. Women have been shown to perform low-promotability tasks more often than men (e.g., De Pater et al., 2010; Chan and Anteby, 2016; Babcock et al., 2017b).[1] For instance, a survey by McKinsey & Company in 2021 finds that female senior managers are more likely to consistently dedicate time to employees' well-being and emotional support. Although most companies deem these tasks essential for collective success, only the minority recognizes them formally. Similar logic applies to household chores in the private domain.

Understanding who performs low-promotability tasks and *why* is crucial in promoting equity in the workplace. Although much attention has been paid in previous studies to individuals who strategically inflate competence to attract desirable opportunities (e.g., Schwardmann and van der Weele, 2019; Soldà et al., 2020; Exley and Kessler, 2022), little is known about individuals who strategically claim incompetence to avoid undesirable tasks. We investigate this key mechanism in the workplace context where an undesirable task, specifically a costly public goods task, has to be assigned to and performed by a group member. We define *strategic incompetence* as the understatement of one's own ability (i.e., claiming to be of lower ability) to avoid being assigned such a task and shift it onto other group members.[2] We argue that the understatement of ability can systematically distort who is assigned costly public goods tasks, thereby contributing to workplace inequality.[3]

To the best of our knowledge, this study is the first to quantitatively assess the concept of *strategic incompetence*, that is, communicating one's own ability negatively. Furthermore, we address the question of whether this behavior is shaped by stereotypes (Bordalo et al., 2016).[4] Specifically, we investigate how gender stereotypes about ability impact men's and women's

[1] Miller and Roksa (2020), Cubel et al. (2024), Chu et al. (2022) and Nelson et al. (2023) provided more recent evidence among PhD students, economists and medical attendings.

[2] Similar constructs are discussed in psychology and organizational behavior e.g., *feigned incompetence* or *weaponized incompetence* (e.g., McLuhan, 2020a,b) and *skilled incompetence* (Argyris, 2003). To the best of our knowledge, these constructs lack empirical support (see a recent review by Stadnicka, 2024). The topic recently received considerable media attention; see, e.g., Huffpost and Forbes, accessed on 7th November2025.

[3] Alternative definitions of strategic incompetence are possible. For example, individuals who put low effort into a task to obtain low performance and avoid future task assignment. For this paper, we decided to let strategic incompetence play out through communication.

[4] Bordalo et al. (2016) model stereotypes, based on the representativeness heuristic of Kahneman and Tversky (1972), as distorted probability distributions about individuals from a particular group with certain characteristics or attributes, such that perceived group differences are exaggerated even when actual differences

propensity to claim incompetence. When a task is stereotyped (i.e., there is a generalized belief that men or women perform better or worse), claiming incompetence could be seen as more or less credible depending on the worker's gender.[5] For instance, men may 'play dumb' in female-typed tasks (e.g., arts tasks) and be perceived as credible, while women may do the same in male-typed tasks (e.g., technical tasks).

Our contribution to the literature on workplace inequalities is two-fold. First, we propose and quantitatively measure individuals' engagement in strategic incompetence in the context of an undesirable public goods task that needs to be performed by someone in a group. Second, we examine how gender stereotypes about ability affect women's and men's engagement in strategic incompetence to avoid being assigned a costly public goods task.

We design a laboratory experiment that allows us to elicit participants' *private* beliefs about their ability, and measure their communicated incompetence to others when a costly public goods task has to be assigned to and performed by a group member. All group members benefit from the task being done, and only the individual performing the task bears the cost of effort. We use a modified public goods game that captures additional key features of such tasks: the task performer's ability affects the payoff of all group members, and ability is private information.

The experimental session is divided into two blocks and each block is composed by four parts. In part 1, participants complete a timed trivia quiz covering different question categories. Performance in the quiz determines their ability type: In a group of four, the top (bottom) two performers are classified as High- (Low-)ability types, but they are not informed about their absolute performance and their type. In part 2, we elicit participants' private belief about their type.

In part 3, participants play the modified public goods game in groups of four. The outcome of the public goods task depends on the task performer's ability type. A High-type performer is more likely to succeed in the task than a Low-type performer. While the group gets a higher expected payoff if a *High-type* member performs the task, providing the public good is personally costly for the performer.[6] This introduces a dilemma because performing the task is undesirable for all payoff-maximizing group members – even High types. In part 4, we elicit participants' first-order beliefs about other group members' types and second-order beliefs about their own type.

Our design mimics how such tasks are allocated in group settings — for instance, in meetings where team members express their (in)competence before jointly deciding who should

may be small or insignificant. In other words, individuals make judgments based on mental representations of what is 'typical' of a group.

[5]While it is sometimes assumed that ability does not play an important role for low-promotability tasks, we argue that individuals' ability in undesirable public goods tasks can vary and influence task assignment. However, ability might be relatively less relevant for the final performance of the task than the provision of effort. In this paper, we focus only on ability and rule out effort provision.

[6]Following the induced-value paradigm (Smith, 1976), the cost of effort is the same independent of the performer's type. Instead, the performer's type increases the expected performance of the task. We can think of performers dedicating the same amount of time to the public goods task and the performer's ability type affecting task performance.

perform the task. To determine who invests, the group members first simultaneously send a *cheap-talk* message about the likelihood of being a High type. After observing all messages, each member privately and simultaneously casts a vote and the group member with the most votes performs the public goods task. Individuals can thus (strategically) claim incompetence to reduce the chance of being selected as the task performer, thereby moving the task burden onto others.

We exogenously manipulate *perceived* gender differences in ability, that is, gender stereotypes by varying the trivia quiz categories. In the first block of the session, participants are randomly assigned to one of three stereotype treatments: Neutral, Female, or Male. In the **Neutral** treatment, the questions center around neutral topics in which men and women are expected to perform equally well (e.g., cities and countries). In the **Female** treatment, the questions are on female-typed topics – domains where female participants are believed to outperform their male counterparts (e.g., art and craft). Similarly, the **Male** treatment consists of questions on male-typed topics, where men are believed to outperform women (e.g., fixes and repairs). Our experimental design aims to capture stereotypical beliefs that are *inaccurate*. Specifically, the trivia quizzes are calibrated so that no significant gender differences in performance are expected to occur in each treatment. However, participants generally believe that there is a gender gap if the trivia categories are female- or male-typed, respectively. This design feature enables us to attribute our treatment effects to inaccurate stereotype beliefs and not *actual* gender differences in ability.[7] In the second block, participants perform the trivia quiz of a different treatment than in the first block (e.g., Neutral in Block 1 → Female or Male in Block 2). The six resulting treatment sequences are balanced.

We find that individuals strategically claim incompetence when a costly public goods task has to be assigned and performed. Signaling 'incompetence' reduces the likelihood of being chosen for such a task, as close to 90% of the groups select the group member signaling the highest competence to perform the task and provide the public good. Stereotypes indeed shape the way individuals claim incompetence: men and women are more likely to claim incompetence when the task is gender-incongruent (i.e., when their gender is believed to be less able). Surprisingly, these gender gaps in 'playing dumb' only emerge with experience.

The gender gaps in strategic incompetence are fully explained by the private beliefs of the participants. To understand the mechanism behind the observed gender gaps, we find that participants, whom the stereotype prescribes as 'less able', distort their private beliefs downward thereby aligning with the stereotype. Consistent with 'self-stereotyping' (Coffman, 2014), our results suggest that individuals internalize stereotypical beliefs, affecting their self-assessment, and eventually strategic communication to avoid being assigned a costly public goods task. However, this seems to only happen when participants are *aware* of the stereotype.

Using our data on the first- and second-order beliefs about ability, we further shed light on how stereotypes shape credibility in communication. Individuals who self-stereotype (i.e.,

[7] We find (ex-post) no systematic gender differences in the trivia performances. More details of the experimental design and calibration of trivia questions are described in section 3.

distorted into thinking they are incompetent) perceive their claimed incompetence to be credible, while others also believe the former's claim to be credible. This suggests that after recognizing stereotypes, individuals incorporate these generalized, yet inaccurate, beliefs into their own belief system, affecting not only their own self-assessment and behavior but also their perception of others. To reduce gender disparity in the assignment of undesirable tasks, it is therefore important to challenge stereotypes that reinforce strategic incompetence.

The remainder of the paper is organized as follows. Section 2 provides an overview of the related literature. Section 3 outlines the experimental design and procedure. Section 4 states the hypotheses and predictions. Section 5 reports the results. Section 6 discusses the findings and concludes.

2 Related Literature

Our study relates to the literature on misrepresentation of ability, which shows that people exaggerate their stated competence for strategic reasons. People adjust communicated competence by reacting to monetary incentive (Charness et al., 2018) and social perception about an underlying type (Thoma, 2016; Kurschilgen and Marcin, 2019). Related research on confidence shows that self-confidence can be motivated in strategic settings, providing instrumental benefits in persuading others (see Soldà et al., 2020; Schwardmann and van der Weele, 2019; Schwardmann et al., 2022). A recent work by Exley and Kessler (2022) shows that individuals self-promote by over-claiming their competence in a context of desirable tasks, with men exaggerating more than women in a male-typed task. This gap in behavior contributes explaining gender gaps in hiring and promotion. More recent evidence indicates that the gender gap is driven by women's reluctance to self-promote, a lower assertiveness when doing so (Chang et al., 2025), and fear of social judgment or norm violation (e.g., Ludwig et al., 2017; Tradenta et al., 2025).

While these prior works have focused on the strategic competence in desirable tasks, little is known whether individuals strategically under-communicate their competence in *undesirable* tasks. Our study contributes by focusing on how individuals use claims of incompetence as an excuse to evade such tasks. An example is a low-promotablity task (see e.g., Babcock et al., 2017a,b; Villas-Boas et al., 2019; Banerjee and Mustafi, 2025), which is deemed essential for organizations but does not increase an individual's likelihood of receiving a promotion. Therefore, we complement the existing literature by showing that individuals can influence the overall task allocation not only by appearing more competent when tasks are desirable but also by downplaying it when they are undesirable.[8]

Our work also relates to the growing literature of gender economics and in particular stereotypes (see Bordalo et al., 2016, 2019) by examining how stereotypical beliefs about

[8]Relatedly, Chen et al. (2024) shows that people strategically adapt facial expressions depending on whether the task to be assigned is desirable or not, suggesting a form of nonverbal strategic communication independent of ability.

ability differences shape the gender gap in strategic incompetence.[9] This literature shows that gender stereotypes cause disparity in the labor market outcomes. On the demand side, stereotypical beliefs – accurate or not – create a gender bias in hiring and promotion decision against individuals whose gender is believed to be less able. In a male-typed task (typically STEM-based such as an arithmetic task), managers tend to believe women to be less competent than men and thus prefer to hire men (e.g., Reuben et al., 2014; Kübler et al., 2018; Coffman et al., 2021; Bohren et al., 2023; Barron et al., 2024). In team settings where individual contributions are obscure, evaluators attribute more credits to men than women in a male-typed task, but attribute equally when the task is female-typed (Sarsons et al., 2021). On the supply side, stereotypes affect labor segregation. Buser et al. (2014) and Coffman et al. (2024) document that women are less likely to self-select into a male-dominant sector or those perceived to be highly competitive (see also Niederle and Vesterlund, 2007). Stereotypes also affect the willingness to participate in gender-incongruent domains due to self-stereotyping (Coffman, 2014) and anticipated discrimination (Lepage et al., 2025). This creates inefficiency as unrealized talent or resource misallocation arise when individuals do not receive training based on their innate abilities but on stereotypes (Hopfensitz et al., 2025).

In relation to this stream of literature, our work demonstrates how individuals claim incompetence by *hiding* behind stereotypes. Our experimental design exogenously varies the gender stereotypes about ability differences in the task to examine their impact on the gender gaps in strategic incompetence. Despite no detectable gender difference in actual ability, individuals may hold stereotypical beliefs that exaggerate true underlying gender differences. These *perceived* ability differences may make it easier for individuals to claim incompetence in gender-incongruent domains as that very claim is viewed as more credible.[10] Therefore, a man can hide behind a generalized belief that women are better in female-typed domains (e.g., employees' well-being support), while a woman can do the same in male-typed domains (e.g., tasks that demand technical skills). If stereotypes lead to a gender gap in strategic incompetence, the implication follows that to minimize gender inequality through the assignment of undesirable stereotyped tasks, it is essential to challenge misperception about gendered abilities to prevent them from being used as justification.

Lastly, our work relates to a larger literature from psychology and organizational behavior on impression management (see Bolino et al., 2016) which looks at behavioral tactics used by employees to manage social perceptions and relations in organizational contexts. Most prior works in this field typically rely non-incentivized survey measures and qualitative data

[9] Gender stereotypes could also be about traits and attributes, as documented in psychology (see e.g., Fiske et al., 2018; Diekman and Eagly, 2000). In economics, Exley et al. (2025) show that despite no gender difference in other-regarding preferences, the vast majority of people believe that women are more prosocial than men. Such misperceptions could reinforce social expectations about what one ought to be or do based on gender identity.

[10] This credibility be may reinforced further by self-stereotyping: individuals who internalize stereotypes may hold beliefs that are distorted vis-à-vis their *actual* beliefs. This exacerbates the problem as people who claim incompetence in gender-incongruent domains not only view their claims as credible but hold motivated beliefs to support them.

from focus groups and interviews. To the best of our knowledge, we are the first to quantitatively examine playing dumb (i.e., creating a negative image at work) and gender stereotypes about ability affect its propensity using incentivized experimental methods in a controlled environment.

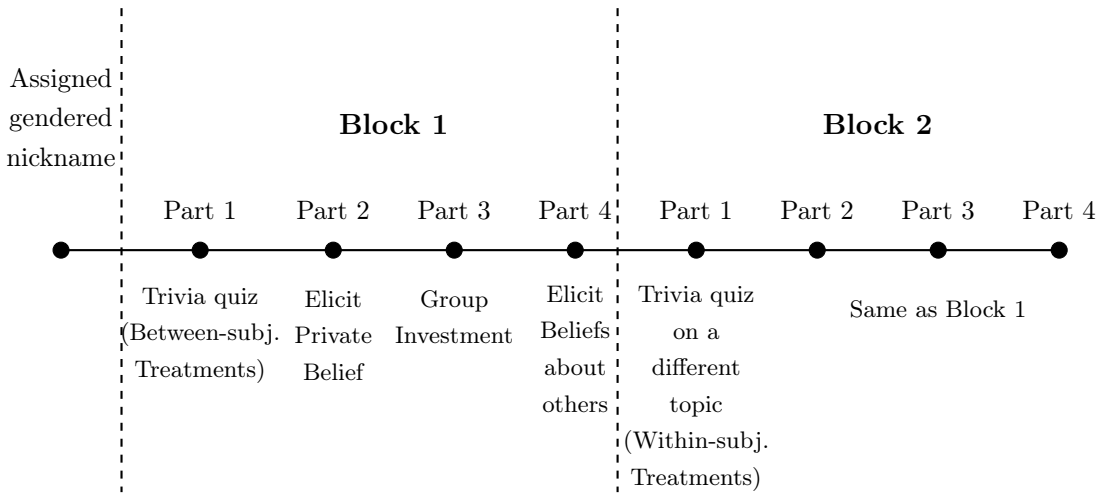
3 Experimental Design and Procedures

Overview

Each session consists of two blocks with four parts in each block. At the beginning of the session, participants are informed about the number of blocks and parts, but receive relevant instructions at the start of each part. They are informed that one of the four parts in each block will be randomly selected for their additional payment at the end of the session.

In addition, we reveal participants' gender information using gendered nicknames. Precisely, before the start of the session, each participant is assigned an anonymous ID, comprising of a gendered nickname and a string of random three-digit number. The assignment of gendered nicknames is based on self-reported gender identity in the pre-session survey. The assigned IDs are then displayed during the experiment. We elaborate our design choices and discuss trade-offs in Section 3.2. Figure 1 depicts the timeline of the experimental session.

Figure 1: Timeline of the experimental session.



3.1 Design

Part 1: Trivia

In part 1, inspired by Coffman (2014), participants complete a timed quiz, consisting of 20 multiple choice trivia questions. Each question has five answer options, one of which is correct. Participants have five minutes to provide answers to as many questions as possible.

No performance feedback is given. If part 1 is selected for additional payment, participants earn 12 points per correct answer.

The trivia topic depends on the treatment, which varies in the gender stereotype associated with the topic (Neutral, Female, or Male).[11] We designed these question sets so that men and women perform equally well in each treatment on average, but participants *believe* that the performance differs when the trivia topic is gendered. To ensure that the treatment captures the effect of *inaccurate* stereotypical beliefs rather than true ability differences, we conducted a separate experiment (N=65) with an independent sample drawn from the same subject pool. This allowed us to select questions that are perceived as gender stereotyped with no actual gender gap in performance. Ex-post, we confirm that in the main experiment men and women perform equally well in each treatment, even though participants believe that men (women) are better at male-typed (female-typed) trivia.[12]

Treatment sequences

Each session consists of two blocks, which are identical except for the topic of the trivia quiz. In Block 1, participants are either assigned to the Neutral, Female or Male treatment (between-subjects). In Block 2, participants are assigned to a treatment different than in Block 1 (within-subjects). This results in a mixed experimental design with the following six treatment sequences namely NeutralFemale, NeutralMale, FemaleMale, FemaleNeutral, MaleFemale, MaleNeutral. We elaborate this design choice in section 3.2. Besides the within-subject variations in the trivia topic, the remaining three parts remain identical across the two blocks.[13]

Part 2: Elicitation of private belief

In part 2, we elicit participants' private belief about their trivia performance. They are informed that they would be matched with three other participants in the session (identified by their anonymous IDs) and their trivia performances will be ranked from the lowest to the highest. They have to guess the likelihood of being in the top half, by selecting an interger on a scale from 0% (certain to be in the bottom half) to 100% (certain to be in the top half). This is incentivized; participants are informed that if this part is selected, the chance of receiving the payoff in this part (240 points) is maximized by being as accurate as possible.[14] Additionally, participants are informed that their response will not be shown

[11] The instructions do not refer to the topic as *Neutral*, *Female* or *Male*. Participants are informed of the question categories that could be asked in the assigned treatment. For instance, neutral topics included 'cities and countries', female-typed topics included 'cooking and home', and male-typed topics included 'fixes and repairs'.

[12] All materials used in the calibration experiment (e.g., instructions, question sets and tests) are reported in the Online Appendix E.

[13] Additionally, in Block 1 participants answer to some understanding questions before entering their decisions in the private belief elicitation (part 2) and the Group Investment (part 3). These understanding questions are not present in Block 2 to avoid repetition.

[14] We incentivized our belief measures as per Karni (2009) and closely followed the instruction used in Danz et al. (2022). Precisely, if part 2 is selected, the computer program randomly selects a number between 0 and

to the other participants. We use this as a measure of participants' *private* belief about ability.

Part 3: Group Investment

In part 3, participants play a modified one-shot public good game (framed as a group investment decision). In our configuration, only one person must incur a personal cost in an investment that benefits the entire group. This cost is fixed and captures the provision of effort in producing a public good, or more generally, the opportunity cost of performing a public goods task.

Participants are informed that they are matched to form a group of four (the same as in the belief elicitation). Each group consists of two High types and two Low types, determined by the trivia performance rankings. Group members do not know their own type, nor the type of others, and this is common knowledge. The two types differ in the probability that the investment will succeed. If the investor is a Low type, the investment succeeds with 25% and fails with 75%. If the investor is a High type, the investment succeeds with 75% and fails with 25%.

Investment outcomes affect the payoffs of all group members. When the investment succeeds, each group member earns 240 points; when it fails, each earns 160 points. Regardless of the outcome, the investor incurs a cost of 100 points. Thus, when the investment succeeds, the investor earns 140 points (240-100) and the other group members who don't invest earn 240 points each. If the investment fails, the investor earns 60 points (160-100) and the other group members earn 160 points each. Given these parameters, the group's expected payoff is higher when a High type invests, but neither types have an incentive to be the investor.

A key feature of our game is a pre-play communication stage where group members send a signal about their ability-type before jointly deciding who should be the investor. This stage introduces strategic communication and mimics a stylized situation outside the laboratory where a public goods task must be assigned and individuals can claim incompetence to evade task assignment and thus pass it onto others in the group.

To determine the investor, each group member simultaneously sends a *cheap-talk* message about the likelihood of being a High type. This is done by selecting an integer between 0 and 100 to complete a pre-formulated message: *"I think that I am a High type with ...%"*. The messages are then shown to all group members; after observing them, each participant privately and simultaneously votes for one group member (including themselves) to be the investor. Participants are informed that the member with the most votes becomes the in-

100. If the guess is lower or equal to the random number, the participant receives 240 points if they are in the top half, and otherwise nothing. If the guess is higher than the random number, the program conducts a lottery where the chance to receive 240 points is equal to that random number. As in Danz et al. (2022), we give minimum information about the incentivization (i.e., that being as accurate as possible maximizes the chance to receive the points without mathematical formulas). Our participants are informed that the exact payment rule for this part can be obtained at the end of the session in case they wish to know. Of all participants, only three asked for this instruction. For best practices in eliciting beliefs using incentive compatible methods, see Healy and Leo (n.d.).

vestor, and in the case of a tie, the computer randomly selects one of the tied members to invest.

After the investor is selected, Nature determines whether the investment succeeds or fails with the probabilities associated with the investor's actual type. Participants receive feedback about the outcomes of investor selection, the investment (success or failure), their payoffs at the end of the session.[15]

Part 4: Elicitation of beliefs about others

In part 4, we elicit participants' beliefs about others in the Group Investment. We are interested in exploring the mechanism of credibility in communication and how that changes with stereotypes. Precisely, we elicit two beliefs: what do participants think about the type of the other three group members (first-order belief), and what they think others think about their type (second-order belief).

Participants submit in total four guesses. The first three guesses concern their first-order beliefs for each of the three group members. Participants see again the (cheap-talk) message sent by each group member during the Group Investment phase along with their anonymous ID. They are asked to guess the likelihood that each member is a High type. After submitting these guesses, we elicit their second-order belief. Each participant is reminded of the message sent to their group and is asked to guess the average guesses submitted by the three group members about them (i.e., the mean first-order beliefs held by others).[16]

3.2 Design choices

We elaborate in more detail a few important design choices, in particular revealing participant's gender information, and the use of mixed design.

Revelation of gender information: To study the mechanism of credibility in communication, participants need to be aware of the co-participant's gender identity. We reveal participants' gender information using gendered nicknames assigned at the beginning of the session based on the self-reported gender identity. Precisely, after an informed consent and prior to receiving any instructions, participants are asked to fill out a short questionnaire indicating their age, gender identity (male, female or other) and university. After completing this short survey, they are informed about the assignment of the anonymous ID, which comprises of a (gendered) nickname chosen from a set of common names and a random three-digit

[15] Given fixed group matching, this rules out any potential reciprocity that may arise across the two blocks.

[16] The incentivization and description of the instruction are similar to the one used in the private belief in part 2. Precisely, participants are informed that if part 4 is selected, one of the four guesses would be randomly selected for additional payment. For the first-order beliefs, the incentivization is the same to that used for the private belief in part 2. For the second-order belief, the following protocol is implemented; the computer randomly selects a number between 0 and 100. If the guess is lower or equal to the random number, the computer conducts a lottery where the chance to receive 240 points is equal to the mean guesses submitted by the group members, and nothing otherwise. If the guess is higher than the random number, the computer conducts a lottery where the chance of receiving 240 points is equal to the random number.

number. Unbeknownst to the participants, we assign the nickname based on self-reported gender identity.[17] We do not indicate the assignment procedure to avoid inducing any experimenter demand effect. The anonymous ID, which is gender revealing by design, is displayed during the parts with group matching (i.e., part 2, 3 and 4). In addition, to increase statistical power, participants are matched to form gender balanced groups, with two men and two women.

Mixed design: Our six treatment sequences allow us to make comparisons both between-subjects and across-block comparisons. We can compare between-subjects treatments in Block 1, where participants have no prior experience of the game. The addition of Block 2 allows us to further test whether the experience of the game in Block 1 reinforces engagement in strategic incompetence in Block 2. If having an experience in a strategic environment make people become more strategic, we would expect higher engagement in strategic incompetence in Block 2 compared to Block 1, independently of the treatment.

In addition, our within-subjects design alternates the trivia topics across the two blocks. This design feature enables us to observe how stereotypes operate. Since each trivia quiz contains questions belonging to one specific stereotype (i.e., Neutral, Female or Male), individuals may not recognize it immediately in Block 1, but may become aware of it in Block 2 when they encounter a *different* stereotyped trivia. A purely between-subjects design would not allow us to capture the impact of experience and the stereotype awareness on behavior and belief.

Procedures

The experiment was run at GATE-Lab in Lyon, France. We ran a total of 25 sessions with 492 participants. All were recruited through Hroot (Bock et al., 2014) from local universities and various educational background (business, economics, engineering). Recruitment at the session level was gender balanced – 50.81% of participants are female. The experiment was programmed with oTree (Chen et al., 2016).[18]

Upon arrival, participants randomly drew a ticket from an opaque bag which assigned them to computer terminals. After an informed consent and the assignment of the anonymous ID, printed instructions were distributed at the beginning of the relevant part in Block 1 and

[17] We refrain from allowing participants to freely select nicknames to ensure that the nickname matches their actual gender identity. We observe that the fraction of self-reported gender in the experiment and the gender information in the recruitment system do not differ at the session level. This implies that our nickname procedure perfectly matches participants' gender identity.

[18] Despite a gender balanced recruitment, the gender composition varies from session to session due to no shows. The fraction of female participants ranges between 37.5% and 65%. Therefore, we slightly oversampled to reach our pre-registered sample size (see Table B1 to B4 in the Online Appendix for summary statistics). In all of our analyses, we exclude groups that are not gender balanced (52 individual participants, leaving us with N=440) because the group's gender composition may change the way participants form beliefs about their ability. Including these observations do not change the conclusion of the paper.

read aloud. In Block 2, participants received the part instructions on the computer screen, which were not read aloud to avoid repetition.

At the end of Block 2, participants received feedback on part 3 of both blocks (i.e., vote outcome, investment outcome, and realized payoff). Then, they responded to the final questionnaire, including self-reported risk attitudes, measures of lying type from Schudy et al. (2024), a 16-item Personal Attribute Questionnaire taken from Spence et al. (1975), and beliefs about ability differences in the trivia (similar to Coffman, 2014). These measures were non-incentivized. Finally, participants received feedback on the payoffs of all parts and blocks, and were informed which parts had been randomly selected for their additional payment. The average duration of a session was 75 minutes. The average earnings were 20 Euros (including a show-up fee of 5 Euros).

4 Hypotheses

Our design allows us to observe participants' private belief about their ability and the competence they claim in the Group Investment phase. Because being selected to invest is costly and undesirable by design, we expect participants to strategically claim incompetence (i.e., stating a low chance to be a High type) to shift investment burden onto the other group members.

First, we anticipated that people strategically claim incompetence in the Group Investment phase to avoid being selected as the investor. Given our configuration and parameter choices, a profit maximizing individual should claim incompetence (e.g., stating to be a Low type for sure) *regardless* of their true type. Since both High and Low types have an incentive to claim incompetence, messages are expected to become uninformative. This gives rise to babbling equilibria, in which cheap-talk messages are ignored and the group members randomly vote one member (other than themselves) to become the investor.

However, these theoretical predictions may not hold empirically. First, individuals may be reluctant to claim incompetence due self and social image concerns from misrepresentation (Gneezy et al., 2018; Dufwenberg and Dufwenberg, 2018; Abeler et al., 2019). Therefore, depending on behavioral types, we expect heterogeneity in the extent to which individuals engage in strategic incompetence.[19] Second, random voting is unlikely to occur due to the presence of focal point. In our setting, the group members with the most votes is chosen as the investor. Since the group is better off if the investor is a High type, participants have an incentive to vote *strategically*: to minimize own chance of being selected, individuals should vote for the person they expect others to vote for. As a result, the group member who claim to be the most competent becomes a focal point in the voting stage and has the highest chance

[19] While we acknowledge that individuals may not want to perceive themselves (and be perceived by others) as a Low type, we believe in the context of an undesirable task, these image concerns are, if any, minimal. This reasoning is aligned with Kurschilgen and Marcin (2019) whose findings suggest little image concerns for the type of non-academic questions we use in the trivia. Therefore, we assume that the monetary gain from claiming incompetence outweighs potential image costs.

to receive the most votes. Given these reasonings, we formulate our first hypothesis as follows.

Hypothesis 1. (Strategic incompetence): Individuals strategically claim to be incompetent to avoid being assigned the undesirable task, thereby shifting it onto others in the group.

Second, we anticipated individuals to engage more in strategic incompetence across blocks due to their experience of strategic environment in Block 1. If experience reinforces engagement in strategic incompetence, we should observe claimed competence to be lower in Block 2 compared to Block 1, independently of the treatment, which leads us to the second hypothesis.

Hypothesis 2. (The impact of experience): Individuals engages more in strategic incompetence in Block 2 compared to Block 1.

Lastly, we anticipated that the gender stereotypes associated with the task give rise to gender gaps in strategic incompetence. This results from the fact that when there is a stereotyped belief where a gender group is thought to be more (or less) competent than the other, claiming to be incompetent could be perceived as more credible for the 'less able' group (or less credible for the 'more able' group). Simply put, when task is stereotyped and men (or women) are believed to be *less* able, they would engage more in strategic incompetence, as those claims are perceived to be credible. This leads us to the two following hypotheses.

Hypothesis 3. (The impact of female stereotype): Relative to gender neutrality, men claim more incompetence than women when the task is female-typed.

Hypothesis 4. (The impact of male stereotype): Relative to gender neutrality, women claim more incompetence than men when the task is male-typed.

Our design and hypotheses were pre-registered prior to the data collection at AsPredicted.org (#223442).

5 Results

We start by first assessing the gender gap in the trivia performance within each block and treatment, then we evaluate the prevalence of strategic incompetence and the role of experience. We then examine the impact of stereotypes on the gender gap in strategic incompetence and investigate their origins. Finally, we provide additional evidence by analyzing our belief data to explore the mechanisms of credibility in communication.

Throughout this section, and unless otherwise specified, we use Mann-Whitney U tests (for between-subject comparisons) and Wilcoxon signed-rank tests (for within-subjects comparisons) as our main statistical tools, treating each participant as one independent observation.

All p-values are reported from two-sided tests. We further support our claims via econometric analyses using OLS regression models with clustering at the matching group level.

5.1 Gender gap in performance

Before testing our hypotheses, we first check for any gender gap in the trivia performance. Table 1 displays the mean number of correct answers in the trivia by men and women in each block and treatment.[20] Overall, we see that men and women perform equally well across all blocks and treatments. All comparisons do not reveal significant gender gap at the conventional levels. An exception is in the Female treatment, where women slightly outperform men (Block 1, $p = 0.063$; Block 2, $p = 0.110$), although these differences are marginally significant. This implies that our treatment manipulation principally varies *inaccurate* gender stereotypes about ability differences between men and women without meaningful actual differences.[21]

Table 1: Trivia performance by gender, block and treatment.

	Block 1		Block 2		Men vs. Women ($p-$value)	
	Men	Women	Men	Women	Block 1	Block 2
Neutral	13.09	13.11	12.97	13.30	$p = 0.613$	$p = 0.783$
	(3.75)	(3.11)	(3.58)	(2.93)		
Female	11.42	12.59	12.28	13.28	$p = 0.063$	$p = 0.110$
	(3.65)	(3.09)	(3.79)	(2.70)		
Male	11.43	11.49	11.80	11.18	$p = 0.836$	$p = 0.286$
	(3.48)	(3.08)	(3.17)	(3.07)		

Note: This table reports the mean number of correct answers in the trivia quizzes, with standard deviations shown in parentheses. $p-$values reported are from ranksum tests.

5.2 Strategic incompetence

Prevalence

We begin by documenting the prevalence of strategic incompetence. Table 2 places side-by-side private beliefs and claimed competence by block and treatment.

Given our design (i.e., no gender gap in performance and a gender balanced group composition), if participants form rational expectation about their ability and communicate it honestly, claimed competence is expected to be 50% on average. The pattern of claimed competence in Table 2 shows that this is not the case: on average the claims are well below

[20] To avoid confusion with the treatment terminology (Neutral, Male, Female), we refer to male participants as *men*, and female participants as *women*. None self-reported to be other.

[21] Looking at the fraction of men and women classified as High types by block and treatment leads to a similar conclusion: pairwise comparisons reveal no significant differences (the smallest p-value is 0.066). Furthermore, across the two blocks, we find no significant differences in trivia performance or the fraction of High types given treatment for either gender (see Tables B5 and B6 in the Online Appendix).

the 50% benchmark across all blocks and treatments (the largest p-value is 0.005). Given we elicited private beliefs, we observe that the rationality assumption does not hold. This provides strong evidence of engagement in strategic incompetence to avoid being assigned an undesirable task as claimed competence is consistently lower than private beliefs in a given treatment and block (all $p < 0.001$).

Table 2: Private belief & claimed competence by block and treatment.

	Block 1		Block 2		Priv. Belief vs. Claim ($p-$value)	
	Priv. Belief	Claim	Priv. Belief	Claim	Block 1	Block 2
Neutral	61.26	39.58	57.27	41.89	$p < 0.001$	$p < 0.001$
	(23.63)	(25.41)	(23.54)	(26.67)		
Female	61.39	43.12	51.82	33.00	$p < 0.001$	$p < 0.001$
	(24.27)	(23.42)	(27.48)	(25.25)		
Male	54.68	35.00	44.25	33.32	$p < 0.001$	$p < 0.001$
	(26.31)	(25.09)	(23.88)	(22.07)		

Note: This table reports the mean private belief and claimed competence about being a High type, with standard deviation in parentheses. Private belief refers to the belief about one's likelihood of being a High type. Claimed competence refers to the cheap-talk message about one's likelihood of being a High type, and is the inverse measure of strategic incompetence. $p-$values reported are from signrank tests.

Result 1: Individuals strategically claim incompetence to avoid being assigned an undesirable task.

The role of experience

The next question is whether the experience of the game in Block 1 increases an engagement in strategic incompetence in Block 2. Comparing across blocks, claimed competence in the Neutral and Male treatments do not significantly differ ($p = 0.413$ and $p = 0.649$, respectively), while those in the Female treatment become lower in Block 2 (44% in Block 1 vs. 33% in Block 2, $p < 0.001$). However, this is inconsistent with our hypothesized effect of experience. We anticipate that, independent of the treatment, claimed competence go down in Block 2 as people have had an experience of claiming incompetence in a strategic environment in Block 1, while private beliefs about ability remain constant across the two blocks in a given treatment.

Contrary to our priors, we observe no clear pattern for the impact of experience on strategic incompetence, and surprisingly the private beliefs are statistically lower in Block 2 than in Block 1 in the Female and Male treatments ($p = 0.002$ and $p < 0.001$, respectively) – even though the performance levels across blocks are indistinguishable (as shown in the previous section). We will return to this interesting pattern in private beliefs when we discuss the

impact of stereotypes on the gender gaps in claiming incompetence.[22]

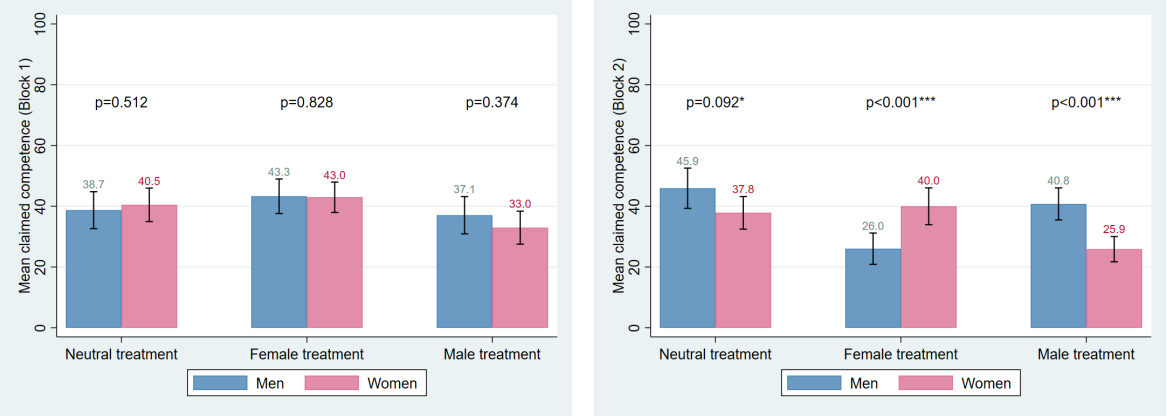
Result 2: Experience has no impact on individuals' propensity to engage in strategic incompetence.

The impact of gender stereotypes

To evaluate how gender stereotypes shape strategic incompetence, we first look more closely at the gender gap in claimed competence across treatments. Figure 2 displays the average claimed competence by men and women by block and treatment. We find a very small to no gender gap in Block 1 (Panel a) for all treatments. However, the hypothesized gender gaps emerge in the Female and Male treatment in Block 2 (Panel b). While claimed competence by men and women do not significantly differ in the Neutral treatment (46% vs. 38% to be a High type, $p = 0.092$), we find that men claim more incompetence than women in the Female treatment (26% vs. 40%, $p < 0.001$). Similarly in the Male treatment, women claim more incompetence than men (26% vs. 41%, $p < 0.001$).[23]

Figure 2: Claimed competence by gender and treatment.

(a) Block 1 (b) Block 2



Note: The figure displays claimed competence by men and women across treatments in Block 1 (Panel A) and Block 2 (Panel B). Claimed competence refers to the cheap-talk message about one's likelihood of being a High type, and is the inverse measure of strategic incompetence. $p-$values reported are from ranksum tests.

[22] Given private beliefs differ across block, we compare the difference between private belief and claimed incompetence across blocks in a given treatment and find no clear pattern that supports our hypothesized effect of experience in reinforcing strategic incompetence (see Table B7 in the Online Appendix; Wald tests from OLS regressions return $p = 0.054$, $p = 0.876$ and $p = 0.001$ for Neutral, Female and Male treatment, respectively).

[23] As a robustness check, we perform the same analysis by treatment sequence, and find that the observed gender gaps in Block 2 in the Female and Male treatment occur *independently* of the assigned treatment in Block 1. This complementary analysis is reported in the Online Appendix D.

Further, we observe how gender stereotypes affect men's and women's claim relative to the Neutral treatment. We find that stereotypes change claimed incompetence for those whom stereotypes prescribe as 'less competent' (see Panel b of Figure 2). Comparing across treatments, men (women) claim more incompetence in the Female (Male) treatment relative to the Neutral treatment (both $p < 0.001$). On the other hand, claimed competence remain largely unaffected when the treatment is gender-congruent. Women's claimed competence is on average 40% in the Female treatment (vs. 38% in the Neutral treatment, $p = 0.721$), while men's claimed competence is 41% in the Male treatment (vs. 46% in the Neutral treatment, $p = 0.229$).

These results imply that when the task is stereotyped and gender-incongruent (i.e., domains where own gender is believed to be less able), individuals claim more incompetence – though this only emerges in Block 2 of the experiment. Our interpretation is that the stereotype embedded in the trivia in Block 1 might have been subtle and were not recognized immediately. As we alternate the trivia topics at the within-subject level, our results in Block 2 suggest that decision-makers need to be *aware* of stereotype for it to have any impact.[24]

Result 3: A gender gap in strategic incompetence emerges when the task is stereotyped, as individuals claim more incompetence in gender-incongruent domains. These gender gaps arise only in Block 2 of the experiment, suggesting that individuals need to first be aware of stereotype for it to have an impact.

5.3 Origins of the gender gaps in strategic incompetence

To understand why the gender gaps in strategic incompetence in stereotyped tasks only emerge in the latter half of the experiment, we examine the role of private beliefs. Recall that we elicit participants' private beliefs about their ability after the trivia quiz and *prior* to the group investment decision. We first show that the observed gender gaps in strategic incompetence are *fully* explained individuals' private beliefs. Further, we show that individuals, whom stereotype prescribes as 'less able', distort their private beliefs to conform to the stereotype.

To examine the origin of the gender gaps in strategic incompetence, Table 3 presents the coefficients from OLS regressions, where the dependent variable is the claimed competence in Block 2.[25] In model 1, the independent variables include treatment dummies (with Neutral treatment as the reference category), a sex dummy (1 for women, 0 otherwise) and their interaction terms. Consistent with the previous section, results from Wald tests (see at the

[24] To support our interpretation, we find that participants' belief about gender differences in ability (measured in a non-incentivized question in the final questionnaire) in the female- or male-typed trivia is *more* stereotypical when it's assigned in Block 2 compared to when the same trivia is assigned in Block 1. This is driven by a shift from less extreme beliefs (e.g., 'men and women are equally good' or 'slightly better') towards extreme ones (e.g., 'men/women are better'). See Table B11 in the Online Appendix.

[25] Given our results, we focus on Block 2 where the gender gaps are observed. For completeness, Table B8 in the Online Appendix reports the coefficients from OLS regressions where the dependent variable is the claimed competence in Block 1, using the same regression specifications.

Table 3: Determinants of claimed competence in Block 2

Dependent variable: Claimed competence	(1)	(2)	(3)
Neutral T.	*ref.*	*ref.*	*ref.*
Female T.	-19.905***	-10.277**	-9.791**
	(4.724)	(4.148)	(4.004)
Male T.	-5.162	-0.734	-1.454
	(4.838)	(3.903)	(3.904)
Women	-8.095**	-3.846	-3.317
	(3.475)	(2.756)	(3.128)
Women X Female T	22.053***	8.362*	7.730
	(5.066)	(4.984)	(4.931)
Women X Male T	-6.797	-2.362	-2.241
	(4.715)	(4.009)	(3.968)
Private Belief		0.510***	0.524***
		(0.053)	(0.055)
Constant	45.932***	14.578***	1.163
	(3.761)	(3.593)	(13.905)
Control Variables	No	No	Yes
N	440	440	440
Clusters	110	110	110
R-Square	0.091	0.326	0.364
Post-estimation Wald tests			
Coeff. (Women - Men in Female T.)	13.96***	4.52	4.41
$p-$values	[< 0.001]	[0.280]	[0.295]
Coeff. (Women - Men in Male T.)	-14.89***	-6.21**	-5.56*
$p-$values	[< 0.001]	[0.030]	[0.056]
Coeff. (Women in Neutral T. - in Male T.)	-11.96***	-3.10	-3.70
$p-$values	[0.002]	[0.337]	[0.227]
Coeff. (Men in Neutral T. - in Female T.)	-19.91***	-10.28**	-9.79**
$p-$values	[< 0.001]	[0.015]	[0.016]

Notes: This table reports presents the coefficients from OLS regressions in which the dependent variable is claimed competence (i.e., the inverse measure of strategic incompetence) in Block 2. Independent variables in model (1) include treatment dummies (with Neutral treatment as the reference category), sex dummy (1 for women, 0 otherwise) and their interaction terms. Model (2) includes private beliefs about being a High type. Model (3) further include control variables namely trivia performance, age, self-reported risk attitudes, personality traits (agentic and communal), and lying type dummies (high intrinsic cost and high social cost). Standard errors are clustered at the group level. * p<0.10; ** p<0.05; *** p<0.01.

bottom of Table 3) confirm the presence of gender gaps in strategic incompetence between men and women in the Female and Male treatment (both $p < 0.001$). In addition, for a given gender, stereotypes cause men (women) to claim more incompetence in the Female (Male) treatment relative to the Neutral treatment (both $p < 0.001$).

To examine the role of private beliefs, model 2 controls for individual's private belief about being a High type in Block 2, while model 3 additionally includes a set of control variables (i.e., trivia performance in Block 2, age, risk attitude, personality traits, and lying aversion measures). These results show that the private beliefs individuals hold about their ability *fully* account for the observed gender differences in strategic incompetence. After accounting for the private belief, the gender gap in strategic incompetence is fully closed in the Female treatment (model 2: $p = 0.280$ and model 3: $p = 0.278$), but remains somewhat in the Male treatment (model 2: $p = 0.030$ and model 3: $p = 0.059$). Similarly, accounting for private beliefs largely explains the impact of stereotype on women's and men's strategic incompetence in the Male and Female treatment relative to the Neutral treatment (see Wald tests indicated at the bottom of Table 3). For control variables (model 3), we find that risk loving attitudes and age to be positively associated with claimed competence (both significant at 1%). For personality traits,[26] the measure of agency (i.e., 'masculine' traits such as assertiveness and competition) is negatively correlated with claimed competence (significant at 5% level).

These results imply that the observed gender gaps in strategic incompetence are fully accounted for by individuals' private beliefs about ability, which is consistent with *self-stereotyping* (Coffman, 2014). In other words, individuals tend to hold *low* private beliefs in gender-incongruent domains (i.e., when their gender is believed to be 'less able'), which in turn translates into claiming incompetence in those domains. Indeed, in Block 2, men's private beliefs are significantly lower than women's in the Female treatment (42% vs. 64% to be a High type, $p < 0.001$). Similarly, women's private beliefs are significantly lower than men's in the Male treatment (36% vs. 53%, $p < 0.001$).

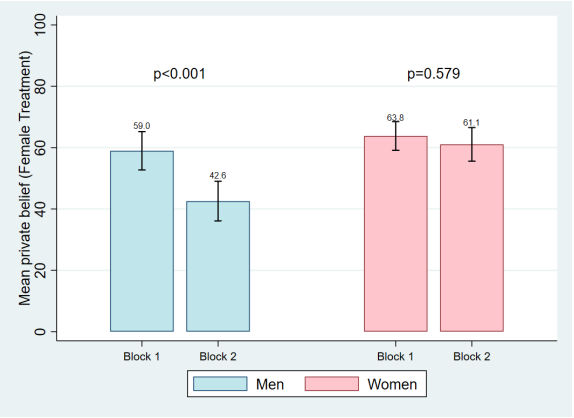
To better understand how these low private beliefs arise in gender-incongruent domains, Figure 3 displays the mean private beliefs of men and women in the Female and Male treatment across the two blocks. Because our within-subjects design alternates the trivia topic, participants always encounter a different trivia quiz in Block 2 than in Block 1. The pattern of private beliefs across blocks suggest that these 'low' private self-assessments observed in gender-incongruent domains have been *downwardly* distorted to align with stereotypes.

When facing a female-typed trivia in Block 1 (Panel a of Figure 3), men believe to be a High type with 59% chance on average, yet when the same quiz is presented in Block 2, men's private beliefs drop to 43% ($p < 0.001$). A similar pattern is observed among women in the Male treatment (Panel b of Figure 3): when facing a male-typed trivia in Block 1, women on average believe to be a High type with 48% chance, but this falls to 36% when the same

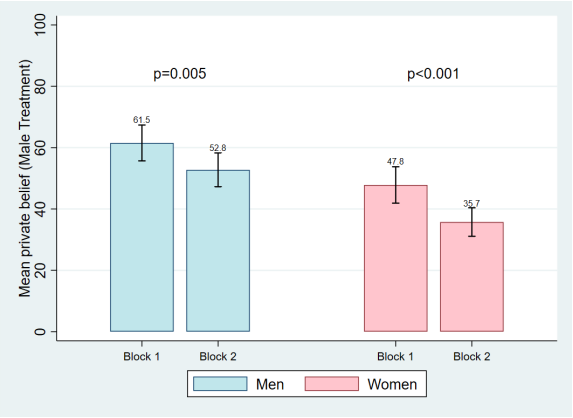
[26] Table B12 in the Online Appendix reports the factor analysis of the 16-item Personal Attributes Questionnaire. The results show a clear two-factor structure with acceptable internal consistency (Cronbach's alpha) for both personality dimensions (i.e., agency and communion). We therefore averaged item responses within each trait and used in the regression analyses.

Figure 3: Private beliefs in stereotyped treatments by gender across blocks.

(a) Female Treatment



(b) Male Treatment



Note: The figure displays private beliefs about being a High type by men and women in the Female treatment (Panel A) and Male treatment (Panel B) across blocks. p-values reported are from ranksum tests.

quiz is presented in Block 2 ($p < 0.001$). This result is particularly striking given neither gender gaps in performance nor within-gender performance differences across blocks. Taken together, these findings suggest that an awareness of stereotype through repetition leads individuals to distort their private self-assessment into believing that they are incompetent in gender-incongruent domains, even though their true ability remains unaffected.

Finally, we note that belief distortion seems to be driven by individuals whom stereotype prescribes to be less able and only occurs when the trivia is stereotyped. The private beliefs of women in the Female treatment remain highly constant across blocks (64% in Block 1 vs. 61% in Block 2, $p = 0.579$). However, the private beliefs of men in the Male treatment *do* differ across blocks (62% in Block 1 vs. 53% in Block 2, $p = 0.005$).[27] In the Neutral treatment, where men and women are believed to be equally able, we do not observe any belief distortion across blocks (men $p = 0.350$; women $p = 0.428$; see Figure C1 in Online Appendix).

In summary, the mechanism behind the gender gaps in strategic incompetence observed in Block 2 is two-fold. (i) The observed gaps in behavior are fully explained by gender differences in private beliefs, consistent with self-stereotyping. (ii) These 'self-stereotyping' beliefs are not innate but have been distorted *downward* to confirm the stereotype in which *their* gender is believed to be less able. Together, our findings suggest that after being aware of stereotypes, individuals internalize them and act upon beliefs of incompetence in gender-incongruent domains.

[27] This asymmetry may relate to gender differences in the formation of motivated belief (Thaler, 2021).

5.4 Credibility and perceived credibility

We provide additional evidence on how stereotypes shape credibility in communication using the belief data elicited after the group investment decision. Recall that participants are asked to estimate the likelihood that each group member is a High type after having observed their claims (i.e., first-order beliefs about others). Then, we elicit their second-order belief: they are asked to estimate the average first-order beliefs submitted by their group members about them. These statistics are reported in Table B9 and B10 in the Online Appendix.

We first look at the first-order beliefs. If the average beliefs about an individual aligns closely to the cheap-talk message, it suggests that the message is credible. Given a group of four, we calculate the mean first-order beliefs held by the other three members about each participant. We find that the mean first-order beliefs are consistently higher than what has been communicated in the cheap-talk message. This is true for all treatments and blocks, suggesting that claims of incompetence are discounted (the largest p-value from pairwise comparisons is 0.034).

However, even after discounting claims, stereotypes still shape how men and women are perceived in Block 2, where we find them to be impactful. When the task is stereotyped and gender-incongruent, men and women are on average believed to be a High type with only 38% and 36%, respectively. This is far below a benchmark of 50% in the case where believed ability is gender neutral (both $p < 0.001$). This suggests that, although individuals are aware that others might have strategically claimed incompetence, they still perceive these claims through the lens of gender stereotypes. By contrast, in the Neutral treatment, the mean first-order beliefs about men and women do not differ significantly from the 50% benchmark (men, $p = 0.132$; women, $p = 0.062$).[28]

If gender stereotypes lead to a biased judgment of abilities based on gender when people are aware of them, what do messengers think about the credibility of their communication. This is reflected in the second-order beliefs held by men and women. When the task is stereotyped and gender-incongruent, individuals expect others to judge them stereotypically: men (women) believe they are more likely to be perceived as a Low type when the trivia topic is female-typed (male-typed) ($p = 0.001$ and $p < 0.001$, respectively). These expectations are well-aligned with the views of others: comparing their second-order beliefs with the actual first-order beliefs (i.e., average views held by group members) reveals no significant differences ($p = 0.533$ for men in Female treatment, and $p = 0.351$ for women in Male treatment). In other words, individuals who have claimed to be incompetent in gender-incongruent domains perceive their claim to be credible, which also aligns with the actual views of others.

[28] To further support our interpretation, we point out that in Block 1 where we find no impact of stereotypes on communication, the mean first-order beliefs about men and women are close to 50%. Pairwise comparisons reveal no significant differences (Neutral, $p = 0.480$; Female $p = 0.746$; Male $p = 0.112$), suggesting that they are perceived to be equally able in all treatments in Block 1.

6 Discussion & Conclusion

In this paper, we provide novel evidence from a laboratory experiment showing that individuals strategically claim incompetence to avoid being assigned an undesirable public goods task in a group. While prior studies focus on the promotion of ability in the positive domain (where high ability pays off), we address individuals' ability communication in the negative domain. Our results highlight the importance of stereotypical beliefs about gendered ability for men's and women's willingness to claim incompetence. When there is stereotypical belief ascribing own gender as 'less able' in a particular domain, a gender gap in playing dumb emerges. This however arises only with experience.

Our experimental findings enrich the literature on stereotypes and strategic communication in two ways. First, while prior work documents self-stereotyping as a mechanism behind a gender gap in group contribution (e.g., Coffman, 2014), we show that such low self-assessments in a gender-incongruent domain does not occur by default. Instead, it may require individuals to be *aware* of stereotypes. After recognizing the presence of a stereotype, individuals whose gender is *believed* to be less competent distort their *own* belief to confirm the stereotype. Our work shows when and how stereotypes set in. Coffman (2014) employed the trivia combining both female and male-typed questions. Our design differs by separating different stereotypes at a within-subject level, enabling us to pinpoint *when* stereotypes begin to shape beliefs and behavior. Altogether, our work demonstrates how individuals internalize stereotypical beliefs despite being largely inaccurate; once individuals recognize stereotypes, they distort their private self-assessments, judgment of others' abilities and the way they strategically signal their (in)competence.

While we remain cautious about the generalizability of our findings, we believe they are relevant for policies to reduce group inequality at work. Given evidence on how undesirable, low-promotability tasks are disproportionately borne by women, our work suggests that this may stem from the fact that the majority of these public goods tasks are perceived as female-typed. To minimize an unbalanced assignment of such tasks arising from strategic incompetence, organizations can benefit from breaking down stereotypes. By debiasing inaccurate beliefs about ability, individuals believed to be 'incompetent' will find it harder to justify their incompetence.

Our work opens up numerous future research avenues. While we demonstrate how gender stereotypes about ability differences shape strategic incompetence, future research could examine it in other contexts such as stereotypes about age, race or their intersectionality. Studying strategic incompetence through low effort provision to evade future task assignment instead of communication can also be interesting. Finally, looking at the managerial responses to incompetence claims is worth exploring. If managers fail to account the gender gap in strategic incompetence, this can further reinforce gender disparities in task assignment in a top-down approach.

References

Abeler, Johannes, Daniele Nosenzo, and Collin Raymond, "Preferences for Truth-Telling," *Econometrica*, 2019, *87* (4), 1115–1153.

Argyris, Chris, "A Life Full of Learning," *Organization Studies*, September 2003, *24* (7), 1178–1192.

Babcock, Linda, Maria P. Recalde, and Lise Vesterlund, "Gender Differences in the Allocation of Low-Promotability Tasks: The Role of Backlash," *American Economic Review*, 2017, *107* (5), 131–135.

_ , _ , _ , and Laurie Weingart, "Gender Differences in Accepting and Receiving Requests for Tasks with Low Promotability," *American Economic Review*, 2017, *107* (3), 714–747.

Banerjee, Ritwik and Priyoma Mustafi, "Using social recognition to address the gender difference in volunteering for low-promotability tasks," *Management Science*, 2025.

Barron, Kai, Ruth Ditlmann, Stefan Gehrig, and Sebastian Schweighofer-Kodritsch, "Explicit and Implicit Belief-Based Gender Discrimination: A Hiring Experiment," *Management Science*, May 2024.

Bock, Olaf, Ingmar Baetge, and Andreas Nicklisch, "hroot: Hamburg Registration and Organization Online Tool," *European Economic Review*, October 2014, *71*, 117–120.

Bohren, J. Aislinn, Kareem Haggag, Alex Imas, and Devin G. Pope, "Inaccurate Statistical Discrimination: An Identification Problem," *The Review of Economics and Statistics*, September 2023, pp. 1–45.

Bolino, Mark, David Long, and William Turnley, "Impression management in organizations: Critical questions, answers, and areas for future research," *Annual Review of Organizational Psychology and Organizational Behavior*, 2016, *3* (1), 377–406.

Bordalo, Pedro, Katherine Coffman, Nicola Gennaioli, and Andrei Shleifer, "Stereotypes," *Quarterly Journal of Economics*, November 2016, *131* (4), 1753–1794.

_ , _ , _ , and _ , "Beliefs about Gender," *American Economic Review*, March 2019, *109* (3), 739–773.

Buser, Thomas, Muriel Niederle, and Hessel Oosterbeek, "Gender, Competitiveness, and Career Choices*," *Quarterly Journal of Economics*, August 2014, *129* (3), 1409–1447.

Chan, Curtis K. and Michel Anteby, "Task Segregation as a Mechanism for Within-job Inequality: Women and Men of the Transportation Security Administration," *Administrative Science Quarterly*, June 2016, *61* (2), 184–216.

Chang, Jenny, Silvia Saccardo, and Jana Gallus, "Leaning In Softly: On Gender and Self-Promotion," August 2025.

Charness, Gary, Aldo Rustichini, and Jeroen van de Ven, "Self-confidence and strategic behavior," *Experimental Economics*, March 2018, *21* (1), 72–98.

Chen, Daniel, Astrid Hopfensitz, Boris van Leeuwen, and Jeroen van de Ven, "The Strategic Display of Facial Expressions," 2024.

Chen, Daniel L., Martin Schonger, and Chris Wickens, "oTree—An open-source platform for laboratory, online, and field experiments," *Journal of Behavioral and Experimental Finance*, 2016, *9*, 88–97.

Chu, Bryan, Ben Handel, Jon Kolstad, and Ulrike Malmendier, "Gender Differences in Non-Promotable Tasks: The Case of Clinical Note-Taking," 2022.

Coffman, Katherine B., Christine L. Exley, and Muriel Niederle, "The Role of Beliefs in Driving Gender Discrimination," *Management Science*, June 2021, *67* (6), 3551–3569.

_ , Manuela R. Collis, and Leena Kulkarni, "Whether to Apply," *Management Science*, July 2024, *70* (7), 4649–4669.

Coffman, Katherine Baldiga, "Evidence on Self-Stereotyping and the Contribution of Ideas*," *Quarterly Journal of Economics*, November 2014, *129* (4), 1625–1660.

Cubel, Maria, Laura Hospido, and Judit Vall, "Survey on the Work Environment in Economics," 2024.

Danz, David, Lise Vesterlund, and Alistair J. Wilson, "Belief Elicitation and Behavioral Incentive Compatibility," *American Economic Review*, September 2022, *112* (9), 2851–2883.

Diekman, Amanda B. and Alice H. Eagly, "Stereotypes as Dynamic Constructs: Women and Men of the Past, Present, and Future," *Personality and Social Psychology Bulletin*, November 2000, *26* (10), 1171–1188.

Dufwenberg, Martin and Martin A. Dufwenberg, "Lies in disguise – A theoretical analysis of cheating," *Journal of Economic Theory*, May 2018, *175*, 248–264.

Exley, Christine L and Judd B Kessler, "The Gender Gap in Self-Promotion*," *The Quarterly Journal of Economics*, August 2022, *137* (3), 1345–1381.

_ , Oliver P Hauser, Molly Moore, and John-Henry Pezzuto, "Believed Gender Differences in Social Preferences*," *The Quarterly Journal of Economics*, February 2025, *140* (1), 403–458.

Fiske, Susan T., Amy J. C. Cuddy, Peter Glick, and Jun Xu, "A model of (often mixed) stereotype content: Competence and warmth respectively follow from perceived status and competition," in "Social Cognition" 2018. Num Pages: 53.

Gneezy, Uri, Agne Kajackaite, and Joel Sobel, "Lying Aversion and the Size of the Lie," *American Economic Review*, February 2018, *108* (2), 419–453.

Healy, Paul J and Greg Leo, "BELIEF ELICITATION: A USER'S GUIDE."

Hopfensitz, Astrid, Christina Rott, and Ernesto Reuben, "Arbitrary stereotypes cause gender segregation in labor markets," 2025. mimeo.

Kahneman, Daniel and Amos Tversky, "Subjective probability: A judgment of representativeness," *Cognitive Psychology*, July 1972, *3* (3), 430–454.

Karni, Edi, "A Mechanism for Eliciting Probabilities," *Econometrica*, 2009, *77* (2), 603–606. _eprint: https://onlinelibrary.wiley.com/doi/pdf/10.3982/ECTA7833.

Kurschilgen, Michael and Isabel Marcin, "Communication is more than information sharing: The role of status-relevant knowledge," *Games and Economic Behavior*, January 2019, *113*, 651–672.

Kübler, Dorothea, Julia Schmid, and Robert Stüber, "Gender discrimination in hiring across occupations: a nationally-representative vignette study," *Labour Economics*, December 2018, *55*, 215–229.

Lepage, Louise-Pierre, Xiaomeng Li, and Basit Zafar, "Anticipated Discrimination and Major Choice," 2025. mimeo.

Ludwig, Sandra, Gerlinde Fellner-Röhling, and Carmen Thoma, "Do women have more shame than men? An experiment on self-assessment and the shame of overestimating oneself," *European Economic Review*, February 2017, *92*, 31–46.

McKinsey & Company, "Women in the Workplace 2021," Technical Report, McKinsey Company and LeanIn.Org 2021.

McLuhan, Arthur, "Adopting a Cloak of Incompetence: Impression Management Techniques for Feigning Lesser Selves," *Sociological Theory*, 2020, *38* (2), 122–141.

_ , "Feigning Incompetence in the Field," *Qualitative Sociology Review*, 2020, *16* (2), 62–74.

Miller, Candace and Josipa Roksa, "Balancing Research and Service in Academia: Gender, Race, and Laboratory Tasks," *Gender & Society*, February 2020, *34* (1), 131–152.

Nelson, Laura K., Alexandra Brewer, Anna S. Mueller, Daniel M. O'Connor, Arjun Dayal, and Vineet M. Arora, "Taking the Time: The Implications of Workplace Assessment for Organizational Gender Inequality," *American Sociological Review*, August 2023, *88* (4), 627–655.

Niederle, Muriel and Lise Vesterlund, "Do Women Shy Away From Competition? Do Men Compete Too Much?*," *The Quarterly Journal of Economics*, August 2007, *122* (3), 1067–1101.

Pater, Irene E. De, Annelies EM Van Vianen, and Myriam N. Bechtoldt, "Gender differences in job challenge: A matter of task allocation," *Gender, Work & Organization*, 2010, *17* (4), 433–453.

Reuben, Ernesto, Paola Sapienza, and Luigi Zingales, "How stereotypes impair women's careers in science," *Proceedings of the National Academy of Sciences*, March 2014, *111* (12), 4403–4408.

Sarsons, Heather, Klarita Gërxhani, Ernesto Reuben, and Arthur Schram, "Gender Differences in Recognition for Group Work," *Journal of Political Economy*, January 2021, *129* (1), 101–147.

Schudy, Simeon, Susanna Grundmann, and Lisa Spantig, "Individual Preferences for Truth-Telling," November 2024.

Schwardmann, Peter and Joël van der Weele, "Deception and self-deception," *Nature Human Behaviour*, October 2019, *3* (10), 1055–1061. Number: 10.

_ , Egon Tripodi, and Joël J. Van Der Weele, "Self-Persuasion: Evidence from Field Experiments at International Debating Competitions," *American Economic Review*, April 2022, *112* (4), 1118–1146.

Smith, Vernon L., "Experimental Economics: Induced Value Theory," *The American Economic Review*, 1976, *66* (2), 274–279.

Soldà, Alice, Changxia Ke, Lionel Page, and William von Hippel, "Strategically delusional," *Experimental Economics*, September 2020, *23* (3), 604–631.

Spence, J. T., R. Helmreich, and J. Stapp, "Ratings of self and peers on sex role attributes and their relation to self-esteem and conceptions of masculinity and femininity," *Journal of Personality and Social Psychology*, July 1975, *32* (1), 29–39.

Stadnicka, Agnieszka, "Feigned Digital Incompetence as a New Managerial Challenge: A Systematic Literature Review and Future Research Agenda," *Annales Universitatis Mariae Curie-Skłodowska, Sectio H Oeconomia*, 2024, *58* (4), 223–248.

Thaler, Michael, "Gender differences in motivated reasoning," *Journal of Economic Behavior & Organization*, November 2021, *191*, 501–518.

Thoma, Carmen, "Under- versus overconfidence: an experiment on how others perceive a biased self-assessment," *Experimental Economics*, March 2016, *19* (1), 218–239.

Tradenta, Julio Mancuso, Ananta Neelim, and Joseph Vecci, "Gender differences in the self-promotion of prosocial behaviour: exploring the female modesty constraint," *Experimental Economics*, January 2025, *28* (1), 1–21.

Villas-Boas, Sofia B., Rebecca L. C. Taylor, and Elizabeth Deakin, "Effects of peer comparisons on low-promotability tasks: Evidence from a university field experiment," *Journal of Economic Behavior & Organization*, February 2019, *158*, 351–366.

ONLINE APPENDIX

Online Appendix A Instructions (Translated from French)

At the beginning of the session, participants received the general instructions, and the part instructions before each relevant part. They were read aloud using an audio recording. Apart from the trivia topics, which depended on the assigned treatment, all instructions remained identical.

General Instructions *(printed)*

Hello and welcome to today's experiment. We will go through the instructions together and read them aloud. Please turn off your phone and put it away. You are not allowed to use your phone or talk with others during the experiment. You are not allowed to open tabs or computer programs other than the one opened for you. If you violate any of these rules, you will be excluded from the experiment immediately and you will not receive any payment.

During this experiment, you can earn money. The amount of money you earn depends on your decisions as well as those made by others in the session. Therefore, please read the instructions carefully.

The experiment is divided into two blocks, followed by a questionnaire at the end. Each block has four parts. Thus, there will be a total of eight parts. You will receive the part instructions at the beginning of the respective part. The instructions are identical for all participants. You will have the opportunity to ask questions privately to the experimenter in case you do not understand the instructions. To do so, please press the red button on the side of your table or raise your hand. The experimenter will come to answer in private. Please do not ask questions aloud.

How will your decisions affect your earnings?
For today's experiment, **you receive 5 euros for participating in the study plus additional earnings**. The exact amount of additional earnings is determined at the end of today's session. The computer program randomly selects one part from each block. Your collected points in the two selected parts determine the additional earnings. **100 points are worth 5 euros**. Any decimal points will be rounded. Since all parts have an equal chance to be selected, it is in your best interest to make decisions as if that part is selected for reward and determines the additional earnings.

Anonymity of your decisions
All decisions and responses will be anonymous. No one will be able to determine which decisions you made. You will not know the identity of the other participants before, during, or after the experiment. The other participants will not know your identity either.

You will now receive the instructions for Block 1 - Part 1.

Block 1 - Part 1 *(printed)*

You will now respond to a trivia quiz with **20 multiple-choice questions**. These questions are fun facts about various topics such as *[Neutral treatment: cities and countries, Earth and nature, food, animals, board games, popular movies, and popular books; Female treatment: cooking, home, art and crafts, fashion and clothes, mind-body sports, musical films, and romance books; Male treatment: fixes and repairs, information and technology, video games, cars, competitive sports, action movies, and sci-fi books]*. For each question, you will see a label, indicating the respective topic.

Each question has five answer options and one of them will be correct. You will have **5 minutes** in total to submit your answers to the questions. The remaining time will be displayed at the top-right corner of the screen.

If this part is selected at the end of the experiment, you will receive an additional payoff based on your score. **For each correct answer, you receive 12 points**. There is no point deduction for an incorrect or no answer.

If you have questions, please press the red button. The experimenter will answer them in private.

Block 1 - Part 2 *(printed)*

You will now answer a question about your performance in the trivia quiz you just completed.

If this part is selected at the end of the experiment, your guess determines whether you receive a prize of 240 points or not. **The payment rule is designed so that you can secure the largest chance of winning the prize by reporting your most-accurate guess.** The precise payment rule details are available upon request at the end of the experiment.

You will be matched with three other participants in the session, whose anonymous IDs will be shown on the screen. Your trivia performances will be ranked from the lowest score (rank 4) to the highest score (rank 1). Any ties will be broken randomly. This ranking means that ranks 4 and 3 are in the bottom half, and ranks 2 and 1 are in the top half.

Your guess: What do you think is the likelihood (in percent) that you are in the top half?

You can enter any value between 0 and 100(%).

- 0(%) means that you are completely certain that you are in the bottom half.
- 50(%) means that you believe it's equally likely that you are in the bottom half or the top half.
- 100(%) means that you are completely certain that you are in the top half.

This guess will **not** be shown to the other participants.

Before you submit your guess, you will answer a few understanding questions about this part on the computer screen. If you have any questions, please press the red button and we will answer in private.

–Understanding questions for part 2 (on screen)–

1. Your trivia performance will be compared and ranked with three other participants in this session. (True/False)
2. Which statement is correct?
   (a) The trivia performance ranking is randomly determined.
   (b) The trivia performance is ranked from the lowest (rank 4) to the highest score (rank 1).
   (c) The trivia performance is ranked from the highest (rank 4) to the lowest score (rank 1).
3. If your guess to be in the top half is a number between 1 and 49, what does it mean?
   (a) You are completely certain that you are in the bottom half.
   (b) You are completely certain that you are in the top half.
   (c) You are not completely certain but believe it's more likely that you are in the top half.
   (d) You are not completely certain but believe it's more likely that you are in the bottom half.
4. If your guess to be in the top half is a number between 51 and 99, what does it mean?
   (a) You are completely certain that you are in the bottom half.
   (b) You are completely certain that you are in the top half.
   (c) You are not completely certain but believe it's more likely that you are in the top half.

(d) You are not completely certain but believe it's more likely that you are in the bottom half.

Block 1 - Part 3 *(printed)*

You are matched again with the same three other participants to form a group of four. If this part is selected at the end of the experiment, the decisions made by you and your group members will affect your additional payoff. Therefore, please read the following instructions carefully.

Group Investment
You will interact with your group through the computer towards a group investment decision. The outcome of this investment will affect the points earned by each group member. But only one group member will invest in the group account and bear the investment cost of **100 points**.

Return from Investment and Participant Types
The outcome of investment depends on the type of the investor. Each participant is assigned a type, either **'Low'** or **'High'** based on the trivia performance in part 1. The trivia performances of all group members will be ranked from the lowest to the highest score. Any ties will be broken randomly.

- The **two lower performing group members** are **Low** types.
- The **two higher performing group members** are **High** types.
  Neither you nor your group members will be informed about your own or each other's type.

The investment can either **succeed or fail**. The chance of success is higher if the investor is a **High** type.

- **If the investor is a Low type**:
  - 25% chance the investment succeeds → each member earns 240 points.
  - 75% chance the investment fails → each member earns 160 points.
- **If the investor is a High type**:
  - 75% chance the investment succeeds → each member earns 240 points.
  - 25% chance the investment fails → each member earns 160 points.

Regardless of the outcome and the investor's type, the investor will pay the investment cost of 100 points.

Your Decisions
Before the group investment outcome is determined, there will be **two stages**: first **Communication of type** and then **Selection of investor**.

1. Communication of type
Each participant has been assigned an anonymous ID and will have the opportunity to send a message to their group. This message allows each member to indicate how likely they think they are a High type.

A screenshot of the communication stage is displayed below. The anonymous IDs were chosen for illustrative purposes and likely vary for your group.

(screenshot of communication stage displayed here)

Each participant will select a number between 0 and 100 to complete the sentence: "I think that I am a High type with ...%."

- 0(%) means that you are completely certain that you are a Low type

- 50(%) means that you believe it's equally likely that you are a Low type or a High type.
- 100(%) means that you are completely certain that you are a High type.

Once all group members submit their messages, they will be displayed to the entire group and each member will select whom they would like to make the investment.

2. Selection of investor
The investor is selected through majority voting.

- Each participant will select one of the four group members (including themselves).
- The participant with most votes will be selected to invest in the group account.
- In case of a tie, the computer program will select one of the tied participants randomly.

A screenshot of the selection stage with *hypothetical messages* is displayed below. The percentages for the messages were chosen randomly between 0 and 100. The anonymous IDs are displayed in a random order. This example does not indicate what you should do or what you can expect others to do.

(screenshot of selection stage displayed here)

Investment Outcomes and Final Payoffs
After the investor is chosen by the group, the computer program determines whether the group investment succeeds or fails based on the investor's type.

- If the investment **succeeds**:
  - the investor receives 140 points (that is, 240 points - investment cost of 100 points).
  - the other group members receive 240 points each.
- If the investment **fails**:
  - the investor receives 60 points (that is, 160 points - investment cost of 100 points).
  - the other group members receive 160 points each.

At the end of the experiment
You will be informed about the number of votes each group member received and the chosen investor. Furthermore, you will be informed whether the investment succeeded or failed, and the final payoffs of all group members. You will **not** be informed whether the investor is a Low type or a High type.

SUMMARY
1. One of the four group members must invest in the group account.
2. Each group member is either a Low type or a High type, based on the ranking of the trivia performance.
3. Low types have a 25% chance of investment success, while High types have a 75% chance of investment success.
4. Each group member sends a message about how likely they think to be a High type.
5. All group members observe all messages and privately select a group member to invest.
6. The group member with the most votes invests and pays the cost of 100 points.
7. If the investment succeeds, the investor receives 140 points and the others receive 240 points each.
8. If the investment fails, the investor receives 60 points and the others receive 160 points each.
9. At the end of the experiment, you will learn which group member invested, whether the investment succeeded and the final payoffs for this part.

Please take a few minutes to re-read the instructions. Do not hesitate to press the red button if you need further explanation, or have a question. The experimenter will answer them in private. After this, you will answer a few understanding questions about the group investment on the computer screen.

– Understanding questions for part 3 (on screen)–

1. If Florence-969 received 2 votes, Jules-013 received 1 vote, Béatrice-477 received 1 vote and Matheiu-268 received 0 vote, who will be selected as the investor?
   (a) Florence-969
   (b) Jules-013
   (c) Béatrice-477
   (d) Matheiu-268
2. How many points will be deducted from the investor's payoffs regardless of the investment outcome? (100)
3. If the group selects a participant who is a Low type, what is the probability that the investment ...
   - Succeeds? (25%)
   - Fails? (75%)
4. If the group selects a participant who is a High type, what is the probability that the investment ...
   - Succeeds? (75%)
   - Fails? (25%)
5. At the end, if you learn that the investment succeeded, what can be inferred about the investor's type?
   (a) The investor must be a Low type.
   (b) The investor must be a High type.
   (c) The investor could be either a Low type or a High type; both types can result in the investment to succeed.

Block 1 - Part 4 *(printed)*

You will now answer some questions related to the group investment in the previous part.

In this part, you will make a total of four guesses. If this part is selected at the end of the experiment, one of the four guesses will be randomly selected by the program and used to determine whether you receive a prize of 240 points or not. **The payment rule is designed so that you can secure the largest chance of winning the prize by reporting your most-accurate guess**. The precise payment rule details are available by request at the end of the experiment.

In the previous part, each group member sent a message indicating their likelihood to be a High type. You will see a summary of the messages sent by your group member on the computer screen.

Your guess: What do you think is the likelihood (in percentage) that each member is a High type?

You can enter any value between 0 and 100(%).

- 0(%) means that you are completely certain that the group member is a Low type.
- 50(%) means that you believe it's equally likely that the group member is a Low type or a High type.
- 100(%) means that you are completely certain that the group member is a High type.

You will submit three guesses, one about each group member. Then, the instruction of the fourth guess will appear.

These guesses will **not** be shown to the other participants.

Please press the red button if you need further explanation or have a question.

–Instructions for the fourth guess (i.e., second-order belief) (on screen)–

We have asked your group members namely (anonymous IDs of the group members displayed here) about the likelihood they believe you are a High type.

Recall that they have seen the following message in the previous part: *"I think I am a High type with (communicated belief displayed here))%."*

Your guess: What do you think is the average value of the three guesses submitted by your group members?

You can enter any value between 0 and 100(%).

- 0(%) means that you think they are completely certain that you are a Low type.
- 50(%) means that you think they believe it's equally likely that you are a Low type or a High type.
- 100(%) means that you think they are completely certain that you are a High type.

Please press the red button if you have a question. Otherwise, you can enter your guess and click on the Next button to continue.

—

Block 2 instructions

At the end of Block 1, participants were informed that the instructions of Block 2 would be displayed on the computer screen. They received part instructions before each relevant part. There were no understanding questions for the belief (part 2) and the group investment (part 3) to avoid repetition.

Final Questionnaire *(on screen)*

- *(SOEP general risk attitude)* In general, how willing are you to take risks on a scale of 0 to 10? 0 means you are "completely unwilling to take risks" and 10 means you are "completely willing to take risks."
- *(Non-incentivized lying aversion)* Imagine that the host of a live radio shows calls you to participate in a raffle.
  Your role is as follows: you must toss a coin 4 times and indicate the number of tails you got. You will receive 10 euros for each tail you got. You know that the host cannot under any circumstances cehck whether you have indicated the exact number of tails.
  - Situation 1: Imagine the unlikely case where you get 4 tails. How many talks will you indicate to the host?
  - Situation 2: Imagine the unlikely case where you get 0 tails. How many talks will you indicate to the host?
- *(16-item Personal Attributes Questionnaire)* The questions below ask you about the type of person you think you are. Each question consist of two characteristics. Between the two, a scale of 1 to 5 is displayed

  You must select a number to indicate the characteristics that best describe you, 1 mean you think the characteristic on the left best describe you , while 5 means that the characteristic on the right best describe you.

- Not at all independent/Very independent
- Not at all emotional/Very emotional
- Very passive/Very active
- Not at all able to devote self completely to others/Able to devote self completely to others
- Very rough/Very gentle
- Not at all helpful to others/Very helpful to others
- Not at all competitive/Very competitive
- Not at all kind/Very kind
- Not at all aware of others' feelings/Very aware of others' feelings
- Can make decisions easily/Has difficulty making decisions
- Give up very easily/Never give up easily
- Not at all self-confident/Very self-confident
- Feel very inferior/Feel very superior
- Not at all understanding of others/Very understanding of others
- Very cold in relations with others/Very warm in relations with others
- Go to pieces under pressure/Stand up well under pressure.

- *(Non-incentivized belief about ability)* In Part 1 of each block, you took the quiz on various topics. **For each quiz, on average, do you think men are better, men and women are equally good or women are better?**

  - **Block 1**: the topics were [a list of topics displayed here, depending on treatment].
    -Men are better than women.
    -Men are slightly better than women.
    -Men and women are equally good.
    -Women are slightly better than men.
    -Women are better than men.
  - **Block 2**: the topics were [a list of topics displayed here, depending on treatment].
    -Men are better than women.
    -Men are slightly better than women.
    -Men and women are equally good.
    -Women are slightly better than men.
    -Women are better than men.

- *(Ego-relevance of the quiz)* Not counting the money you can receive for your trivia score, how important is it to you to do well on these quizzes? Please rate from 1 "Not at all important" to 7 "Very important"

Explanation of incentivization of beliefs provided upon request at the end of the session

(printed)

Payment rule for Part 2

At the end of the experiment, if Part 2 in either Block 1 or 2 is selected by the program, the following rule applies.

To determine whether you get the additional payment of 240 points, we will compare your guess to be in the top half to a random draw between 0 and 100. All numbers are equally likely to be selected. We refer to your guess as G and the random draw as R.

- If $R \leq G$, you will receive 240 points if you are in top half (i.e., Ranks 1 or 2) and nothing if you are in the bottom half (i.e., Ranks 3 or 4).
- If $R > G$, you will receive 240 points with R% and nothing with (1-R)%.

For example:

- Suppose your guess to be in the top half is 75.
- Now suppose that the randomly drawn number is 46.
- Since 46 is lower than 75, you will receive 240 points if you are in the top half and nothing if you are in the bottom half.

Another example:

- Suppose your guess to be in the top half is 75.
- Now suppose that the randomly drawn number is 80.
- Since 80 is higher than 75, you will receive 240 points with 80% chance and nothing with 20% chance.
- In this case, the program conducts a lottery where the chance of receiving 240 points is equal to 80%.

It is always better for you to guess what you really believe:

Imagine you are rather confident to be in the top half (say, with 75%), but instead of submitting a 75, you submit a guess of 50.

- If the random draw is 55, which is higher than your guess (50), you earn 240 points with 55% and nothing with 45%.
- However, had you submitted 75 (your true belief), you will receive 240 points if you are in the top half, and nothing if you are in the bottom half. Since your true belief is 75% to be in the top half, this gives you a higher chance to receive the payment (75% vs. 55%).
- This means that answering your true belief maximizes the chance to receive the payment.

Payment rule for Part 4

At the end of the experiment, if Part 4 in either Block 1 or 2 is selected by the program, the following rule applies.

The program first randomly selects one of the four guesses and used to determine your additional payment. Recall that the first three guesses were about the likelihood each group member is a High type, while for the fourth guess, you were asked to estimate the average guesses made by the three group members about you being a High type.

If the selected guess is one of the first three guess:

The payment rule is similar to the one in Part 2 **EXCEPT** that when the random draw is lower than or equal to your guess, then you receive 240 points if the group member is a High type, and nothing if that group member is a Low type.

If the selected guess is the fourth guess:

The program first calculates the average (mean) of the guesses submitted by the three group members about you being a High type. We refer to this mean as X.

To determine whether you get 240 points, we will compare your guess to a random draw between 0 and 100. All numbers are equally likely to be selected. We refer to your guess as G and the random draw as R.

- If $R \leq G$, you will receive 240 points with X% and nothing with (1-X)%.
- If $R > G$, you will receive 240 points with R% and nothing with (1-R)%.

Online Appendix B Appendix Tables

Table B1: Details of treatment sequences and sessions conducted.

Treatment Sequence	Men	Women	*N*	Sessions
NeutralFemale	37	43	80	4
NeutralMale	42	42	84	4
FemaleNeutral	42	42	84	5
FemaleMale	40	40	80	4
MaleNeutral	40	40	80	4
MaleFemale	41	43	84	4
Total	242	250	492	25

Notes: This table summarizes the treatments sequences and sessions conducted with all observations. We have excluded N=52 from our analysis due to gender imbalance in the group, leaving us with N=440. Including these observations do not change the conclusion of the paper.

Table B2: Number of observations by block and treatment (gender balanced only)

	Block 1			Block 2		
Treatment	Men	Women	*N*	Men	Women	*N*
Neutral	74	74	148	74	74	148
Female	74	74	148	72	72	144
Male	72	72	144	74	74	148
Total	220	220	440	220	220	440

Notes: This table summarizes the number of observation by block and treatment, keeping only gender balanced groups.

Table B3: Summary statistics: Block 1 by treatment (gender balanced only)

	(1) Neutral		(2) Female		(3) Male		(1-2)	(1-3)	(2-3)
								$p-$value	
	Mean	SD	Mean	SD	Mean	SD			
Age (in years)	21.48	2.37	21.59	3.52	21.47	2.55	$p = 0.274$	$p = 0.936$	$p = 0.351$
Business & Economics (dummy)	0.55	0.50	0.47	0.50	0.52	0.50	$p = 0.163$	$p = 0.569$	$p = 0.413$
SOEP risk attitude (0-10)	6.53	1.79	6.61	2.14	6.48	1.92	$p = 0.613$	$p = 0.989$	$p = 0.586$
High intrinsic lying cost (dummy)	0.34	0.47	0.33	0.47	0.27	0.45	$p = 0.902$	$p = 0.214$	$p = 0.262$
High social lying cost (dummy)	0.14	0.34	0.16	0.37	0.10	0.31	$p = 0.513$	$p = 0.415$	$p = 0.145$
Agentic trait (1-5)	3.48	0.61	3.42	0.64	3.47	0.62	$p = 0.487$	$p = 0.846$	$p = 0.417$
Communal trait (1-5)	3.89	0.54	3.92	0.58	3.92	0.54	$p = 0.535$	$p = 0.626$	$p = 0.896$
Observations	148		148		144				

Notes: This table displays summary statistics of participants by treatment in Block 1. The p-values reported are from chi-square tests for dummy variables and ranksum tests for continuous variables.

Table B4: Summary statistics: Block 2 by treatment (gender balanced only)

	(1) Neutral		(2) Female		(3) Male		(1-2)	(1-3)	(2-3)
								$p-$value	
	Mean	SD	Mean	SD	Mean	SD			
Age (in years)	21.34	2.15	21.35	2.60	21.83	3.61	$p = 0.567$	$p = 0.997$	$p = 0.621$
Business & Economics (dummy)	0.52	0.50	0.53	0.50	0.49	0.50	$p = 0.805$	$p = 0.642$	$p = 0.478$
SOEP risk attitude (0-10)	6.45	1.95	6.58	1.97	6.59	1.94	$p = 0.377$	$p = 0.374$	$p = 0.960$
High intrinsic lying cost (dummy)	0.30	0.46	0.27	0.45	0.36	0.48	$p = 0.531$	$p = 0.268$	$p = 0.085$*
High social lying cost (dummy)	0.11	0.32	0.12	0.33	0.16	0.37	$p = 0.790$	$p = 0.239$	$p = 0.366$
Agentic trait (1-5)	3.42	0.61	3.48	0.66	3.47	0.60	$p = 0.351$	$p = 0.688$	$p = 0.588$
Communal trait (1-5)	3.94	0.58	3.91	0.54	3.88	0.54	$p = 0.703$	$p = 0.342$	$p = 0.564$
Observations	148		144		148				

Notes: * $p < 0.10$. This table displays summary statistics of participants by treatment in Block 2. The p-values reported are from chi-square tests for dummy variables and ranksum tests for continuous variables.

Table B5: Trivia performance difference across blocks given gender.

	Block 1		Block 2		Block 1 vs. 2 ($p-$value)	
	Men	Women	Men	Women	Men	Women
Neutral	13.09	13.11	12.97	13.30	p = 0.680	p = 0.787
	(3.75)	(3.11)	(3.58)	(2.93)		
Female	11.42	12.59	12.28	13.28	p = 0.113	p = 0.147
	(3.65)	(3.09)	(3.79)	(2.70)		
Male	11.43	11.49	11.80	11.18	p = 0.851	p = 0.562
	(3.48)	(3.08)	(3.17)	(3.07)		

Note: This table reports the mean number of correct answers provided in the trivia quizzes (standard deviation in parentheses). $p-$values reported are from ranksum tests.

Table B6: Fraction of men and women classified as High types by block and treatment.

	Block 1		Block 2		Men vs. Women ($p-$value)	
	Men	Women	Men	Women	Block 1	Block 2
Neutral	50.00%	50.00%	54.05%	45.95%	p = 1.000	p = 0.441
Female	43.24%	56.76%	47.22%	52.78%	p = 0.139	p = 0.617
Male	58.33%	41.67%	56.76%	43.24%	p = 0.066	p = 0.139

Note: This table reports the fraction of men and women who are classified as High types (i.e., top two performers in the trivia quizzes) by block and treatment. Across-block comparisons reveal no significant differences (Neutral p = 0.742, Female p = 0.740, Male p = 0.868). $p-$values reported are from exact tests.

Table B7: Diff-in-Diff comparisons of private and claimed competence across blocks given treatment.

Dependent variable	(1)
Diff.(Private Belief & Claimed Competence)	Coeff. (St.Err.)
Neutral T.	*ref.*
Female T.	-3.405
	(3.009)
Male T.	-2.002
	(2.944)
Block 2	-6.291*
	(3.231)
Block 2 X Female T.	6.833
	(5.389)
Block 2 X Male T.	-2.457
	(4.768)
Constant	21.676***
	(2.129)
N	880
Clusters	110
R-Square	0.019
$p-$values from Wald tests	
Block 1 vs. 2 in Neutral T.	p = 0.054
Block 1 vs. 2 in Female T.	p = 0.876
Block 1 vs. 2 in Male T.	p = 0.001

Notes: This table reports presents the coefficients from OLS regressions in which the dependent variable is the difference between private belief and claimed competence. Claimed competence is the inverse measure of strategic incompetence. Independent variables include treatment dummies (with Neutral treatment as the reference category), a block dummy (1 for Block 2, 0 otherwise) and their interaction terms. Standard errors are clustered at the group level. * p<0.10; ** p<0.05; *** p<0.01.

Table B8: Determinants of claimed competence in Block 1

Dependent variable	(1)	(2)	(3)
Claimed competence			
Neutral T.	*ref.*	*ref.*	*ref.*
Female T.	4.581	7.644*	8.145*
	(4.768)	(4.444)	(4.276)
Male T.	-1.647	0.331	3.118
	(4.664)	(4.598)	(4.298)
Women	1.757	5.944	6.937*
	(3.875)	(4.023)	(4.075)
Women X Female T	-2.081	-8.322	-8.578*
	(5.151)	(5.120)	(4.969)
Women X Male T	-5.854	-4.228	-6.477
	(5.442)	(5.644)	(5.342)
Private Belief		0.424***	0.371***
		(0.049)	(0.052)
Constant	38.703***	10.607**	-24.577
	(3.503)	(4.166)	(15.529)
Control Variables	No	No	Yes
N	440	440	440
Clusters	110	110	110
R-Square	0.021	0.191	0.241
Post-estimation Wald tests			
Coeff. (Women - Men in Female T.)	-0.32	-2.38	-1.64
$p-$values	[0.924]	[0.456]	[0.629]
Coeff. (Women - Men in Male T.)	-4.10	1.72	0.46
$p-$values	[0.286]	[0.667]	[0.904]
Coeff. (Women in Neutral T. - in Male T.)	-7.50*	-3.90	-3.36
$p-$values	[0.056]	[0.223]	[0.275]
Coeff. (Men in Neutral T. - in Female T.)	4.58	7.64*	8.15*
$p-$values	[0.339]	[0.088]	[0.059]

Notes: This table reports presents the coefficients from OLS regressions in which the dependent variable is claimed competence in Block 1. Claimed competence is the inverse measure of strategic incompetence. Independent variables in model (1) include treatment dummies (with Neutral treatment as the reference category), sex dummy (1 for women, 0 otherwise) and their interaction terms. Model (2) includes private beliefs about being a High type. Model (3) further include control variables namely trivia performance, age, self-reported risk attitudes, personality traits (agentic and communal), and lying type dummies (high intrinsic cost and high social cost). Standard errors are clustered at the group level. * p<0.10; ** p<0.05; *** p<0.01.

Table B9: First-order beliefs about men and women by block and treatment.

	Block 1		Block 2		Men vs. Women ($p-$value)	
	Men	Women	Men	Women	Block 1	Block 2
Neutral	49.41	51.40	53.74	44.84	$p = 0.480$	$p = 0.023$
	(21.11)	(18.82)	(23.33)	(22.72)		
Female	47.78	48.78	37.56	58.68	$p = 0.746$	$p < 0.001$
	(22.55)	(22.55)	(19.22)	(23.46)		
Male	49.77	42.93	53.14	35.88	$p = 0.112$	$p < 0.001$
	(22.26)	(23.88)	(20.44)	(18.83)		

Note: This table reports the mean first-order beliefs about men and women (standard deviation in parentheses). First-order beliefs refer to the likelihood that each participant is perceived as a High type by the other three group members in the group. $p-$values reported are from ranksum tests.

Table B10: Second-order beliefs by men and women by block and treatment.

	Block 1		Block 2		Men vs. Women ($p-$value)	
	Men	Women	Men	Women	Block 1	Block 2
Neutral	51.30	49.46	52.45	46.18	$p = 0.616$	$p = 0.104$
	(24.10)	(23.80)	(29.42)	(23.17)		
Female	46.01	50.57	37.83	51.89	$p = 0.322$	$p = 0.001$
	(28.10)	(23.05)	(28.39)	(24.63)		
Male	49.57	40.80	48.53	33.82	$p = 0.066$	$p < 0.001$
	(30.46)	(24.51)	(24.40)	(20.85)		

Note: This table reports the second-order beliefs held by men and women (standard deviation in parentheses). Second-order beliefs refer to each participant's belief about the average first-order beliefs that the other three group members hold about them. $p-$values reported are from ranksum tests.

Table B11: Believed gender differences in ability by block and treatment.

	Block 1					Block 2					p-value
	$M >> W$	$M > W$	$M = W$	$M < W$	$M << W$	$M >> W$	$M > W$	$M = W$	$M < W$	$M << W$	Block 1 vs. 2
Neutral	1.35%	7.43%	64.86%	22.97%	3.38%	0%	8.78%	64.19%	22.97%	4.05%	$p = 0.816$
Female	0.68%	0.68%	35.14%	43.24%	20.27%	0%	2.08%	18.75%	48.61%	30.56%	$p = 0.006$
Male	12.5%	47.22%	34.03%	6.25%	0%	21.62%	43.92%	31.76%	1.35%	1.35%	$p = 0.029$

Notes: This table reports the distribution of believed gender differences in ability (non-incentivized) elicited at the end of the experiment (N=440). The response ranges from 'men are better than women', 'slightly better', 'equally good' to 'women are slightly better than men', 'women are better than men'. Modal responses are highlighted in gray. Pairwise comparisons across treatments in a given block reveal significant differences (all $p < 0.001$). p-values from exact tests.

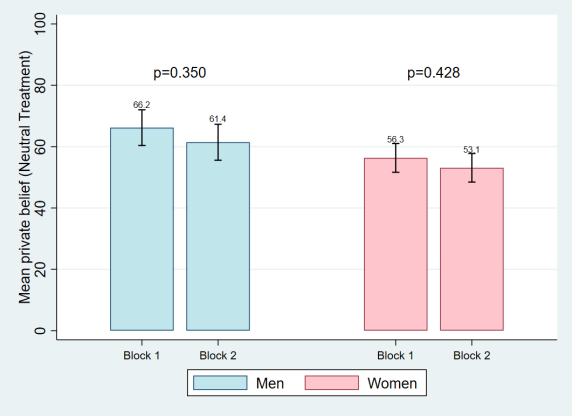
Table B12: Factor analysis of 16-item Personal Attributes Questionnaire

Item	Factor loading	Cronbach's alpha
Agentic traits		0.7369
Independent	0.2741	
Active	0.3412	
Competitive	0.4733	
Difficulty making decision (Reversed)	0.4160	
Never give up easily	0.3066	
Self-confident	0.5866	
Feel superior	0.4965	
Standup well under pressure	0.5078	
Communal traits		0.7183
Emotional	0.1581	
Devoted to others	0.3625	
Gentle	0.2964	
Helpful	0.4223	
Kind	0.4855	
Aware of others' feelings	0.4222	
Understanding of others	0.5026	
Warm in relations	0.5066	

Notes: This table presents the factor loadings and reliability estimates (Cronbach's alpha) for the 16-item Personal Attributes Questionnaire (N = 440). The two-factor structure shows a clear pattern of loadings corresponding to Agentic and Communal traits, each demonstrating acceptable internal consistency. Based on these results, we computed the mean scores of the items within each construct and used them as control variables in subsequent regression analyses.

Online Appendix C Appendix Figures

Figure C1: Private beliefs in Neutral treatment by gender across blocks.



Note: The figure displays private beliefs about being a High type by men and women in the Neutral treatment across blocks. p-values reported are from ranksum tests.

Online Appendix D Robustness check: Ordering effect

In the main analysis, we report treatment effects pooling together participants who faced the same quiz in Block 2 but had faced a different quiz in Block 1 (or vice versa). However, it's plausible that the impact of stereotype on strategic incompetence observed in Block 2 may depend on the treatment assigned in Block 1 (e.g., individuals might react more strongly in Block 2 if they were exposed to a stereotyped treatment in Block 1, compared to when the treatment was neutral in Block 1).

Table D1 reports the mean claimed competence by men and women for each treatment sequence. Panel (a) corresponds to the Female treatment in Block 2, Panel (b) to the Male treatment in Block 2, and Panel (c) to the Neutral treatment in Block 2. These figures are consistent with in the main text. The gender gaps in strategic incompetence in stereotyped tasks emerge in Block 2 (see Panel a and b). Comparing the difference in claimed competence in Block 1 and 2 by men (or by women) across NeutralFemale and MaleFemale, and NeutralMale and FemaleMale do not yield any significant differences (the smallest p-value is 0.289). This suggests that the stereotype effects found in Block 2 are independent of the treatment assigned in Block 1.

Table D1: Claimed competence by men and women by treatment sequence.

	Block 1		Block 2		Men vs. Women ($p-$value)	
	Men	Women	Men	Women	Block 1	Block 2
Panel (a)						
NeutralFemale	38.64	41.14	30.03	41.44	$p = 0.577$	$p = 0.055$
	(28.91)	(23.59)	(24.04)	(23.53)		
MaleFemale	29.69	32.39	22.03	38.53	$p = 0.652$	$p = 0.010$
	(22.02)	(23.33)	(19.94)	(28.95)		
Panel (b)						
NeutralMale	38.76	39.82	32.95	23.11	$p = 0.758$	$p = 0.039$
	(24.81)	(25.07)	(21.79)	(18.75)		
FemaleMale	47.17	43.69	49.03	28.81	$p = 0.488$	$p < 0.001$
	(22.91)	(20.66)	(21.82)	(17.56)		
Panel (c)						
FemaleNeutral	39.61	42.26	42.97	30.53	$p = 0.688$	$p = 0.060$
	(26.54)	(23.33)	(28.58)	(21.00)		
MaleNeutral	44.42	33.53	49.06	45.56	$p = 0.099$	$p = 0.600$
	(28.91)	(24.03)	(29.65)	(23.90)		

Note: This table reports the mean claimed competence by men and women across treatment sequences. Panel (a) corresponds to the Female treatment in Block 2, Panel (b) to the Male treatment in Block 2, and Panel (c) to the Neutral treatment in Block 2. Standard deviations are shown in parentheses. Claimed competence refers to the cheap-talk message about one's likelihood of being a High type, and is the inverse measure of strategic incompetence. $p-$values reported are from ranksum tests.

We do observe, however, an interesting pattern when the Neutral treatment is assigned in Block 2 (see Panel c). Among men, changes in claimed competence in Block 1 and 2 do not differ significantly between FemaleNeutral and MaleNeutral ($p = 0.840$, ranksum test). In contrast, the difference is highly significant

among women ($p < 0.001$, ranksum test). This suggests that women seem to respond differently in the Neutral treatment in Block 2 depending on whether they were assigned to the Female or Male treatment in Block 1.

This pattern of claimed competence suggests that the neutral quiz was perceived as *female-typed* when it followed a Male treatment, compared to when it followed a Female treatment. This interpretation is consistent with the (non-incentivized) beliefs about gender differences in ability elicited at the end of the experiment. The distribution of stereotypical belief in Block 2 shifts from 'neutral' in FemaleNeutral to slightly female-typed in MaleNeutral ($p = 0.025$, exact test). Overall, these results indicate that the treatment ordering matters only when the Neutral treatment is presented in Block 2.

Online Appendix E Calibration of Trivia Quizzes

Separate Experiment: Three sessions (N=65) were conducted with an independent sample drawn from the same subject pool prior to the main experiment with the goal of calibrate the trivia quizzes. The experiment consisted of two parts. In part 1, participants answered six sets of 20 trivia questions (two sets per treatment). The sets were randomly assigned at an individual level. In part 2, participants performed six estimation tasks, which corresponded to each trivia quiz in part 1. In each estimation task, they saw each trivia question and were asked to guess the number of men and women in the session who have answered correctly to the question. Participants were incentivized for the accuracy of their response. At the end of the experiment, two tasks (one from each part) were randomly selected for an additional payment. See full instructions on page 29 of this appendix.

Question Categories: Questions belong either to neutral, female- of male-typed topics. The question categories for the neutral topics were cities and countries, earth and nature, food, animals, boardgames, popular films and books. Those for the female-typed topics were cooking, home, art and craft, fashion and clothes, mind-body sports, musical films and romance novels. Those for the male-typed topics were fixes and repairs, information and technology, video games, cars, competitive sports, action films and sci-fi books. All questions tested are listed on page 26 of this appendix.

Selection Criteria: Table E2 to E7 display, for each question, the fractions of men and women who answered correctly (i.e., actual performance difference), and the *believed* fractions of men and women who answered correctly (i.e., believed performance difference). We selected the trivia questions for the main experiment following these criteria:.

1. In terms of performance, we considered questions without significant differences between the fraction of men and women who answered the question correctly. We also checked that the mean trivia scores by men and women in the selected questions did not significantly differ.

2. In terms of belief about performance:

   - For the Neutral treatment, we considered questions in which participants believed there was no significant differences between the fraction of men and women who answered the question correctly.
   - For the Female and Male treatment, we considered questions in which participants believed the gender gap existed (i.e., believed that the fraction of women (men) who answered correctly to be higher than that of men (women) for the Female (Male) treatment).

Table E1 shows the mean trivia scores by men and women in the selected questions, and the believed fraction of men and women correctly.

Table E1: Trivia performance and believed gender gap in selected questions by treatment.

	Neutral		Female		Male		Men vs Women (p-value)		
	Men	Women	Men	Women	Men	Women	Neutral	Female	Male
Trivia performance	13.53	13.30	12.69	12.73	13.15	12.39	$p = 0.588$	$p = 0.6708$	$p = 0.2168$
	(2.96)	(2.91)	(2.63)	(2.11)	(2.46)	(2.82)			
Believed performance	0.74	0.74	0.65	0.75	0.73	0.67	$p = 0.684$	$p < 0.001$	$p < 0.001$
	(0.11)	(0.10)	(0.11)	(0.09)	(0.09)	(0.09)			

Notes: This table reports mean trivia scores (actual performance) and mean *believed* fractions of correct responses by men and women for each treatment. All statistics are based on the subset of trivia questions selected after the calibration experiment. Standard deviations are shown in parentheses. $p-$values are from ranksum tests for trivia performance and signrank tests for believed performance.

Table E2: Actual and believed gender gaps in trivia performance: Neutral Set 1

Question	Name	Actual Gap		p-val	Believed Gap		p-val
		Men	Women	(exact)	Men	Women	(signrank)
1	Eurovision	0.41	0.15	0.028**	0.51	0.54	0.020**
2	Kiwi	0.44	0.39	0.804	0.55	0.53	0.010**
3	Switzerland	0.19	0.06	0.149	0.51	0.51	0.993
4	Strawberry	0.88	0.70	0.130	0.82	0.85	0.479
5	Deadsea	0.94	0.73	0.044**	0.76	0.76	0.998
6	Desert rock	0.44	0.33	0.450	0.56	0.56	0.641
7	Pasta	0.56	0.67	0.450	0.63	0.68	0.003***
8	Durian	0.59	0.42	0.218	0.56	0.58	0.426
9	Unpopular pizza	0.19	0.09	0.303	0.63	0.63	0.788
10	Flamingo	0.84	0.94	0.258	0.60	0.62	0.487
11	Wombat	0.53	0.36	0.216	0.50	0.50	0.751
12	Octopus	0.53	0.39	0.324	0.55	0.55	0.398
13	Charades	0.53	0.67	0.317	0.74	0.74	0.849
14	Jenga	0.66	0.61	0.798	0.75	0.73	0.147
15	Monopoly	0.91	0.85	0.708	0.88	0.88	0.509
16	Lion King	0.91	0.88	1.000	0.89	0.89	0.4732
17	Titanic	0.94	0.88	0.672	0.77	0.82	<0.001
18	Pixar	0.56	0.36	0.138	0.60	0.59	0.566
19	Harry Potter	0.91	0.88	1.000	0.79	0.80	0.556
20	Willy Wonka	1.00	0.82	0.024**	0.87	0.89	0.003***
N		32	33		65	65	

Notes:This table reports, for each trivia question, (i) the actual fractions of men and women who answered correctly, and (ii) participants' *beliefs* about these fractions. The column "Actual Gap" refers to observed performance differences between men and women, with corresponding p-values from exact tests. The column "Believed Gap" refers to the perceived performance differences elicited in the belief tasks, with p-values from Wilcoxon signed-rank tests.

Table E3: Actual and believed gender gaps in trivia performance: Female Set 1

Question	Name	Actual Gap		p-val	Believed Gap about		p-val
		Men	Women	(exact)	Men	Women	(signrank)
1	Bechamel	0.44	0.67	0.083*	0.64	0.77	<0.001
2	Carbonara	0.56	0.48	0.622	0.72	0.78	<0.001
3	Braising	0.19	0.06	0.149	0.51	0.62	<0.001
4	Scrub daddy	0.44	0.36	0.617	0.54	0.64	<0.001
5	Dryer	0.75	0.94	0.044**	0.69	0.83	<0.001
6	Disinfectant	0.53	0.64	0.452	0.59	0.71	<0.001
7	Andy Warhol	0.66	0.64	1.000	0.64	0.69	0.003
8	Origami	0.97	0.94	1.000	0.89	0.90	0.340
9	Glitter	0.28	0.39	0.434	0.67	0.62	0.006
10	Yoga meaning	0.59	0.52	0.620	0.58	0.64	<0.001
11	Yoga block	0.31	0.42	0.310	0.54	0.66	<0.001
12	Pregnancy sport	0.59	0.85	0.028**	0.68	0.82	<0.001
13	Coco Chanel	0.44	0.70	0.025**	0.55	0.73	<0.001
14	Converse	0.50	0.52	1.000	0.66	0.73	<0.001
15	Levi's	0.59	0.48	0.459	0.70	0.74	0.011
16	La La Land	0.75	0.64	0.422	0.58	0.69	<0.001
17	Frozen	1.00	0.94	0.492	0.96	0.97	<0.001
18	The Wicked	0.72	0.79	0.574	0.57	0.66	<0.001
19	Bridgerton	0.50	0.58	0.622	0.41	0.67	<0.001
20	Twilight	0.94	0.94	1.000	0.70	0.86	<0.001
N		32	33		65	65	

Notes: This table reports, for each trivia question, (i) the actual fractions of men and women who answered correctly, and (ii) participants' *beliefs* about these fractions. The column "Actual Gap" refers to observed performance differences between men and women, with corresponding p-values from exact tests. The column "Believed Gap" refers to the perceived performance differences elicited in the belief tasks, with p-values from Wilcoxon signed-rank tests.

Table E4: Actual and believed gender gaps in trivia performance: Male Set 1

Question	Name	Actual Gap		p-val	Believed Gap		p-val
		Men	Women	(exact)	Men	Women	(signrank)
1	IKEA	0.53	0.33	0.136	0.77	0.66	<0.001
2	Car tire	0.81	0.73	0.558	0.81	0.72	<0.001
3	Leaky pipe	0.53	0.58	0.805	0.72	0.65	<0.001
4	Youtube video	0.47	0.12	0.003***	0.62	0.55	<0.001
5	Keyboard shortcut	0.78	0.45	0.010***	0.80	0.77	0.005
6	Siri	0.19	0.33	0.260	0.53	0.50	<0.001
7	Super Mario	1.00	0.88	0.114	0.95	0.91	0.001
8	Minecraft	0.94	0.91	1.000	0.92	0.83	<0.001
9	Esport	0.84	0.42	0.001***	0.84	0.61	<0.001
10	Mustang	0.66	0.39	0.048**	0.81	0.64	<0.001
11	Lamborghini	0.56	0.30	0.046**	0.66	0.51	<0.001
12	Ferrari	0.88	0.73	0.215	0.87	0.76	<0.001
13	Golf	0.22	0.27	0.775	0.54	0.46	<0.001
14	Ronaldo	0.72	0.39	0.013**	0.76	0.55	<0.001
15	Baseball	0.19	0.27	0.558	0.53	0.43	<0.001
16	007 films	0.69	0.42	0.046**	0.79	0.74	0.002
17	Ironman	0.59	0.30	0.025**	0.78	0.63	<0.001
18	The Terminator	0.47	0.317	0.202	0.62	0.53	<0.001
19	Ender's Game	0.22	0.12	0.339	0.55	0.48	<0.001
20	The Hunger Games	0.84	0.79	0.751	0.76	0.73	0.003
N		32	33		65	65	

Notes: This table reports, for each trivia question, (i) the actual fractions of men and women who answered correctly, and (ii) participants' *beliefs* about these fractions. The column "Actual Gap" refers to observed performance differences between men and women, with corresponding p-values from exact tests. The column "Believed Gap" refers to the perceived performance differences elicited in the belief tasks, with p-values from Wilcoxon signed-rank tests.

Table E5: Actual and believed gender gaps in trivia performance: Neutral Set 2

Question	Name	Actual Gap		p-val	Believed Gap		p-val
		Men	Women	(exact)	Men	Women	(signrank)
1	Australia	0.47	0.27	0.127	0.85	0.87	0.138
2	Amsterdam	0.66	0.79	0.277	0.76	0.77	0.657
3	Italy	0.97	0.94	1.000	0.93	0.93	0.569
4	Ostrich	0.84	0.79	0.751	0.73	0.72	0.222
5	Sea otter	0.56	0.73	0.200	0.56	0.59	0.051*
6	Baby hippo	0.22	0.36	0.277	0.55	0.53	0.130
7	Sunflower	1.00	1.00	-	0.83	0.87	0.004***
8	Mont St. Michel	0.72	0.70	1.000	0.67	0.68	0.560
9	Antarctica	0.81	0.73	0.558	0.71	0.70	0.619
10	Saffron	0.88	0.82	0.733	0.70	0.75	<0.001***
11	Tofu	0.84	0.79	0.751	0.67	0.74	<0.001***
12	Sushi	0.97	0.94	1.000	0.90	0.92	0.068*
13	Pictionary	0.72	0.76	0.783	0.78	0.80	0.321
14	Escape Room	0.97	0.91	0.613	0.89	0.88	0.782
15	Carcassone	0.41	0.39	1.000	0.65	0.55	<0.001***
16	Shrek	0.91	0.91	1.000	0.86	0.86	0.356
17	Star Wars I	0.94	0.79	0.149	0.90	0.85	0.0002***
18	Finding Nemo	0.69	0.79	0.408	0.88	0.88	0.012**
19	Petit Prince	0.53	0.48	0.806	0.69	0.73	0.005***
20	Harry Potter II	0.78	0.73	0.775	0.67	0.67	0.926
N		32	33		65	65	

Notes: This table reports, for each trivia question, (i) the actual fractions of men and women who answered correctly, and (ii) participants' *beliefs* about these fractions. The column "Actual Gap" refers to observed performance differences between men and women, with corresponding p-values from exact tests. The column "Believed Gap" refers to the perceived performance differences elicited in the belief tasks, with p-values from Wilcoxon signed-rank tests.

Table E6: Actual and believed gender gaps in trivia performance: Female Set 2

Question	Name	Actual Gap		p-val	Believed Gap		p-val
		Men	Women	(exact)	Men	Women	(signrank)
1	Ratatouille	0.78	0.88	0.339	0.78	0.85	<0.001
2	Chocolate mousse	0.84	0.97	0.105*	0.70	0.83	<0.001
3	Meringue	0.84	0.85	1.000	0.74	0.84	<0.001
4	Hygge	0.31	0.27	0.789	0.48	0.53	0.003
5	Indoor plant	0.09	0.06	0.672	0.48	0.60	<0.001
6	Home DIY	0.72	0.76	0.783	0.76	0.70	<0.001
7	Glass work	0.97	0.97	1.000	0.88	0.85	0.046
8	Paper marché 0.16	0.06	0.258	0.68	0.72	0.017	
9	Orange color	0.91	0.97	0.355	0.89	0.90	0.448
10	Yoga pose	0.25	0.36	0.422	0.51	0.61	<0.001
11	Meditation	0.94	0.88	0.672	0.71	0.76	0.008
12	Headspace	0.72	0.76	0.783	0.65	0.71	<0.001
13	Baggy jeans	0.25	0.21	0.775	0.54	0.71	<0.001
14	Shein	0.94	0.97	0.613	0.87	0.91	<0.001
15	Crocs	0.97	0.91	0.613	0.80	0.83	<0.001
16	Taylor Swift	0.50	0.21	0.020	0.50	0.62	<0.001
17	Encanto	0.53	0.55	1.000	0.48	0.57	<0.001
18	Lady Gaga	0.66	0.82	0.166	0.63	0.78	<0.001
19	Christian Grey	0.97	0.91	0.613	0.75	0.85	<0.001
20	Call me by your name	0.50	0.58	0.622	0.50	0.64	<0.001
N		32	33		65	65	

Notes: This table reports, for each trivia question, (i) the actual fractions of men and women who answered correctly, and (ii) participants' *beliefs* about these fractions. The column "Actual Gap" refers to observed performance differences between men and women, with corresponding p-values from exact tests. The column "Believed Gap" refers to the perceived performance differences elicited in the belief tasks, with p-values from Wilcoxon signed-rank tests.

Table E7: Actual and believed gender gaps in trivia performance: Male Set 2

Question	Name	Actual Gap		p-val	Believed Gap		p-val
		Men	Women	(exact)	Men	Women	(signrank)
1	Patch work	0.69	0.76	0.587	0.75	0.67	<0.001
2	Clogged drain	1.00	0.97	1.000	0.93	0.91	0.042
3	Door hinge	1.00	0.94	0.492	0.86	0.81	<0.001
4	Facebook	0.75	0.30	<0.001	0.76	0.74	0.010
5	Alexa	0.88	0.88	1.000	0.83	0.80	0.009
6	Augmented reality	0.69	0.61	0.606	0.69	0.62	<0.001
7	Sony	0.94	0.52	<0.001	0.91	0.73	<0.001
8	Health points	0.94	0.39	<0.001	0.87	0.72	<0.001
9	Zombie game	0.66	0.48	0.213	0.79	0.58	<0.001
10	Car's engine	0.66	0.55	0.450	0.82	0.71	<0.001
11	BMW	0.91	0.73	0.108	0.83	0.68	<0.001
12	Toyota	0.81	0.70	0.389	0.71	0.58	<0.001
13	Michael Phelps	0.81	0.61	0.102	0.78	0.64	<0.001
14	Cricket	0.84	0.70	0.240	0.74	0.65	<0.001
15	Soccer	0.84	0.55	0.015	0.90	0.78	<0.001
16	Louvre	0.72	0.64	0.598	0.63	0.60	0.011
17	Star Wars II	0.97	0.85	0.197	0.94	0.90	<0.001
18	Tom Cruise	0.97	0.82	0.105	0.79	0.71	<0.001
19	Dune	0.56	0.45	0.460	0.70	0.66	0.001
20	Valerian	0.44	0.30	0.310	0.58	0.52	<0.001
N		32	33		65	65	

Notes: This table reports, for each trivia question, (i) the actual fractions of men and women who answered correctly, and (ii) participants' *beliefs* about these fractions. The column "Actual Gap" refers to observed performance differences between men and women, with corresponding p-values from exact tests. The column "Believed Gap" refers to the perceived performance differences elicited in the belief tasks, with p-values from Wilcoxon signed-rank tests.

All trivia questions

Below reports all questions used in the calibration exercise, and which are selected for the treatment manipulation. Each question and set correspond to those reported in Table E2 to E7.

Neutral categories Set 1:

1. Which city will be hosting the Eurovision song contest in 2025? (Cities & Countries)
2. Which country has a law that makes it illegal to own just one guinea pig, because they must have a companion? (Cities & Countries)
3. Which country has a law that makes it illegal to own just one guinea pig, because they must have a companion? (Cities & Countries)
4. What is the only fruit that has its seeds on the outside? (Earth & Nature)
5. What makes the Dead Sea unique? (Earth & Nature)
6. What weird thing can happen to rocks in the desert? (Earth & Nature) **[Selected]**
7. Which type of pasta is shaped like little 'ears'? (Food) **[Selected]**
8. Which fruit is known as the 'king of fruits' due to its strong smell? (Food) **[Selected]**
9. What unusual pizza topping is popular in Sweden? (Food)
10. What strange thing happens to flamingos if they do not eat enough shrimp? (Animals)
11. Which animal's poop is cube-shaped? (Animals)
12. How many hearts does an octopus have? (Animals)
13. Which of the following best describes the Charades game setup? (Board games) **[Selected]**
14. Which board game requires players to remove pieces without making the structure collapse? (Board games) **[Selected]**
15. What is the main objective of Monopoly? (Board games)
16. What is the name of Simba's father in The Lion King? (Popular films) **[Selected]**
17. What was the issue with the lifeboats in the movie Titanic? (Popular films)
18. What was the first Pixar movie ever released? (Popular films)
19. Which of the following book series has sold over 500 million copies worldwide? (Popular Books) **[Selected]**
20. In "Charlie and the Chocolate Factory," what is the name of the eccentric factory owner?

Female categories Set 1:

1. Which of these ingredients is essential for making a classic French bechamel sauce? (Cooking)
2. What is the key ingredient in a traditional carbonara pasta? (Cooking) **[Selected]**
3. What is the cooking technique used to slowly cook food in liquid at a low temperature for a long period of time? (Cooking)
4. Which of the following is the famous cleaning product brand known for its smiley face sponge? (Home) **[Selected]**
5. Which of these items should never be put in the dryer, as it may easily get damaged? (Home)
6. Which of the following household items can act as a natural disinfectant? (Home) **[Selected]**
7. Which artist is known for colorful paintings of soup cans and Marilyn Monroe? (Art & Craft) **[Selected]**
8. What is the Japanese word for the traditional art of folding paper to create shapes? (Art & Craft)
9. Which of the following materials is commonly added to craft projects to create a sparkling effect? (Art & Craft)
10. What is the traditional meaning of the word "yoga"? (Mind-Body Sports) **[Selected]**
11. Which of these is a common accessory used in yoga practice for support? (Mind-Body Sports)
12. Which of the following statements is NOT true about exercises for pregnant women? (Mind-Body Sports) **[Selected]**
13. Which fashion designer is known for creating the little black dress? (Fashion & Clothes)

14. Which Converse sneaker model is considered the most iconic and remains a popular choice for casual footwear worldwide? (Fashion & Clothes)
15. Which brand is known for its high-quality denim and casual wear, featuring a logo with two horses? (Fashion & Clothes)
16. Which musical movie features a romantic dance scene in front of a sunset-lit Los Angeles skyline? (Musical Movies) **[Selected]**
17. Which Disney musical movie features a young queen who learns to embrace her true powers and the song Let It Go? (Musical Movies)
18. Which Broadway musical adaptation is based on The Wizard of Oz but tells the story from the witches' perspective? (Musical Movies)
19. In 'The Duke and I', the first novel to the Bridgerton series by Julia Quin, who is the main protagonist? (Romance Books)
20. Which novel series features the character Bella Swan, a young woman caught in a love triangle between a vampire and a werewolf? (Romance books) **[Selected]**

Male categories Set 1:

1. What tool is commonly used when assembling IKEA furniture? (Fixes & Repairs)
2. What should you do first when you notice a flat tire on your car? (Fixes & Repairs)
3. What household item can be used temporarily to stop a leaking pipe before calling a plumber? (Fixes & Repairs)
4. What was the first video ever uploaded on YouTube? (Info. & Tech)
5. Which of the following keyboard shortcuts is incorrect? (Info. & Tech)
6. In 2016, what bizarre thing happened when people asked Siri 'What's 0 divided by 0'? (Info. & Tech) **[Selected]**
7. In the Super Mario universe, what is the name of Mario's brother? (Video Games) **[Selected]**
8. Which type of game is Minecraft known as? (Video Games) **[Selected]**
9. Which of these competitive games is considered to have the most iconic and established esports scene, known for its massive global tournaments? (Video Games)
10. Which car company is known for producing the iconic Mustang, a symbol of American muscle cars?(Cars)
11. Before Lamborghini became known for high-performance sports cars, what did the company originally produce? (Cars)
12. Which Italian sports car brand is famous for its prancing horse logo? (Cars)
13. Which sport was banned in early Scotland because it distracted from military training? (Competitive Sports) **[Selected]**
14. Which soccer player has a statue in their hometown that looks nothing like them? (Competitive Sports)
15. Which sport once had a rule banning players from having beards? (Competitive Sports) **[Selected]**
16. What is the name of the spy played by Daniel Craig in the recent 007 films? (Action Movies)
17. Which of the following superhero characters is NOT from the DC Universe? (Action Movies)
18. In 'The Terminator' (1984), why does a cyborg assassin travel back in time to target Sarah Connor? (Action Movies) **[Selected]**
19. Which sci-fi novel features a military academy where children are trained to fight in an intergalactic war? (Sci-fi Books) **[Selected]**
20. Which dystopian novel features a competitive survival game in a post-apocalyptic world, where participants fight for their lives in a controlled environment? (Sci-fi Books) **[Selected]**

Neutral categories Set 2:

1. What is the only country that is also a continent? (Cities & Countries) **[Selected]**
2. Which capital city is known for having more bicycles than people? (Cities & Countries) **[Selected]**
3. Which country is shaped like a boot on the map? (Cities & Countries) **[Selected]**
4. Which bird is unable to fly but is the fastest on land? (Animals) **[Selected]**
5. Which animal holds hands while sleeping to avoid drifting apart? (Animals) **[Selected]**

6. What specie is Moo Deng, the famous baby animal that went viral online? (Animal) **[Selected]**
7. Which flower is known for following the sun during the day? (Earth & Nature)
8. Which of these real islands can be cut off during high tide? (Earth & Nature) **[Selected]**
9. Which of the following is a desert that receives snowfall? (Earth & Nature) **[Selected]**
10. Which spice is often called "red gold" due to its price? (Food)
11. What is tofu primarily made from? (Food)
12. In which country is sushi a traditional dish? (Food) **[Selected]**
13. Which classic board game involves drawing and guessing words or phrases based on illustrations? (Board games) **[Selected]**
14. In which game do players work together in teams to solve puzzles within a limited time to escape from a locked room or scenario? (Board games)
15. What popular game in France involves laying tiles to build a medieval landscape with towns, roads, and fields? (Board games) **[Selected but for Male treatment]**
16. What kind of creature is Shrek? (Popular films) **[Selected]**
17. Which film series is famous for the phrase "May the Force be with you"? (Popular films)
18. In the movie "Finding Nemo," what type of fish is Nemo? (Popular films) **[Selected]**
19. In Le Petit Prince, what does the prince ask the narrator to draw? (Popular books)
20. Which Harry Potter book features a giant snake living in the school's basement? (Popular books) **[Selected]**

Female categories Set 2:

1. Which of these ingredients is typically used to create a classic French ratatouille? (Cooking) **[Selected]**
2. What is the main ingredient that gives chocolate mousse its airy texture? (Cooking)
3. Which dessert is made from whipped egg whites and sugar, baked until crisp? (Cooking) **[Selected]**
4. What is the Danish concept that refers to creating a cozy, comfortable, and content atmosphere at home? (Home)
5. Which popular indoor plant is so low-maintenance it could probably survive a month without water and still look cute on your shelf? (Home) **[Selected]**
6. Which of these materials is commonly used in home DIY projects for creating custom furniture? (Home) **[Selected but for Male treatment]**
7. What material is typically used to create stained glass windows, often seen in churches or cathedrals? (Art & craft)
8. What is papier-mâché made of? (Art & Craft) **[Selected]**
9. Which two colors make orange when mixed? (Art & Craft)
10. Which of these is NOT a yoga pose? (Mind-Body Sports)
11. What is the primary benefit of meditation in mind-body sports? (Mind-Body sports) **[Selected]**
12. Which of these apps is specifically used for meditation and mindfulness practices? (Mind-Body sports)
13. Which type of pants were made iconic in the 1990s by celebrities like Britney Spears and the Spice Girls? (Fashion & Clothes) **[Selected]**
14. Which of these fashion brands has been criticized for its unsustainable business practices? (Fashion & Clothes) **[Selected]**
15. Which brand made a viral "ugly shoe" trend with its foam-like clogs? (Fashion & Clothes) **[Selected]**
16. Which famous pop star acted in the 2019 movie adaptation of Cats? (Musical Movies)
17. In Disney's Encanto, what does the song "We Don't Talk About Bruno" reveal about his visions? (Musical Movies) **[Selected]**
18. Who plays the lead role in the musical film A Star Is Born (2018)? (Musical movies) **[Selected]**
19. What is the name of the rich and mysterious man that falls for Anastasia Steele in Fifty Shades of Grey? (Romance books) **[Selected]**
20. In the film adaptation of Call Me by Your Name, based on the novel by André Aciman, where does the story take place? (Romance books) **[Selected]**

Male categories Set 2:

1. Which of these items can be used to patch a hole in a wall? (Fixes & repairs) **[Selected]**
2. When should you use a plunger? (Fixes & repairs) **[Selected]**
3. Which of these household items can be used to fix a squeaky door hinge as a lubricant? (Fixes & repairs) **[Selected]**
4. Which of these social media platforms was originally launched as a networking site for university students? (Info. & Tech)
5. What is the name of the popular robot assistant created by Amazon for controlling smart devices? (Info. & Tech) **[Selected]**
6. Which technology enables your phone's camera to identify and interact with real-world objects through digital overlays? (Info. & Tech) **[Selected]**
7. Which company is known for developing the PlayStation consoles? (Video games)
8. Which of these colors is typically associated with health restoration in video games? (Video Games)
9. Which game is set in a post-apocalyptic world and revolves around surviving against zombies? (Video games)
10. What is the first thing you should check if your car's engine won't start? (Cars) **[Selected]**
11. Which of these car brands is famous for its "German engineering" and known for producing luxury vehicles? (Cars)
12. Which Japanese automaker, originally a division of a textile company, became famous for its innovation in mass production and hybrid technology? (Cars) **[Selected]**
13. Which sport did Michael Phelps dominate, winning a record number of Olympic gold medals? (Competitive sports)
14. Which of these sports is played with a bat and a ball, and is most popular in countries like India and Australia? (Competitive sports)
15. In which sport can you get a "hat trick" by scoring three goals in a single game? (Competitive sports)
16. In the movie 'The Da Vinci Code', what famous Parisian landmark is featured in one of the key scenes? (Action films) **[Selected]**
17. Which movie features the famous quote, "I am your father"? (Action films) **[Selected]**
18. Which movie features Tom Cruise performing his own stunts while hanging from the side of a flying airplane? (Action films)
19. In Dune, what precious resource is only found on the desert planet Arrakis? (Sci-fi books) **[Selected]**
20. Which French comic series is considered a sci-fi classic and influenced the film The Fifth Element? (Sci-fi books)

Full instructions of this separate experiment (translated from French):

General Instructions

Hello and welcome to today's experiment. We will go through the instructions together and read them aloud. Please turn off your phone and put it away. You are not allowed to use your phone or talk with others during the experiment. You are not allowed to open tabs or computer programs other than the one opened for you. If you violate any of these rules, you will be excluded from the experiment immediately and you will not receive any payment.

During this experiment, you can earn money. The amount of money you earn depends on your decisions as well as those made by others in the session. Therefore, please read the instructions carefully.

The experiment is divided into two blocks, followed by a questionnaire at the end. Each block has six sets of tasks. You will receive the instructions for each block at the beginning of the block. The instructions are the same for all participants. You will have the opportunity to ask questions privately to the experimenter in case you do not understand the instructions. To do so, please press the red button on the side of your table or raise your hand. The experimenter will come to answer in private. Please do not ask questions aloud.

How will your decisions affect your earnings?
For this experiment, you receive 5 euros as your participation fee, plus additional earnings. The exact amount of the additional earnings is determined at the end of the session. The computer program randomly selects one task from each block. The points you have accumulated in these two selected tasks constitute your additional earnings. 100 points equal 4 euros. Decimals will be rounded. Since all tasks have an equal chance of being selected, it is in your best interest to make your decisions as if each task were selected and determined your additional earnings.

—

Block 1
Your task:
In Block 1, you will answer six sets of quizzes. Each set will contain 20 multiple-choice questions. These questions cover trivia related to various topics. You will see the topics in each set, and each question will be labeled with a label indicating the corresponding theme. Each question has five answer options and one of them will be correct. You will have **5 minutes** in total to submit your answers to the questions. The remaining time will be displayed at the top-right corner of the screen.

Your earnings in this block:
At the end of the experiment, the computer program will randomly select a quiz set. You will win based on your score in the selected set. Each correct answer earns 12 points. No penalty is applied for an incorrect answer or no answer. If you have any questions, press the red button. The experimenter will answer them privately. Otherwise, please click "Next" to begin this block.

—

Block 2
Your task:
In Block 2, there are six sets of estimation tasks, each corresponding to the quiz in the previous block. In each estimation task, you will see the same 20 questions. In addition, you will be informed of the distribution of participants by gender (male or female) in the current session. For each question, you must estimate how many male and female participants answered correctly. Therefore, you must provide two estimates for each question: one for male participants and one for female participants. You must therefore make 40 estimates in each set.

Your earnings in this block:
At the end of the experiment, the program randomly selects one of the six estimation tasks. Ten out of twenty questions will then be drawn to determine your additional gain in this block.

- If your estimate exactly matches the actual number of male/female participants who answered correctly, you receive 12 points.
- If your estimate deviates by one point from the actual value, you receive 6 points.
- Otherwise, you receive nothing.

It is therefore in your best interest to make all estimates as accurate as possible. If you have any questions, press the red button. The experimenter will answer them privately. Otherwise, please click "Next" to begin this block.

—