Intelligence Disclosure and Cooperation in Repeated Interactions

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Abstract

How does the information on players' intelligence affect strategic behavior? Game theory, based on the assumption of common knowledge of rationality, does not provide useful predictions. We experimentally show that in the Prisoners' Dilemma disclosure hampers cooperation; higher intelligence players trust their partners less when playing against someone of lower ability. Similarly, in the Battle of Sexes with low payoff inequality, disclosure disrupts coordination, as higher intelligence players try to force their most preferred outcome. Instead, with higher payoff inequality, behavior changes and higher intelligence players concede. We analyze the reasons for these patterns of behavior.

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How does knowledge of the cognitive skills of others affect cooperation when people repeatedly interact with each other? This question is of primary importance to evaluate the relevance of experiments on strategic interactions, and their external relevance for social interactions. In

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the laboratory, subjects typically interact anonymously, thus, such information is unknown to others. On the other hand, in natural real life interactions, individuals will often have some information, or at least, will be able to form some impression on the characteristics of the person they are dealing with; in particular regarding cognitive skills and personality. This knowledge could significantly affect choices and behavior.

It is by now known that, when no information on the cognitive skills of others is revealed, there is a systematic relationship between cognitive skills and strategic behavior under repeated interactions. This topic has been widely investigated (Alaoui and Penta, 2016; Brocas and Carrillo, 2021b; Burks et al., 2009; Gill and Prowse, 2016; Jones, 2008; Proto et al., 2019, 2022). Thus, as part of this general research agenda, a natural question arises: should more intelligent players trust the less intelligent ones *when they know that their opponent is less intelligent than they are*, and vice versa. It is well known that intelligence is a complex and multi-faceted characteristic. In the current paper we will refer to intelligence (or cognitive skills) as cognitive ability in strategic settings, of which the Raven test provides a good measure, as previous studies have demonstrated (Gill and Prowse, 2016; Proto et al., 2019, 2022).[1]

Understanding how information on an opponent's ability affects behavior is useful in various applications of social interactions, which seldom are completely anonymous. The influence of cognitive ability disclosure can also have theoretically interesting implications: players may have an incentive to signal their cognitive skills, or not, in order to affect the beliefs and decisions of others. This paper considers whether and in which direction the provision of information on the relative level of intelligence affects behavior.

We consider two games: Prisoners' Dilemma (PD) and Battle of Sexes (BoS). These games cover a large set of the interesting scenarios generated by repeated games with two actions two players symmetric stage games (Proto et al., 2019). In the repeated PD the key decision follows from recognizing the existence of a trade-off between gains in the present and gains in the future. Thus, disclosing the level of intelligence of the players may have an effect on cooperative behavior. The more intelligent players might not trust the less intelligent to

[1] The Raven test consists of non-verbal multiple choice questions and is recognized as a leading measure of analytic intelligence (Carpenter et al., 1990).

fully understand the trade-off and to be tempted to be less cooperative. For the less intelligent, specific theoretical predictions are potentially more complicated. On the one hand, if a player's intelligence level is too low, they might not be able to think strategically (Gill and Prowse, 2016). On the other hand, they may trust the capacity of the more intelligent to understand the game, and – given our payoffs and continuation probability – cooperate more. Alternatively, if they are able to form higher order beliefs, they may think that the more intelligent will not trust them and therefore would decide to defect.

In the BoS the decision problem is not whether to cooperate or not, but rather how to coordinate on one of the two pure strategy Nash Equilibria, which result in different payoff allocations. Hence, in the BoS a tension is generated by the different payoff appropriation that is possible. Thus, the question of how disclosure may affect behavior when the payoff allocation becomes more extreme arises, as is the case when the payoff difference in the pure strategy Nash Equilibria is larger. A natural conjecture for the BoS is that players of higher cognitive skill will try to force coordination on their preferred outcome. This could stem from the anticipation that their partner of lower ability is more likely to concede than oppose such forceful behavior. The higher intelligence player may believe that the lower ability partner would not be able to understand that opposing their forceful behavior could induce more compromise in future plays. When the payoffs in the pure strategy Nash Equilibria outputs are more unequal, both players have a higher incentive to achieve their preferred outcome and are potentially less willing to concede to others. Thus, we would expect that the effect of disclosure should be attenuated by increasing the inequality in the payoffs of the non-zero payoff outcomes. In order to study this we implement two variants of the BoS which differ in the level of inequality of payoff, one with lower payoff inequality and one with higher payoff inequality.

We find that disclosure affects behavior. In the PD, higher intelligence players play less cooperatively when intelligence differences are disclosed. This change in behavior of higher intelligence players with disclosure results in the lower intelligence subjects suffering the sucker payoff more often. Overall, we find that disclosure hampers cooperation. A similar disruption of cooperation occurs in the BoS with low inequality. Higher intelligence players try to impose themselves by forcing their preferred outcome. However, in the BoS with high inequality, this pattern of behavior changes and disclosure does not significantly disrupt coordination. Our conjecture is that the higher inequality in the payoffs makes the less intelligent less likely to concede in coordinating on an outcome where they obtain the smaller payoff, which in turn discourages the more intelligent to force coordination on their preferred outcome. Our findings are obtained through both econometric analysis and by estimating the likely strategies that subjects are using when playing the repeated games we consider.[2]

Proto et al. (2022) show that more intelligent subjects discipline the less intelligent through punishment only if the error rates of the latter are not too high, the former stop cooperating otherwise. Our results here show that ex-ante knowledge of the partner's cognitive skills can be disruptive as this can convey the signal that the partner is not capable to play the PD efficiently, or induce the more intelligent players to force coordination on their preferred outcome in the BoS.

The behavior of experimental subjects in the repeated games we are considering in the current paper has been extensively studied in the literature under no disclosure of cognitive ability. In the PD, subjects tend to converge to almost full cooperation when gains from cooperation are sufficiently large (e.g. Blonski et al., 2011; Dal Bó, 2005; Dreber et al., 2008; Duffy and Ochs, 2009). In the current paper we use a combination of payoffs and continuation probability under which, as Dal Bó and Fréchette (2011) and Proto et al. (2019, 2022) have shown, behavior converges to almost full cooperation. There is a smaller experimental literature on the repeated BoS (Mathevet and Romero, 2012; McKelvey and Palfrey, 2001; Ioannou and Romero, 2014) that documents players' ability to achieve long run coordination on fair and Pareto efficient outcomes. Proto et al. (2019) show that an individual's ability to coordinate to a fair and Pareto efficient outcome in the repeated BoS is linked to cognitive ability.

Closely related to the current paper is Brocas and Carrillo (2021a), where children of different ages (i.e. at different cognitive development stages) play the repeated BoS in homogeneous sessions. That is, subjects know that they are playing against others in the same cohort. Brocas

[2] We focus on the most widely used strategies in the PD (as reported in the related literature), while for the BoS we follow Brocas and Carrillo (2021a) and define strategies that are inspired from their analysis.

and Carrillo (2021a) find that the capacity to coordinate on what they define as the *Efficient and Fair Outcome* steadily increases with age. In our experiment, high-intelligence subjects face both high- and low-intelligence subjects, while in Brocas and Carrillo (2021a) subjects play only within their age group, which is similar (though not identical) to low-intelligence players playing against low-intelligence players and high playing against high. The aim of Brocas and Carrillo (2021a) is to analyze the link between the capacity of coordination and the level of subjects' development, while ours is to contrast the behavior between disclosure and non-disclosure of abilities.

The theoretical literature is mostly silent about the effect of information of varying levels of cognitive skills of interacting players. Most of classic game theory results hold under the assumption of *common knowledge of rationality.*[3] Introducing different cognitive skills of players opens the question of what would be a meaningful definition of common knowledge of rationality in a context where players have different cognitive skills. In the current paper, we analyze the effect of disclosing the cognitive skills of the two players in repeated games.

Previous laboratory experiments show that the identity of the partner can affect strategic behavior. In particular, Eichberger et al. (2008) introduce the notion of lack of confidence in probability judgments in a static game and show that playing against a granny, a game theorist, or other subjects generate different levels of strategic ambiguity in a static game and experimental subjects play accordingly. Palacios-Huerta and Volij (2009) show that laboratory subjects play more in accordance to sub-game perfect Nash equilibrium when matched with professional chess players than when they play among each other. More recently, Alaoui et al. (2020) show that a signal about the sophistication of the opponent changes both first and higher order beliefs of players.

The remainder of the paper is organized as follows. The next section provides a theoretical background to analyze the experimental data. Section II describes our experimental design. Section III presents our experimental results, for the Prisoners' Dilemma, the Battle of the Sexes with low inequality, and the Battle of the Sexes with high inequality. Section IV offers a

[3]For example, Aumann (1995) shows that backward induction outcome is reached under common knowledge of rationality in extensive form games of perfect information.

short discussion and conclusions. The online supplementary material includes all experimental details and documents and some summary statistics.

I Theoretical & Experimental Background

We consider two games: Prisoners' Dilemma (PD) and Battle of Sexes (BoS). As Proto et al. (2019) argue, these games cover a large set of the interesting scenarios generated by repeated games with two actions two players symmetric stage games. Both games capture important features of cooperation in strategic environments. In table 1, we present the payoff matrices we implement in our experimental design. For the PD, we choose the same payoff matrix and continuation probability, which as Dal Bó and Fréchette (2011) and Proto et al. (2019, 2022) have shown, result to almost full cooperation under anonymity. Similarly, for the BoS with low inequality (BoSLI), we use a combination of payoffs and continuation probability that as Proto et al. (2019) have shown, result to almost full coordination. For the BoS with high inequality (BoSHI), we decrease the lower payoff in the pure strategy Nash Equilibria outcomes to enhance the payoff inequality in these outcomes.

Table 1: **Stage Games.**

(a) PD

	C	D
C	48,48	12,50
D	50, 12	25,25

(b) BoSLI

	W	B
B	48,25	0,0
W	0, 0	25,48

(c) BoSHI

	W	B
B	48,12	0,0
W	0,0	12,48

Note: C: Cooperate, D: Defect; B: Best-outcome action, W: Worst-outcome action

We begin by analyzing the set of possible strategies of the various specifications. Equilibrium strategy profiles for repeated games with PD and BoS as stage games are of course well understood; here we focus on how the equilibria change in games with incomplete information, where players may differ in cognitive skills, and on how different information provided on these skills affect equilibria. As the theory does not provide a precise characterization of these strategies, in particular for the possible effect of disclosing intelligence on strategic behavior, we begin the analysis, following the recent experimental literature (e.g. Dal Bó and Fréchette, 2011; Fudenberg et al., 2012), by formulating some natural questions deriving from a few repeated game strategies that have previously received attention.

In the PD (for the stage game see table 1a), the key decision follows from recognizing the trade-off between gains in the present and losses in the future. Jones (2008) and Proto et al. (2019) show that this understanding and the potential of cooperative behavior is influenced by the level of intelligence of the decision making player. Furthermore, Proto et al. (2022) show that more intelligent subjects adopt harsher strategies if their partners commit too many strategic mistakes. Finally, the more intelligent may think that the less intelligent are unconditional cooperators (a strategy strictly dominated in our setting). This is all consistent with Eichberger et al. (2008) showing that playing against a player with potentially different skills results in different levels of strategic ambiguity.

Given these possible beliefs about the capacity of understanding the game and correctly implementing a strategy, more intelligent players might be tempted to not cooperate. This leads us to our first research question:

Question 1. *In the repeated PD, are the more intelligent less cooperative when cognitive skills are disclosed?*

Formulating predictions on the behavior of the less intelligent is potentially more complicated. If a player's level of intelligence is too low, they might not be able to think strategically (Gill and Prowse, 2016), thus, making their behavior potentially erratic (level 0-like). On the other hand, they may trust that the more intelligent are better able to understand the game and follow them in cooperating more (level 1-like). A further possibility could be that, despite being of lower intelligence, players are able to form higher order beliefs (level >1-like). These beliefs might allow them to anticipate that the more intelligent will not expect them to be cooperative and therefore would decide to play in a non-cooperative manner. These considerations lead to our second research question:

Question 2. *In the repeated PD, do the less intelligent cooperate more or less when cognitive skills are disclosed?*

Overall, putting our first two questions together, we are interested in understanding the effect of cognitive skills disclosure on cooperation of groups of mixed intelligence. Thus, our third research question is:

Question 3. *In the repeated PD, does cognitive skills disclosure lead to lower cooperation rates?*

In the BoS the key issue is not whether to choose to be cooperative or not, but rather how to achieve coordination on one of the non-zero payoff outcomes (pure strategy Nash Equilibria). Each of these outcomes result in a heterogeneous earning allocation given their asymmetric nature. Hence, in the BoS, a tension is generated by the different payoff appropriation that is possible. For the Battle of Sexes with low inequality (BoSLI), we use the same stage game as in Proto et al. (2019) – see table 1b. Proto et al. (2019) show that coordination on one of the two pure strategy Nash equilibria is not affected by player intelligence. Instead, intelligence affects the capacity of alternating and reaching the *Efficient and Fair Outcome*, EFO henceforth. Following Brocas and Carrillo (2021a), the EFO indicates the subgame perfect equilibria that are Pareto optimal and give equal payoff to both players. Accordingly, the EFO in the BoS is achieved when players perfectly alternate between the two pure strategy Nash Equilibria of the stage game.

We anticipate that players with higher cognitive skills will want to try to force coordination on their preferred outcome while under disclosure. This may be because they believe their partner will concede, anticipating them not to be able to comprehend that non-compliance could result in more compromising behavior in later interactions.

These observations lead to the following second block of research questions, concerning the repeated Battle of Sexes with low inequality (BoSLI):

Question 4. *In the repeated BoSLI, do the more intelligent try to force coordination on their preferred outcome when cognitive skills are disclosed?*

Question 5. *In the repeated BoSLI, are the less intelligent more likely to concede when cognitive skills are disclosed?*

Overall, depending on how the behavior of both the more and less intelligent players changes when cognitive skills are disclosed, we ask:

Question 6. *In the repeated BoSLI, does cognitive skills disclosure lead to lower coordination rates?*

The nature of the BoS, as already discussed above, entails a tension between players due to the asymmetry in earnings that result when coordinating on one of the pure strategy Nash equilibria. When inequality of payoff increases, the stake for each player to coordinate to their preferred equilibrium increases as well. Therefore, understanding how the effect of disclosing cognitive skills is influenced when inequality of payoffs is increased is very relevant and we study this with the game we call Battle of Sexes with high inequality (BoSHI) – see table 1c. Following Alaoui and Penta (2022), the level of reasoning for each player can be determined by a cost-benefit introspective analysis. Hence, the focus and effort when playing the BoS should generally increase as payoff inequality increases. Accordingly, higher inequality can make coordination more difficult as both players strive more to achieve their preferred outcome and are less willing to concede. Consequently, we expect that the effect of disclosure would be attenuated by increasing the inequality in the payoffs of the non-zero payoff outcomes.

Therefore, the more intelligent might feel more strongly about achieving their preferred outcome. A countervailing force might be in place though, as the more intelligent could believe that the less intelligent would be less willing to concede given the inequality in payoffs. As a result, the more intelligent might be less tempted to force their preferred outcome onto others. Hence, for the repeated BoS with high inequality (BoSHI) we ask the following questions:

Question 7. *In the repeated BoSHI, do the more intelligent try to force coordination on their preferred outcome more or less when the cognitive skills are disclosed?*

Equivalently, for the less intelligent:

Question 8. *In the repeated BoSHI, do the less intelligent concede more or less when cognitive skills are disclosed?*

Overall, we are interested in how different levels of inequality in payoffs can influence the effect of cognitive skill disclosure on coordination:

Question 9. *Does cognitive skills disclosure have a smaller effect in the BoSLI than in the BoSHI?*

II Experimental Design

II.A Overview

In our experiment subjects play repeated games in a between-subjects design. While playing these games, subjects are either informed or not of the approximate relative ability of themselves and the person they are playing against. Subjects complete a cognitive ability test and are subsequently asked to play either a Prisoner's Dilemma game or one of two variants of a Battle of Sexes game depending on the condition.[4] We vary whether the subjects, while interacting, are given some information on their own and their partner's test scores, the *Disclosure* condition, or not, the *No-disclosure* condition. To avoid any form of deception, prior to the cognitive ability task, subjects are warned that their score may anonymously be shown to other subjects at a later point in the session. Overall, we have a 2×3 factor design resulting in 6 treatments summarized in table 2.

Table 2: **Summary of treatments.**

	Disclosure	*No-disclosure*
Prisoners' Dilemma	1) PD Discl.	4) PD No Discl.
Battle of Sexes (low ineq.)	2) BoSLI Discl.	5) BoSLI No Discl.
Battle of Sexes (high ineq.)	3) BoSHI Discl.	6) BoSHI No Discl.

[4]The Prisoners' Dilemma payoffs are the same as the ones adopted in Dal Bó and Fréchette (2011); Proto et al. (2019, 2022). The Battle of Sexes payoffs in the low inequality variant are the same as those used in Proto et al. (2019), while for the high inequality variant we increase the inequality in the diagonal payoffs by reducing the lower payoff of the two.

II.B Session Timeline

In the first part of the session subjects complete tasks which elicit their cognitive ability and risk preferences. We measure intelligence using the Raven Advanced Progressive Matrices (APM) test of 36 matrices, which is considered a measure of analytic intelligence (e.g. Carpenter et al., 1990). Gill and Prowse (2016) and Proto et al. (2019, 2022) have recently demonstrated that the Raven test is a good measure of cognitive ability in strategic settings.

Subjects have a maximum of 30 minutes for all 36 matrices. They are initially shown an example of a matrix with the correct answer provided below for 30 seconds. Then, for each item a 3×3 matrix of images is displayed on the subjects' screen; the image in the bottom right corner is missing. The subjects are asked to complete the pattern, choosing one out of 8 possible choices presented on the screen. The 36 matrices are presented in order of progressive difficulty, just as they are sequenced in Set II of the APM. Subjects are allowed to switch back and forth through the 36 matrices during the 30 minutes and change their answers. They are rewarded with 1 Euro per correct answer from a random choice of three out of the 36 matrices. The Raven test is a non-verbal test commonly used to measure reasoning ability and general intelligence. Matrices from Set II of the APM are appropriate for adults and adolescents of above average intelligence, as it is natural to assume for university students. During the session we never mention that the task is a test of intelligence or cognitive ability. For risk attitude elicitation, subjects complete an incentivised Holt-Laury task (Holt and Laury, 2002).

Subjects are then asked to play an induced infinitely repeated game. Depending on the condition, subjects played a Prisoner's Dilemma (PD) game, a Battle of Sexes with low inequality (BoSLI) game, or a Battle of Sexes with high inequality (BoSHI) game. The respective stage games are presented in table 1. Payoffs reported are in terms of experimental units; each experimental unit corresponds to 0.003 Euros and subjects receive the sum of all earnings earned across all their interactions.

As is standard in experimental tests of infinitely repeated games, we reproduce the conditions of an infinite repetition of the stage game by introducing random termination through continuation probability δ, with $\delta = 0.75$. We use a pre-drawn realization of the random numbers to ensure all sessions across all treatments are faced with the same experience in terms of length of play at each decision point.[5] We define each repeated game played a *supergame* and refer to the round within a specific supergame as a *period*. We define as *round* the overall count of number of times the stage game has been played across supergames during the session. The length of play of the repeated game is until the completion of the 26th supergame (which entailed 92 rounds, i.e. repetitions of the stage game). This rule is not disclosed to the subjects.

The matching of partners is done within each session under an anonymous and random re-matching protocol. Subjects play as partners for as long as the random continuation rule determines that the particular partnership is to continue. Once a match is terminated, the subjects are again randomly and anonymously matched, and start playing the game again according to the respective continuation probability. Each decision round for the game is terminated when every subject in the session has made their decision. After all subjects make their decisions, a screen appears that reminds them of their own decision, indicates their partner's decision, as well as the experimental units they have earned for that particular round.

After completing the repeated game, subjects are asked to respond to a standard Big Five personality questionnaire[6] together with some demographic questions. No monetary payment is offered for this section of the session and the subjects are informed of this. All the instructions are included in the supplementary material.[7]

II.C Disclosure of intelligence

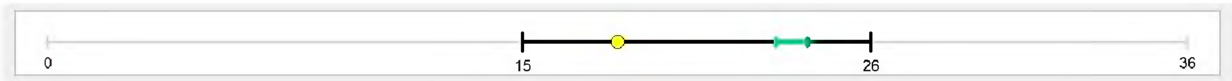
In the disclosure condition, as subjects play either the PD, BoSLI or BoSHI (depending on the condition), they receive information about their own Raven test score as well as their partner's approximate Raven test score. We call the information on the opponent approximate because it is offered through a line graph like the one in figure 1. The gray range depicts the overall possible test scores ranging from 0 to 36, while the black line indicates the range of actual scores

[5]This pre-drawn realization is the same as the one used in Proto et al. (2022). In table O.18 in the supplementary material we list the length of each supergame.

[6]We use the 44-item version that was developed by John et al. (1991), and was further investigated by John et al. (2008).

[7]This is appended at the end of this manuscript.

Figure 1: **Disclosure of Raven scores.** An example of how the own raven score and partner's raven score was disclosed to subjects.



in the session; providing this information is necessary to offer an idea of the typical range of scores subjects obtain. The yellow circle indicates the score of the subject, while the green range indicates the range within which the partner's score lies. We choose to display the green range, instead of a specific point on the line, to prevent (as far as possible) the identification of a partner from previous supergames. This range indicates two points on the line, one of which is the true partner's score. Subjects are not explicitly told how many points are contained within the green range, they only see the range as depicted in figure 1. For each supergame, the partner's score would either be the higher or lower point on the green range. This is kept constant within a supergame but then randomly determined across supergames. In order to allow for clear identification of score differences we ensure that in all matches there is at least one score point difference, which means that the yellow circle never coincides with the green range.[8] This rule is also applied in the no-disclosure condition matching protocol. Other than this restriction, matching is done completely randomly. In the no-disclosure condition, the area where the figure of intelligence disclosure should be is left blank.

II.D Implementation Details

The recruitment was conducted through the Alfred-Weber-Institute (AWI) Experimental Lab subject pool based on the ORSEE (Greiner, 2015) and SONA recruitment software for the sessions taking place in the Heidelberg Lab. For the sessions that were administered in the Frankfurt Lab, recruitment was conducted through the Frankfurt Laboratory for Experimental Economic Research (FLEX) subject pool based on the ORSEE recruitment software. We had to administer some sessions in the Frankfurt lab because the subject pool at the Heidelberg Lab was not large enough to accommodate our needs given that we did not want subjects from

[8]In cases where there is exactly a one point difference between own and partner score, to ensure distinct positions of the yellow circle and green range, the position of the green range is specified non-randomly to extend away from the yellow circle.

previous related work (Proto et al., 2022) to be also subjects in this study. Subjects across the two labs are not different in terms of individual characteristics as seen in table O.19 in the supplementary material. Moreover, when we analyze the data we will also present the main results split by location and argue that the findings are consistent. A total of 430 subjects participated in the experimental sessions. They earned on average around 12 Euros each. The software used for the entire experiment was *Z-Tree* (Fischbacher, 2007).

We conducted 6 sessions for the PD condition consisting of a total of 100 subjects, 10 sessions for the BoSLI condition consisting of a total of 170 subjects and 8 sessions for the BoSHI condition consisting of 160 subjects. Since the analysis for the BoS treatments mainly focuses on outcomes (i.e. whether coordination is achieved or not), while for the PD treatments on just cooperative choices, more observations were needed for the BoS treatments, hence the slightly larger number of sessions and subjects for these. The dates of the sessions and the number of subjects per session, are reported in tables O.15, O.16 and O.17 in the supplementary material.

III Experimental Evidence

III.A Prisoner's Dilemma

We first address our first two research questions, which we repeat here for convenience:

Question 1. *In the repeated PD, are the more intelligent less cooperative when cognitive skills are disclosed?*

Question 2. *In the repeated PD, do the less intelligent cooperate more or less when cognitive skills are disclosed?*

First periods analysis

We initially focus on first period choices, that have the advantage of not being affected by past choices within a supergame. There is widespread evidence that in the repeated PD subjects overwhelmingly play 3 simple strategies: Always Defect, Tit-for-Tat and Grim Trigger (e.g.

Dal Bó and Fréchette, 2018, 2019; Proto et al., 2019; Romero and Rosokha, 2019).[9] Since most behavior is typically limited to these three strategies, first period choices are very indicative of whether a subject is playing a cooperative strategy in a given supergame.

From figure 2, we can observe that under disclosure, subjects playing with partners of lower IQ than themselves open with cooperation less often compared to the non-disclosure treatment, while for the lower intelligence subjects in a given pair the evidence is less clear. In table 3, where we report our logit estimation results in terms of odds ratios, we confirm this pattern.[10] In particular, we analyze cooperative choices separately for when a subject is of higher intelligence than their partner and for when a subject is of lower intelligence than their partner. The results of the former, reported in columns 1 and 2, offer evidence that subjects of higher intelligence than their partner initiate supergames significantly less often with cooperation under disclosure. Interestingly, when we control for the difference in intelligence between partners (column 2), we find that the odds of cooperation decrease as the IQ difference between the pair increases under disclosure. Thus, confirming our prediction in section I about how cooperative the more intelligent will be with their partners would be inversely related to the partner's intelligence. This effect is substantial; looking at the 1st column of table 3, we find that disclosure reduces the odds of cooperation by almost 80% when the subject has a higher score than their partner, corresponding to an estimated negative marginal effect of magnitude 0.125.

The results reported in column 3 table 3 offer some weak evidence that lower intelligence subjects cooperate less in the disclosure condition albeit this is only significant at 10%. Similarly to the case of the higher intelligence subjects, in column 4, we find that the effect of disclosure is stronger as the IQ difference between the two players increases. This effect, though, does appear smaller compared to what we find in column 2 for the higher intelligence subjects. The interaction of the effect of disclosure and higher IQ difference between players, highlights that, with a larger difference in skills, players appear to be less keen to trust each

[9] See also our estimations in tables O.9 and O.10 in the online supplementary material.

[10] As argued in detail in the online appendix of Proto et al. (2019), in such a panel data environment expressing results in odds ratios makes interpretation easier and more precise. Hence, across all our regression results we report these in terms of odds rations when applicable.

other.

The fact that the less intelligent do not significantly change their behavior (or at least change it less than the more intelligent do) results in the less intelligent suffering in terms of payoff in the disclosure condition. In table 4 we analyze payoffs in first periods separately for subjects of higher intelligence than their partner and vice versa. The less intelligent in a pair are on average about 2.27 units worse off in the disclosure condition (column 3), while the more intelligent in a pair are not significantly affected in terms of payoff by disclosure (column 1). Overall, we find that disclosure makes the more intelligent cooperate significantly less, while for the less intelligent this evidence is weaker in first period choices.

Strategy Estimation Analysis

Now we focus on how play of the different intelligence players looks like in the subsequent periods. We analyze this through estimating the likelihood of different strategies separately for the first half and the second half of the session. We use the method first introduced in Dal Bó and Fréchette (2011). The likelihood of each strategy is estimated by maximum likelihood, assuming that the subjects have a fixed probability of choosing one of considered strategies in the time horizon under consideration, depending on whether they are under disclosure or not and whether they are more or less intelligent than their partners. The likelihood that the data correspond to a given strategy is obtained by allowing the subjects some error in their choices in any round, where error is defined as a deviation from the prescribed action according to their strategy.[11]

We report the results of this estimation in tables 5 and 6 for the first and second half of the session respectively. In these tables we only consider 4 possible strategies. As already discussed, the strategies Always Defect (AD), Tit-for-Tat (TfT), and Grim Trigger (GT) are the ones that are overwhelmingly played by experimental subjects in the indefinitely repeated PD. We additionally include Always Cooperate (AC) which could be potentially instructive.[12]

[11]A detailed description of the estimation procedure is in the online appendix of Dal Bó and Fréchette (2011).

[12]Tables O.9 and O.10 in the online supplementary material report estimations where we consider all the strategies commonly considered in the game theory literature for the infinitely repeated PD. These results confirm the empirical regularity of AD, TfT, and GT being the predominant strategies used.

In table 5, when players have a higher IQ score than their partner, we observe a substantial drop in the proportion of AC under disclosure (columns 1 and 2), suggesting that the more intelligent trust the less intelligent less. Furthermore, we also observe more lenient strategies are played – i.e. more TfT and less GT – when they know that their partner has a lower score than themselves. This could be explained by the fact that more lenient strategies are optimal when initially expecting the partner to be more error prone (Fudenberg et al., 2012; Proto et al., 2019). Switching now to individuals playing with partners of higher intelligence than themselves (columns 3 and 4), we observe that they are more cooperative under disclosure: play GT in a higher proportion while the occurrence of AD drops suggesting that less intelligent trust the more intelligent more. In general, the strategy estimation analysis supports the notion that that on average the more intelligent trust less the less intelligent, while the less intelligent are more trusting with disclosure.

In table 6, we report the strategy estimation for the second half of the session. We find no substantial differences to the estimation for the first half of the session. While, again, the less intelligent seem to become more cooperative as they play AC significantly more often under disclosure.

Overall, these results suggest the following answers to questions 1 and 2 :

Result III.1. *In the repeated PD, higher intelligence subjects are less cooperative under disclosure; while for the less intelligent the evidence is mixed. When the intelligence difference is high, both lower and higher intelligence players cooperate significantly less under disclosure.*

We now answer our third research question:

Question 3. *In the repeated PD, does cognitive skills disclosure lead to lower cooperation rates?*

Figure 3 indicates that disclosure significantly reduces first period cooperation rates in the first half of the session. After the second block of 5 supergames is played (marked with 10 in the x-axis of the figure), we observe a difference of around 15 percentage points in first period cooperation rates between the disclosure and no-disclosure treatments. This observation is corroborated by econometric analysis. In table 7, we report the results of a logit estimation of the effect of disclosure on first periods cooperation rates. Column 3 shows a significant negative effect of disclosure in first periods cooperation in the first half – the odds of cooperation are reduced by more than 70% in the disclosure treatment compared to the no-disclosure treatment. This effect remains when estimating the same specification for the whole session (column 5), where we observe a reduction of about 74% of the odds of first periods cooperation in the disclosure treatment. This corresponds to an estimated negative marginal effect of magnitude 0.121. Columns 2, 4 and 6 show that the negative effect of disclosure is significantly stronger when intelligence differences between players are high and this is disclosed. That is, whenever partners have a larger difference in their cognitive abilities and this is common knowledge, interactions are significantly less likely to be initiated with a cooperative choice. This result is in line to what we have seen in columns 2 and 4 of table 3: when there is a large IQ difference between subjects, they significantly trust each other less.

We can then answer our third research question by:

Result III.2. *In the repeated PD, disclosure has a negative effect on cooperation, especially when the intelligence difference between players is large.*

III.B Battle of Sexes with Low Inequality

We now focus on the behavior in the BoS with low inequality (BoSLI) and answer our fourth and fifth research questions:

Question 4. *In the repeated BoSLI, do the more intelligent try to force coordination on their preferred outcome when cognitive skills are disclosed?*

Question 5. *In the repeated BoSLI, are the less intelligent more likely to concede when cognitive skills are disclosed?*

Preferred choices and outcomes

The top panels of figure 4 present the proportion of preferred choice for the subjects with a higher IQ than their partner in the left and vice versa in the right. From the top-left panel we observe that players of higher IQ than their partner more frequently make their preferred choice under disclosure. Instead, the evidence for the players of lower IQ than their partner is not clear. These graphical observations are confirmed in table 8, where we report the results of a logit regression on the likelihood that a subject makes their preferred choice (i.e. choice of B for both the row and column players in table 1b). These results suggest that for subjects knowingly playing with partners of lower intelligence than themselves disclosure significantly increases the probability they play their preferred choice and impose themselves more often. The odds of higher intelligence subjects going for their preferred choice are increased by about 32% when in the disclosure treatment compared to the no-disclosure treatment (column 1); this corresponds to an estimated positive marginal effect of 0.06. The likelihood the less intelligent play their preferred choice does not seem to be affected by disclosure as the results reported in columns 3 and 4 of table 8 indicate.[13]

The bottom panels of figure 4 show that, as a consequence of the behavior we just described, the less intelligent are less often able to achieve their preferred outcome, while the more intelligent are not able to improve the extent by which they impose coordination on their preferred outcome. In table 9, we report the results of a logit regression on the likelihood of achieving one's preferred outcome separately for subjects of higher and lower intelligence in a given pair. These results corroborate the observations made from figure 4. With disclosure there is significantly less coordination on the preferred outcome of the less intelligent subject in a pair. The odds of coordinating to the preferred outcome of the lower intelligence subject in a pair under disclosure are reduced by just over 25%, with an estimated negative marginal effect of disclosure of magnitude 0.06.[14] The more intelligent partners impose themselves more; while the less intelligent appear to concede more. Nevertheless, the more intelligent are not able to achieve their preferred outcome more often under disclosure, possibly because the overall rate of coordination is generally lower under disclosure.[15]

[13]In table O.1 we present separately the results for the data collected in Heidelberg and Frankfurt. Even though the estimated results are not statistically significant due to the lower power of each test, the direction of the effect is qualitatively similar in the two different locations.

[14]In table O.2 we present separately the results for the data collected in Heidelberg and Frankfurt. The table shows a consistently negative effect for the less intelligent both in Frankfurt and in Heidelberg.

[15]Accordingly, disclosure results in a significantly negative impact on payoffs for lower intelligence subjects as we note from table O.3 in the online supplementary material, where we analyze the effect of disclosure on

Subjects in the middle of the intelligence distribution are often flipping between being the higher or the lower intelligence player in a pair. In table 10, by introducing individual fixed effects, we are able to analyze how the same subjects change their behavior when they are matched with a more or less intelligent partner. From columns 1 and 2, we note that under disclosure, when subjects are more intelligent than their counterparts the odds of imposing their preferred choice are increased by about 42%, with an estimated positive marginal effect of magnitude of 0.09.

Strategy Estimation Analysis

We analyze the strategies played by the subjects through estimating the likelihood of different strategies separately for the first half and the second half of the session, while under disclosure or not and depending on whether an individual is more or less intelligent than their partner. We again use the method introduced by Dal Bó and Fréchette (2011) as outlined above. We describe the strategies that we consider in table 11. These strategies are inspired by those considered in Brocas and Carrillo (2021a). Except for the strategies Always Preferred and Always Concede, the rest are increasingly sophisticated strategies aimed at achieving the EFO. As we are interested in understanding how forceful, or conceding players are depending on who they are matched with, we categorize each strategy as either forceful or submissive. For example, in forceful Tit-for-Tat, players start with their preferred choice, while in the submissive Tit-for-Tat players start with the preferred choice of their partner. In tables O.11 and O.12 in the online supplementary material, we report the estimation results when considering all the strategies listed in table 11, for the first and second half of the session respectively. Several strategies are never played by the subjects. For this reason, we run a second estimation where we only include the strategies that are most frequently used by the subjects, the results of which we report in tables 12 and 13.

These estimations are consistent with the results from the previous econometrics analysis. In table 12, we observe subjects with a higher IQ than their partner play more often Always Preferred in the disclosure treatment (columns 1 and 2). On the other hand, the less intelligent

payoffs separately for the higher and lower intelligence subject in a pair.

in a pair seem to play Always Concede more often under disclosure (columns 3 and 4). Overall, the less intelligent play submissive strategies more often and forceful strategies less often under disclosure.

For completeness we present the estimation results for the second half of the session in table 13. Here, we find more homogeneity across subjects and treatments, suggesting that disclosure becomes less relevant after subjects learn from experience. We summarize the results for the BoS with low inequality so far with:

Result III.3. *In the repeated BoSLI, the higher intelligence subjects impose themselves by playing their preferred choice more often under disclosure. The less intelligent concede more often under disclosure.*

We move on to address our next research question:

Question 6. *In the repeated BoSLI, does cognitive skills disclosure lead to lower coordination rates?*

In figure 5, we present the evolution of coordination across the two disclosure treatments. We observe that disclosure hampers coordination, at least in the first half of the session. There is a difference of approximately 10 percentage points between the disclosure and no-disclosure treatments. The equivalent regression analysis we report in table 14 supports this conclusion as well. We find a significant negative effect of disclosure on coordination (column 3) and this difference remains significant throughout the whole session (column 5). Overall, the odds of coordination are reduced by more that 20% in the disclosure treatment, with estimated negative marginal effects of magnitude 0.06 and 0.05 respectively for the first half of the session and the whole session.[16]

We therefore conclude that for the BoS with low inequality:

Result III.4. *In the repeated BoSLI, disclosure has a negative effect on overall coordination. Overall, this negatively affects earnings, but is dis-proportionally more harmful for the lower intelligence subjects.*

[16] In table O.4, where we present the same regressions of columns 1 and 3 for Heidelberg and Frankfurt separately, we note that in both locations the effect of disclosure is negative.

III.C Battle of Sexes with High Inequality

We now turn to the BoS with high inequality (BoSHI) addressing the following:

Question 7. *In the repeated BoSHI, do the more intelligent force coordination on their preferred outcome more or less when the cognitive skills are disclosed?*

Question 8. *In the repeated BoSHI, do the less intelligent concede more or less when cognitive skills are disclosed?*

Preferred choices and outcomes

Figure 6 suggests a different pattern than in the BoS with low inequality. Lower intelligence subjects seem to make their preferred choice and achieve their preferred outcome more often under disclosure, while the evidence for the higher intelligence is less clear. In table 15, we analyze a subject's likelihood to make their preferred choice, separately for the higher and lower intelligence subjects in a given pair. We find an important difference to the behavior observed in the Battle of Sexes with low inequality. Higher intelligence subjects do not make their preferred choice significantly more often under disclosure in the BoS with high inequality, in contrast to what we observe in the low inequality variant. If anything, it seems on the contrary that they play their preferred choice less often (columns 1 and 2), albeit not statistically significant.

More intelligent subjects in the BoS with high inequality do not seem to impose themselves more under disclosure. This change in behavior reduces the effect of disclosure on coordination onto the higher intelligent subject's preferred outcome. In table 16, we estimate the likelihood of coordination to a subject's preferred outcome separately for subjects of higher and lower intelligence than their partner. We find that lower intelligence subjects appear to significantly more often manage to coordinate on their preferred outcome.[17] From column 3 of table 16 we note that the lower intelligence subject in a pair enjoys more than 25% increase in the odds of reaching their preferred outcome under disclosure with an estimated positive marginal effect of magnitude of about 0.05. If we analyze coordination in Heidelberg and Frankfurt

[17] The change in outcomes for the lower and higher intelligence subjects is further evident from the results in table O.5 of the online supplementary material. We find that the lower intelligence subjects of a pair earn significantly higher payoffs under disclosure.

separately, we find consistent results in the two locations as we can observe in table O.7 of the online supplementary material. Column 1 shows that in Frankfurt disclosure significantly reduces the likelihood of coordination on the more intelligent subject's preferred outcome, while column 4 show that in Heidelberg disclosure increases the likelihood for coordination on the less intelligent subject's preferred outcome.

Strategy Estimation Analysis

Similarly to the analysis for the BoSLI, we perform the strategy estimation initially considering all strategies described in table 11. We report these estimations in tables O.11 and O.12 in the online supplementary material, for the first and second half of the session respectively. Once again several strategies are never played by the subjects and so we again run a second strategy estimation considering only the most frequently played strategies. We report the results of this estimation in table 17 for first half of the session. It is useful to recall that apart from Always Preferred and Always Concede all other strategies are aimed to achieve the EFO. The less intelligent do not appear to be conceding any differently under disclosure or not (columns 3 and 4), as it is intuitive to expect given the higher payoff inequality in this variant of the BoS. At the same time the more intelligent do not seem play the Always Preferred strategy under disclosure (column 2). On the contrary, and perhaps surprisingly, the less intelligent are more likely to play Always Preferred and other forceful strategies more often under disclosure (columns 3 and 4). Overall, we note that disclosure appears to discourage the more intelligent but encourage the less intelligent to use forceful strategies.

Table 18 presents the likelihood estimation results for the second half of a session, where in the same vein as in the BoSLI inequality, we find fewer differences in the probability of playing the different strategies across the two disclosure treatments.

We can summarize the results for the BoSHI so far with:

Result III.5. *In the repeated BoSHI, the less intelligent are less likely to concede under disclosure, while the higher intelligence subjects do not try to force coordination on their own preferred outcome under disclosure.*

III.D Comparison within the two Battle of Sexes Conditions

We now turn to the effect of disclosure on the overall level of coordination and in particular to our research question:

Question 9. *Does cognitive skills disclosure have a smaller effect in the BoSHI than in the BoSLI?*

Figure 7 presents the evolution of coordination across the two disclosure treatments in the BoS with high inequality. In contrast to the BoS with low inequality, we observe no clear difference between the two treatments. Table 19 corroborates this observation, there is no statistically significant effect of disclosure on coordination.

We now directly compare the two BoS conditions. First, we study the evolution of preferred outcome coordination in figure 8. The figure contrasts whether the higher intelligence subject in a given pair achieves their preferred outcome or not depending on the game version (blue for BoSLI and red for BoSHI) and on whether intelligence was disclosed (right panel) or not (left panel). Focusing first on the left panel of figure 8, there is no clear difference between the two game variants on whether coordination is on the preferred outcome of the higher intelligence player in a pair under no disclosure. In the disclosure treatments, the outcomes are clearly different depending on the game version (right panel). With disclosure, in the BoSLI, the higher intelligence player in a pair is increasingly enjoying coordination on their preferred outcome, while the converse happens in the BoSHI.

We formalize this discussion using regression analysis; we report the results of this analysis in table 20. The baseline in the regression analysis is the non-disclosure BoSLI treatment. From the results reported in the first column we conclude that disclosure is harmful for coordination in the BoSLI. Moreover, high inequality in the non-zero outcome payoffs (i.e. the BoSHI) has a significant negative effect on coordination if compared to the BoS with low inequality. However, the interaction between disclosure and high inequality results in a significant positive effect on coordination. Having both disclosure and higher payoff inequality translates to 38% increase in the odds of coordination, when compared with low inequality and no-disclosure. As already seen in the previous analysis, coordination is more often on the preferred outcome of the lower intelligence subject in a given pair. This is also clear in columns 3 and 5 of table 20, where we find a significant positive effect for the interacted term (*Disclosure*High Ineq.*) on payoff. The effect is considerably larger for subjects of lower intelligence than their partner. This is consistent with Alaoui et al. (2022) who consider two versions of the BoS, with high and low inequality, but in a one-shot game with group skill labels. They find that as the payoffs in the BoS become more unequal coordination is increasingly achieved on the outcome that is more favorable to the player of lower cognitive ability.

Overall, these results lead us to conclude that:

Result III.6. *Intelligence disclosure in the BoSHI has no effect on overall coordination. Coordination is significantly higher in the BoSHI with disclosure than in the BoSLI under no disclosure. The less intelligent players benefit from this with higher payoffs.*

This confirms our initial conjecture that when inequalities increase, subjects try harder to achieve the efficient and fair outcome attenuating the effects of disclosure. This is also reflected in how differently subjects alternate. In figure 9 we present the alternation rates following Dal Bó (2005) who implement the alternation index by Rapoport et al. (1976). The alternation rates are very similar within the two treatments when inequality is higher, while in the BoS with low inequality, subjects alternate significantly less under disclosure.

IV Concluding Remarks

In this paper we have shown, using laboratory evidence, that disclosure of own and partner's cognitive skills in a repeated game affects cooperation and coordination. These results are of primary importance for our understanding of cooperation in both experimental frameworks and in real life, where this information is typically, in one form or another, available. In experiments, subjects typically interact anonymously; hence, information on cognitive skills is not available. Instead, individuals in social strategic situations will often have some information and form some belief on the characteristics of the person they are dealing with. Furthermore, these results provide more insight on the understanding of strategic behavior under repeated interactions.

In our design we communicate both own and partner's intelligence scores, with some noise, and study behavior across three repeated games that entail different possible motivations for players. The first, a Prisoner's Dilemma game, entails a trade-off between an instantaneous gain from deviating from mutual cooperation, but a long-term loss of future cooperating outcomes. We also study behavior in two versions of the Battle of Sexes game. The Battle of Sexes does not entail the aforementioned trade-off, but allows players to try and increase their payoff by forcing their own preferred outcome. In one version of the Battle of Sexes game, the non-zero payoff outcomes of the stage game involve relatively low inequality in payoffs, while in the second there is higher inequality.

We find that disclosure results in disrupting cooperation in the Prisoner's Dilemma game, compared to the baseline where this information is not available, and this negative effect on cooperation is stronger the larger is the difference in the intelligence between the two players. Access to information on intelligence leads higher intelligence subjects to be less cooperative, while subjects of lower intelligence on average do not appear to significantly adjust their behavior, except for when the intelligence difference between the two players is particularly high. This results in a detrimental effect on the payoffs of the lower intelligence subjects.

In the Battle of Sexes games, we find similar evidence that disclosure hampers coordination. This is more evident in the Battle of Sexes with low inequality, where higher intelligence subjects try to force their own preferred outcome. This attempt is not entirely successful, which results in lower coordination under disclosure. However, in the Battle of Sexes with high inequality, we do not find disclosure having a significant effect on coordination. The higher payoff inequality appears to act as a stronger incentive to reach an efficient and fair outcome, which makes the less intelligent less keen to concede and discourages the more intelligent from trying to force their own preferred outcome.

Overall, the less intelligent appear to have an incentive to not disclose their intelligence to the more intelligent, or to send positive signals to others about their own skill. This is consistent with what individuals will typically do when such revelation has no further consequences on the action of others (e.g. Burks et al., 2013). However, this conclusion holds only in environments where such a conceding stance will not result in a very unequal division of earnings.

V Figures and Tables

Figure 2: **Prisoner's Dilemma: Evolution of cooperation and sucker's payoff rates across the disclosure treatments.** The upper panels represent the cooperation rates in the first period of each supergame for subjects of higher IQ in the left and lower IQ in the right than their partners. The lower panels represent the share of subjects that suffer the sucker's payoff of 12. The rates are calculated by aggregating blocks of 5 supergames.

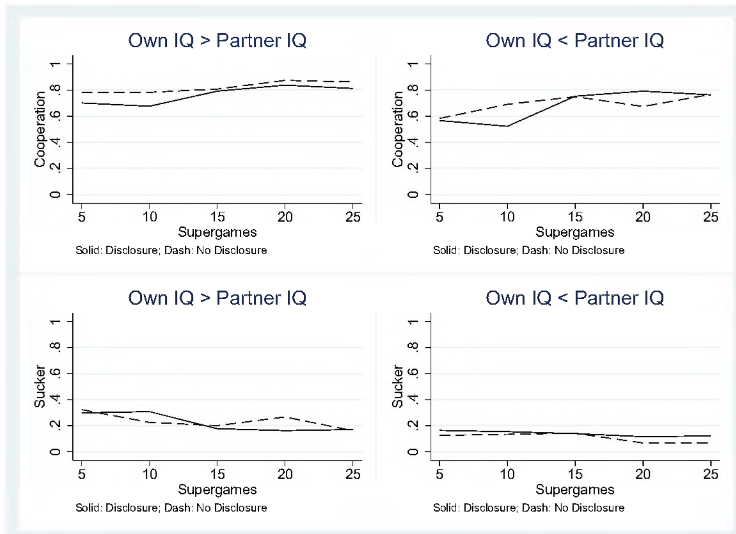


Figure 3: **Prisoner's Dilemma: Evolution of first periods cooperation rate across the disclosure treatments.** Cooperation rates in the first period of each supergame. The rates are calculated by aggregating blocks of 5 supergames. The bands represent the 95% confidence interval.

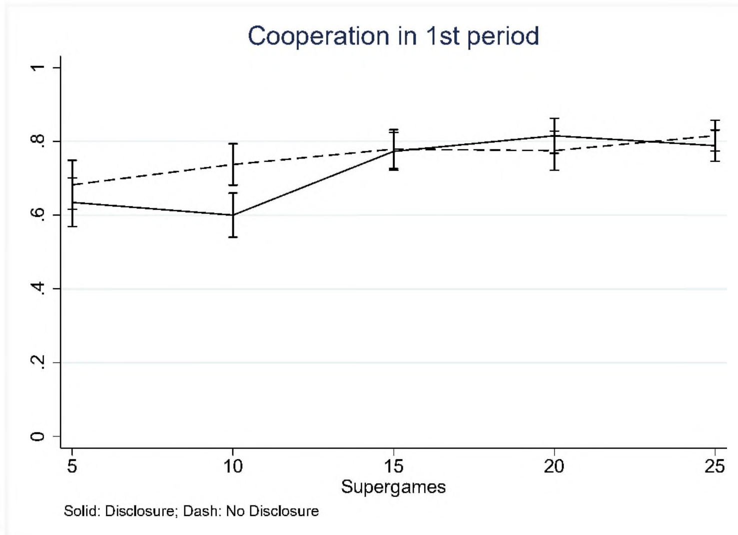


Figure 4: **Battle of Sexes with low inequality: Evolution of preferred choice and preferred outcome rates across the disclosure treatments.** The upper panels represent the preferred choice rates for subjects of higher IQ in the left and lower IQ in the right than their partners. The lower panels represent the share of subjects that coordinated with their partners and obtained their preferred outcome (48,25). The rates are calculated by aggregating blocks of 5 supergames.

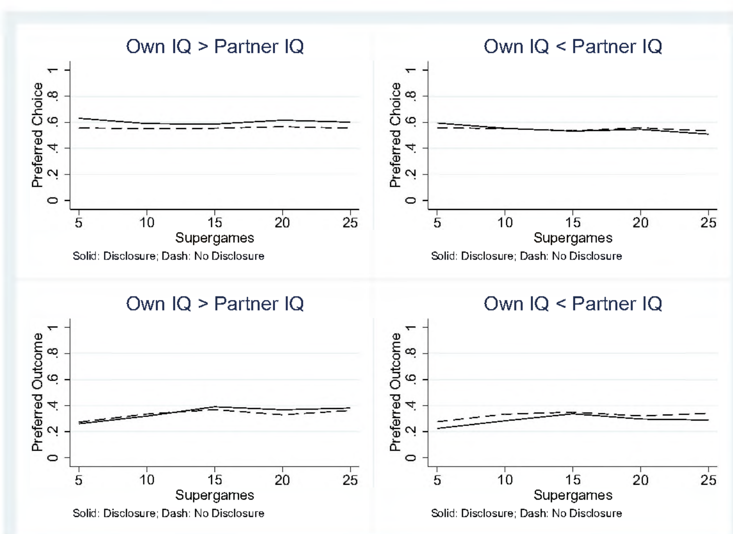


Figure 5: **Battle of Sexes with low inequality: Evolution of coordination.** Coordination rates to a non-zero payoff outcome. The rates are calculated by aggregating blocks of 5 supergames. The bands represent the 95% confidence interval.

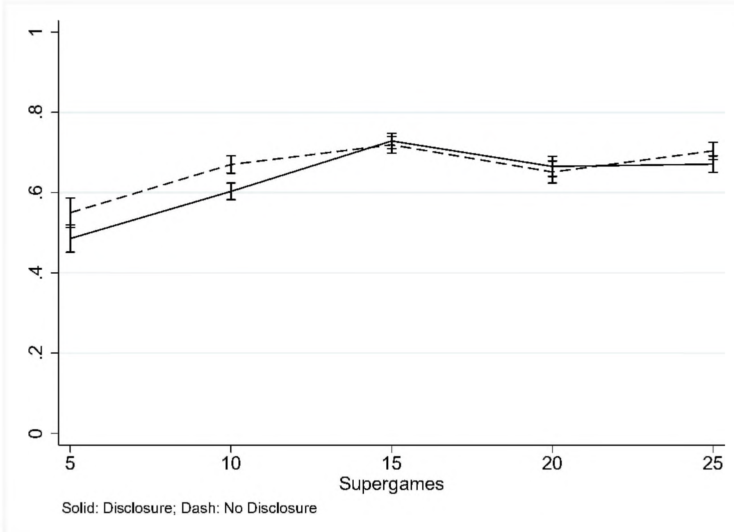


Figure 6: **Battle of Sexes with High Inequality: Evolution of preferred choice and outcome rates in the two treatments.** The upper panels represent the preferred action rates for subjects with respectively higher and lower IQ than their opponents. The lower panels represent the share of subjects that coordinated with their partners and obtained their preferred outcome (48,12). The rates are calculated by aggregating blocks of 5 supergames.

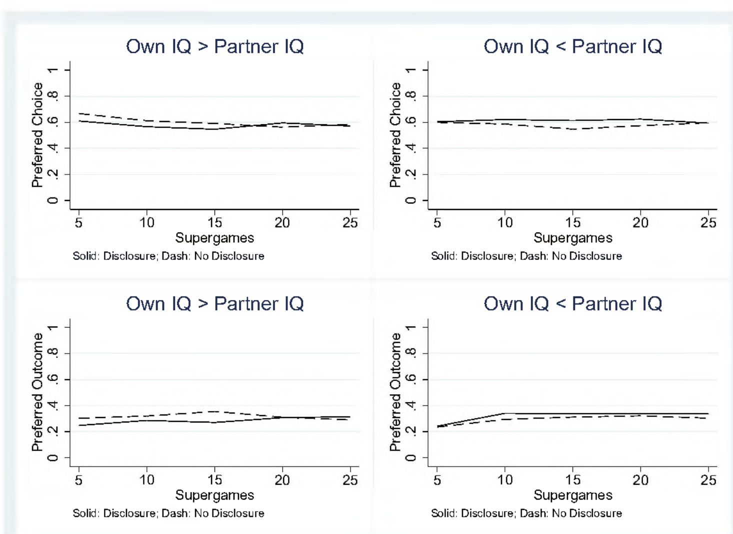


Figure 7: **Battle of Sexes with High Inequality: Evolution of coordination.** Coordination rates to a non-zero payoff outcome. The rates are calculated by aggregating blocks of 5 supergames. The bands represent the 95% confidence interval.

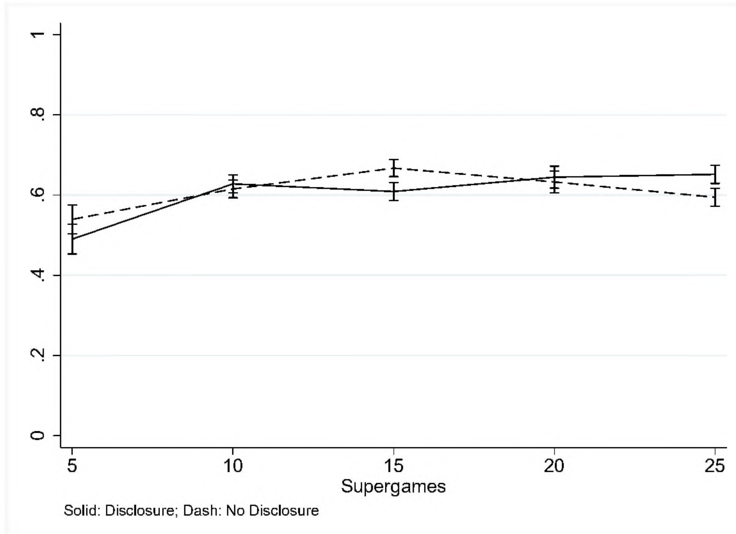


Figure 8: **Battle of Sexes: Coordination on preferred outcome of the more intelligent player by disclosure.** Share of subjects that coordinated with their partners and obtained their preferred outcome. The shares are calculated by aggregating blocks of 5 supergames. The bands represent the 95% confidence interval.

Figure 9: **Battle of Sexes: Alternation rates between the two non-zero payoff outcomes.** Index calculated following Rapoport et al. (1976) and Dal Bo (2005)

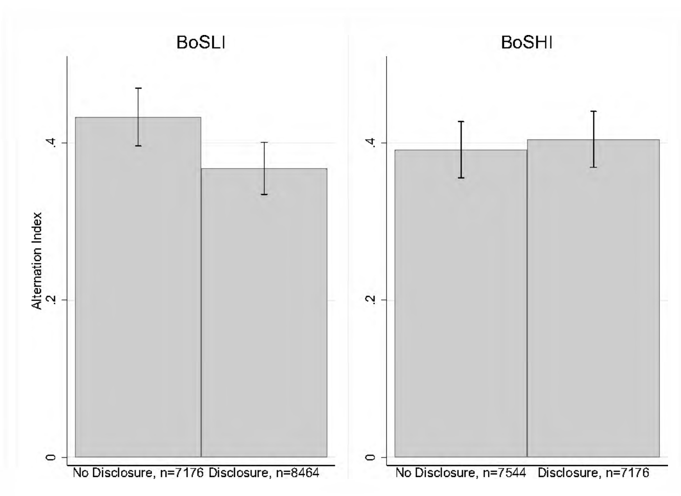


Table 3: **Prisoner's Dilemma: Effect of disclosure on cooperative choice in first periods by relative IQ.** The dependent variable is the choice of cooperation in the first periods of all supergames. The variable IQ diff. represents the absolute difference between the IQ of the two players. Panel logit estimator with random effects and errors clustered at the individual level. Controls for trend, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. **The coefficients are expressed in Odds Ratios**. Clustered Std errors in brackets; * $p-value < 0.1$, ** $p-value < 0.05$, *** $p-value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	1	2	3	4
	b/se	b/se	b/se	b/se
choice				
Disclosure	0.20290**	0.74122	0.26699*	0.57362
	(0.1429)	(0.6591)	(0.1894)	(0.4402)
Disclosure*IQ diff.		0.81483***		0.88588**
		(0.0613)		(0.0496)
IQ diff.		1.04490		1.05300**
		(0.0456)		(0.0256)
Own IQ	1.16499*	1.18881**	1.13511	1.13340
	(0.0976)	(0.1035)	(0.0950)	(0.0925)
N	1250	1250	1250	1250

Table 4: **Prisoner's Dilemma: Effect of disclosure on individual payoff in first periods by relative IQ.** The dependent variable is the payoff in the first periods of all supergames. The variable IQ diff. represents the absolute difference between the IQ of the two players. GLS estimator with random effects and errors clustered at the individual level. Controls for trend, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. Clustered Std errors in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	1	2	3	4
	b/se	b/se	b/se	b/se
Disclosure	0.16990	1.40674	–2.27113**	1.72237
	(1.2783)	(2.3085)	(1.0044)	(1.8094)
Disclosure*IQ diff.		–0.18713		–0.56865***
		(0.2645)		(0.1779)
Own IQ	–0.03440	0.04197	0.06757	–0.14484
	(0.1973)	(0.2239)	(0.1114)	(0.1190)
Partner IQ	0.21306	0.13795	0.56489***	0.76462***
	(0.1425)	(0.1795)	(0.1629)	(0.1804)
N	1250	1250	1250	1250

Table 5: **Prisoner's Dilemma: Strategies estimation in the SGs in the first half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Wald test: * $p-values < 0.1$, ** $p-values < 0.05$ **, $p-values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Cooperate	0.1031	*	0.0102		0.0878		0.0498	
	(0.0548)		(0.0478)		(0.1239)		(0.0611)	
Always Defect	0.1329	**	0.1449		0.2455	***	0.1707	
	(0.0637)		(0.0992)		(0.0755)		(0.1241)	
Grim after 1 D	0.3396	**	0.2832	***	0.2462	**	0.3515	***
	(0.1381)		(0.0941)		(0.1026)		(0.1167)	
Tit for Tat (C first)	0.4244	***	0.5616	***	0.4204	***	0.4280	***
Gamma	0.5121	***	0.5724	***	0.5163	***	0.6130	***
	(0.1147)		(0.0469)		(0.0602)		(0.0440)	
beta	0.876		0.852		0.874		0.836	
Average Periods	3.625		3.625		3.625		3.625	
Observations	1,152		1,248		1,152		1,248	

Table 6: **Prisoner's Dilemma: Strategies estimation in the SGs in the second half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Wald test: * $p - values < 0.1$, ** $p - values < 0.05$ **, $p - values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Cooperate	0.0297		0.0471		0.0248		0.2410	**
	(0.0347)		(0.0807)		(0.0390)		(0.1180)	
Always Defect	0.1474	**	0.1252	**	0.2254	***	0.1265	
	(0.0713)		(0.0636)		(0.0800)		(0.0797)	
Grim after 1 D	0.4469	**	0.3522	***	0.4666	***	0.3130	***
	(0.1801)		(0.0931)		(0.1599)		(0.1149)	
Tit for Tat (C first)	0.3760	**	0.4755	***	0.2831	**	0.3195	***
Gamma	0.3203	***	0.3941	***	0.3663	***	0.4335	***
	(0.0723)		(0.0432)		(0.0557)		(0.0587)	
beta	0.958		0.927		0.939		0.909	
Average Periods	2.818		2.818		2.818		2.818	
Observations	1,056		1,144		1,056		1,144	

Table 7: **Prisoner's dilemma: Effect of disclosure on cooperative choice in first periods.** The dependent variable is the choice of cooperation in the first periods of all supergames. The variable IQ diff. represents the absolute difference between the IQ of the two players. Columns 1 and 2: Logit estimator with robust standard errors. Columns 3 to 6: Panel logit estimator with random effects and errors clustered at the individual level; estimated either for *only* first half (3 & 4) or whole session (5 & 6). Controls for trend, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. **The coefficients are expressed in Odds Ratios**. Std errors in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	Round 1 Cooperate b/se	Round 1 Cooperate b/se	1st Half Cooperate b/se	1st Half Cooperate b/se	All Cooperate b/se	All Cooperate b/se
choice						
Disclosure	0.65712	6.11118*	0.28940**	0.74653	0.25820**	0.91731
	(0.3052)	(6.0493)	(0.1514)	(0.4535)	(0.1523)	(0.5683)
Disclosure*IQ diff.		0.69879***		0.89158**		0.84913***
		(0.0920)		(0.0464)		(0.0367)
IQ diff.		1.25098**		1.01436		1.03585
		(0.1238)		(0.0293)		(0.0231)
Own IQ	1.05828	1.08294	1.12252**	1.11608**	1.14146**	1.12840**
	(0.0468)	(0.0541)	(0.0545)	(0.0551)	(0.0640)	(0.0587)
N	100	100	1200	1200	2500	2600

Table 8: **Battle of Sexes with Low Inequality: Effect of disclosure on the subject's preferred choice.** The dependent variable is the subject making their preferred choice. The variable IQ diff. represents the absolute difference between the IQ of the two players. Panel logit estimator with random effects and errors clustered at the individual level. Controls for trend, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. **The coefficients are presented in Odds Ratios**. Clustered Std errors in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	1	2	3	4
	b/se	b/se	b/se	b/se
preferredchoice				
Disclosure	1.32290**	1.40183**	0.90679	1.08107
	(0.1830)	(0.2192)	(0.1049)	(0.1911)
Disclosure*IQ diff.		0.99189		0.96921
		(0.0120)		(0.0203)
IQ diff.		1.01347		1.02495
		(0.0090)		(0.0171)
Own IQ	0.99626	0.99328	0.97713	0.98112
	(0.0177)	(0.0178)	(0.0142)	(0.0175)
N	7735	7735	7735	7735

Table 9: **Battle of Sexes with Low Inequality: Effect of disclosure on coordinating to subject's preferred outcome.** The dependent variable is coordination to the subject's preferred outcome. The variable IQ diff. represents the absolute difference between the IQ of the two players. Panel logit estimator with random effects and errors clustered at the individual level. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. **The coefficients are presented in Odds Ratios**. Clustered Std errors in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	1	2	3	4
	b/se	b/se	b/se	b/se
preferredoutcome				
Disclosure	0.93869	1.07270	0.74730***	0.87681
	(0.1097)	(0.1680)	(0.0696)	(0.1546)
Disclosure*IQ diff.		0.97739		0.97234
		(0.0167)		(0.0251)
Own IQ	1.00086	1.01338	0.99717	0.98292
	(0.0152)	(0.0181)	(0.0142)	(0.0172)
Partner IQ	1.02118**	1.00759	1.01230	1.02559
	(0.0084)	(0.0129)	(0.0155)	(0.0180)
N	7735	7735	7735	7735

Table 10: **Battle of Sexes: Effect of positive IQ differentials.** The dependent variable is the subject making their preferred choice. Panel logit estimator with *fixed* effects. The dummy *Higher IQ* is equal to 1 when own IQ is higher that the partner's IQ. Controls for supergame, period, average length of past supergames are included in the regressions but omitted from the table. **Coefficients are in Odds Ratios**. Std errors in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	Disclosure Only	All	Disclosure Only	All
	BoSLI	BoSLI	BoSHI	BoSHI
	b/se	b/se	b/se	b/se
preferredchoice				
Higher IQ	1.41840***	1.01664	0.93880	1.03888
	(0.0967)	(0.0718)	(0.0665)	(0.0711)
Disclosure*Higher IQ		1.39510***		0.90374
		(0.1369)		(0.0890)
N	8281	15379	7098	14287

Table 11: **Description of Strategies for BoS.** We denote by ME_i^t the choice by player i in period t of *my* 'preferred' action. By YOU_i^t we denote the choice by player i in period t of *your* 'preferred' action.

Strategy	Description
Always Preferred	Play always ME_i^t
Always Concede	Play always YOU_i^t
Forceful Naive Alternation	Start with ME_i^t and then alternate between YOU_i^t and ME_i^t
Submissive Naive Alternation	Start with YOU_i^t and then alternate between ME_i^t and YOU_i^t
Forceful Tit for Tat	Play ME_i^t in the first period and then copy the choice of the partner in previous period
Submissive Tit for Tat	Play YOU_i^t in the first period and then copy the choice of the partner in previous period
Forceful Rev. Tit for Tat	Play ME_i^t in the first period and then reverse the choice of the partner in previous period
Submissive Rev. Tit for Tat	Play YOU_i^t in the first period and then reverse the choice of the partner in previous period
Forceful Alternating Grim	Start with ME_i^t and then alternate between YOU_i^t and ME_i^t. If coordination fails play ME_i^t from then on
Submissive Alternating Grim	Start with YOU_i^t and then alternate between ME_i^t and YOU_i^t. If coordination fails play ME_i^t from then on
Forceful Teaching	Play ME_i^t unless the last period outcome was (ME_i^t, YOU_j^t)
Submissive Teaching	Play YOU_i^t unless the last period outcome was (YOU_i^t, ME_j^t)

Table 12: **Battle of Sexes with Low Inequality: Strategy estimation in the SGs in the first half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Forceful groups together the proportion of the three forceful strategies, while Submissive groups together the proportion of the three submissive strategies. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Wald test: * $p-values < 0.1$, ** $p-values < 0.05$ **, $p-values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Preferred	0.1633	***	0.2365	***	0.1427	**	0.1619	*
	(0.0527)		(0.0774)		(0.0703)		(0.0833)	
Forceful Rev. Tit for Tat	0.3829	***	0.2089	**	0.1542	*	0.0888	
	(0.1006)		(0.1021)		(0.0916)		(0.0640)	
Forceful Teaching	0.0858		0.2076	***	0.2828	***	0.1541	**
	(0.0757)		(0.0721)		(0.0888)		(0.0655)	
Always Concede	0.0563		0.0703	**	0.0720		0.1297	*
	(0.0502)		(0.0348)		(0.0623)		(0.0680)	
Submissive Rev. Tit for Tat	0.3072	***	0.2107	***	0.1880	***	0.3636	***
	(0.0884)		(0.0607)		(0.0656)		(0.0699)	
Submissive Teaching	0.0045		0.0660		0.1603	**	0.1020	*
All Forceful	0.6320		0.6530		0.5797		0.4048	
All Submissive	0.3680		0.3470		0.4203		0.5953	
Gamma	0.6703	***	0.7165	***	0.8601	***	0.9142	***
	(0.0385)		(0.0590)		(0.0989)		(0.0830)	
beta	0.816		0.801		0.762		0.749	
Average Periods	3.625		3.625		3.625		3.625	
Observations	1,872		2,208		1,872		2,208	

Table 13: **Battle of Sexes with Low Inequality: Strategy estimation in the SGs in the second half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Forceful groups together the proportion of the three forceful strategies, while Submissive groups together the proportion of the three submissive strategies. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Wald test: * $p-values < 0.1$, ** $p-values < 0.05$ **, $p-values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Preferred	0.0811		0.1218		0.1113	*	0.1065	*
	(0.0567)		(0.0825)		(0.0572)		(0.0636)	
Forceful Rev. Tit for Tat	0.4265	***	0.3094	**	0.3576	***	0.2945	***
	(0.1113)		(0.1258)		(0.1022)		(0.1051)	
Forceful Teaching	0.1353		0.1924	**	0.0677		0.0657	
	(0.0866)		(0.0944)		(0.0734)		(0.0886)	
Always Concede	0.0179		0.0043		0.0000		0.0628	
	(0.0244)		(0.0099)		(0.0184)		(0.0554)	
Submissive Rev. Tit for Tat	0.2921	***	0.2357	***	0.4135	***	0.3576	***
	(0.0817)		(0.0644)		(0.0837)		(0.0859)	
Submissive Teaching	0.0472		0.1364	***	0.0499		0.1130	**
All Forceful	0.6429		0.6236		0.5366		0.4667	
All Submissive	0.3572		0.3764		0.4634		0.5334	
Gamma	0.5925	***	0.5926	***	0.6685	***	0.6772	***
	(0.0630)		(0.0470)		(0.0861)		(0.0994)	
beta	0.844		0.844		0.817		0.814	
Average Periods	2.818		2.818		2.818		2.818	
Observations	1,716		2,024		1,716		2,024	

Table 14: **Battle of Sexes with Low Inequality: Effect of disclosure on coordination.** The dependent variable is coordination to a non-zero payoff outcome. The variable IQ diff. represents the absolute difference between the IQ of the two players. Columns 1 and 2: Logit estimator with robust standard errors. Columns 3 to 6: Panel logit estimator with random effects and errors clustered at the individual level; estimated either for *only* first half (3 & 4) or whole session (5 & 6). Controls for trend, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. **The coefficients are expressed in Odds Ratios**. Clustered Std errors in brackets; * $p-value < 0.1$, ** $p-value < 0.05$, *** $p-value < 0.01$.

	Round 1	Round 1	1st Half	1st Half	All	All
	b/se	b/se	b/se	b/se	b/se	b/se
coordboseq						
Disclosure	0.53161	0.62923	0.75468***	0.84706	0.78522***	0.88222
	(0.2060)	(0.3111)	(0.0811)	(0.1223)	(0.0710)	(0.1054)
Disclosure*IQ diff.		0.97066		0.98045		0.98013*
		(0.0521)		(0.0154)		(0.0116)
Own IQ	1.02319	1.02045	0.99722	0.99537	1.01641**	1.01447*
	(0.0339)	(0.0343)	(0.0083)	(0.0086)	(0.0077)	(0.0080)
Partner IQ	1.01556	1.01243	1.00085	0.99863	1.01759***	1.01527***
	(0.0324)	(0.0332)	(0.0079)	(0.0078)	(0.0058)	(0.0059)
N	170	170	7990	7990	15470	15470

Table 15: **Battle of Sexes with High Inequality: Effect of disclosure on the subject's preferred choice.** The dependent variable is the subject making their preferred choice. The variable IQ diff. represents the absolute difference between the IQ of the two players. Panel logit estimator with random effects and errors clustered at the individual level. Controls for trend, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. **The coefficients are presented in Odds Ratios**. Clustered Std errors in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	1	2	3	4
	b/se	b/se	b/se	b/se
preferredchoice				
Disclosure	0.88769	0.90445	1.12211	1.01332
	(0.1411)	(0.1506)	(0.1649)	(0.1801)
Disclosure*IQ diff.		0.99597		1.01621
		(0.0102)		(0.0190)
IQ diff.		1.01264		0.98067
		(0.0078)		(0.0137)
Own IQ	1.00785	1.00506	0.97233	0.96651*
	(0.0190)	(0.0192)	(0.0177)	(0.0172)
N	7280	7280	7280	7280

Table 16: **Battle of Sexes with High Inequality: Effect of disclosure on coordinating to subject's preferred outcome.** The dependent variable is coordination to the subject's preferred outcome. The variable IQ diff. represents the absolute difference between the IQ of the two players. Panel logit estimator with random effects and errors clustered at the individual level. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. **The coefficients are presented in Odds Ratios**. Clustered Std errors in bracket; * $p-value < 0.1$, ** $p-value < 0.05$, *** $p-value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	1	2	3	4
	b/se	b/se	b/se	b/se
preferredoutcome				
Disclosure	0.91303	1.09568	1.25705***	1.12828
	(0.0796)	(0.1356)	(0.0771)	(0.1155)
Disclosure*IQ diff.		0.97165*		1.01713
		(0.0163)		(0.0147)
Own IQ	1.01178	1.02662	1.01431*	1.02401*
	(0.0131)	(0.0168)	(0.0086)	(0.0142)
Partner IQ	1.03146***	1.01665	0.99482	0.98577
	(0.0089)	(0.0138)	(0.0084)	(0.0123)
N	7280	7280	7280	7280

Table 17: **Battle of Sexes with High Inequality: Strategy estimation in the SGs in the first half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Forceful groups together the proportion of the three forceful strategies, while Submissive groups together the proportion of the three submissive strategies. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Wald test: * $p - values < 0.1$, ** $p - values < 0.05$ **, $p - values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Preferred	0.2078	***	0.0897		0.1684	**	0.2568	***
	(0.0757)		(0.0579)		(0.0652)		(0.0890)	
Forceful Rev. Tit for Tat	0.2712	***	0.2540	**	0.0642		0.4332	***
	(0.0812)		(0.1130)		(0.0685)		(0.0974)	
Forceful Teaching	0.1342	**	0.2997	**	0.3256	***	0.0000	
	(0.0664)		(0.1190)		(0.0957)		(0.0511)	
Always Concede	0.0000		0.0347		0.0701		0.0000	
	(0.0236)		(0.0348)		(0.0431)		(0.0258)	
Submissive Rev. Tit for Tat	0.3714	***	0.3192	***	0.3198	***	0.2730	***
	(0.0759)		(0.0671)		(0.0691)		(0.0643)	
Submissive Teaching	0.0154		0.0027		0.0519		0.0370	
All Forceful	0.6132		0.6434		0.5582		0.6900	
All Submissive	0.3868		0.3566		0.4418		0.3100	
Gamma	0.6763	***	0.8067	***	0.8718	***	0.7811	***
	(0.0803)		(0.0716)		(0.0747)		(0.0599)	
beta	0.814		0.776		0.759		0.782	
Average Periods	3.625		3.625		3.625		3.625	
Observations	1,968		1,872		1,968		1,872	

Table 18: **Battle of Sexes with High Inequality: Strategy estimation in the SGs in the second half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Forceful groups together the proportion of the three forceful strategies, while Submissive groups together the proportion of the three submissive strategies. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Wald test: * $p - values < 0.1$, ** $p - values < 0.05$ **, $p - values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Preferred	0.1428	*	0.0395		0.1331	**	0.1544	**
	(0.0773)		(0.0299)		(0.0603)		(0.0731)	
Forceful Rev. Tit for Tat	0.3784	***	0.5037	***	0.3238	***	0.3913	***
	(0.0932)		(0.1184)		(0.0932)		(0.1106)	
Forceful Teaching	0.1273		0.1031		0.1436	**	0.0752	
	(0.0878)		(0.0862)		(0.0652)		(0.0784)	
Always Concede	0.0169		0.0169		0.0000		0.0000	
	(0.0163)		(0.0154)		(0.0322)		(0.0018)	
Submissive Rev. Tit for Tat	0.3345	***	0.2995	***	0.3922	***	0.3487	***
	(0.0830)		(0.0710)		(0.0698)		(0.0748)	
Submissive Teaching	0.0000		0.0374		0.0072		0.0304	
All Forceful	0.6485		0.6463		0.6005		0.6209	
All Submissive	0.3514		0.3538		0.3994		0.3791	
Gamma	0.6008	***	0.5471	***	0.7087	***	0.6498	***
	(0.0412)		(0.0504)		(0.0471)		(0.0451)	
beta	0.841		0.862		0.804		0.823	
Average Periods	2.818		2.818		2.818		2.818	
Observations	1,804		1,716		1,804		1,716	

Table 19: **Battle of Sexes with High inequality: Effect of disclosure on coordination.** The dependent variable is coordination to a non-zero payoff outcome. The variable IQ diff. represents the absolute difference between the IQ of the two players. Columns 1 and 2: Logit estimator with robust errors. Columns 3 to 6: Panel logit estimator with random effects and errors clustered at the individual level. Controls for trend, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. **The coefficients are expressed in Odds Ratios**. Clustered Std errors in brackets; * $p-value < 0.1$, ** $p-value < 0.05$, *** $p-value < 0.01$.

	Round 1 b/se	Round 1 b/se	1st Half b/se	1st Half b/se	All b/se	All b/se
coordboseq						
Disclosure	1.15304	2.06671	0.94762	1.04744	1.09694	1.17099
	(0.4049)	(1.2535)	(0.0912)	(0.1331)	(0.0957)	(0.1225)
Disclosure*IQ diff.		0.91257		0.98433		0.99001
		(0.0698)		(0.0136)		(0.0089)
Own IQ	1.00976	1.00202	1.02697***	1.02530**	1.02546**	1.02452**
	(0.0325)	(0.0328)	(0.0104)	(0.0101)	(0.0105)	(0.0103)
Partner IQ	0.98726	0.98047	1.02944***	1.02800***	1.02518***	1.02433***
	(0.0321)	(0.0324)	(0.0082)	(0.0082)	(0.0059)	(0.0060)
N	160	160	7520	7520	14560	14560

Table 20: **Battle of Sexes: Effect of disclosure and payoffs inequality.** The dependent variable in column 1 is coordination to a non-zero payoff outcome. In columns 2 and 4, the dependent variable is coordination to the subject's preferred outcome, while in columns 3 and 5, the dependent variable is subject payoff. Columns 2 and 3 present the results for only subjects of higher IQ than their partner, in columns 4 and 5 the opposite is true. Columns 1,2, and 4: Panel logit estimator with random effects. Other columns: Panel GLS estimator with random effects. The dummy *High inequality* is equal to 1 for observations in the BoSHI and zero otherwise. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. **Coefficients in columns 1,2, and 4 are in Odds Ratios**. Std errors clustered at the individual level in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	All	Own IQ > Partner IQ		Own IQ < Partner IQ	
	Coordination	Pref. Out.	Payoff	Pref. Out.	Payoff
	b/se	b/se	b/se	b/se	b/se
main					
Disclosure	0.79845***	0.95235	–0.29488***	0.22044*	–2.45483***
	(0.0655)	(0.0935)	(0.0873)	(0.1920)	(0.9301)
Disclosure*High Ineq.	1.38031***	0.94834	0.51681***	3.36975	4.32163***
	(0.1699)	(0.1315)	(0.1142)	(4.2660)	(1.2148)
High Inequality	0.62079***	0.80571*	–0.35651***	0.00056***	–8.25568***
	(0.0621)	(0.0889)	(0.0931)	(0.0006)	(1.0312)
Own IQ	1.02156***	1.00577	0.00444	1.08670	0.11416
	(0.0064)	(0.0098)	(0.0081)	(0.0995)	(0.0786)
Partner IQ	1.02169***	1.02717***	0.00363	1.33371***	0.05709
	(0.0042)	(0.0062)	(0.0085)	(0.0820)	(0.0817)
N	30030	15015	15015	15015	15015

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Intelligence Disclosure in Repeated Interactions

Online Appendix

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June 30, 2023

I Additional Tables

Table O.1: **Battle of Sexes with Low Inequality: Preferred choices in Heidelberg and Frankfurt**. The dependent variable is the subject making their preferred choice. Panel logit estimator with random effects and errors clustered at the individual level. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. Std errors clustered at the individual level in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	Frankfurt b/se	Heidelberg b/se	Frankfurt b/se	Heidelberg b/se
preferredchoice				
Disclosure	1.51126	1.19148	0.62555	0.99154
	(0.5916)	(0.1454)	(0.1877)	(0.1208)
Own IQ	0.98239	1.00360	1.01426	0.97688
	(0.0450)	(0.0187)	(0.0504)	(0.0142)
N	1456	6279	1456	6279

Table O.2: **Battle of Sexes with Low Inequality: Preferred outcomes in Heidelberg and Frankfurt**. The dependent variable is subject's preferred outcome. Panel logit estimator with random effects and errors clustered at the individual level. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. Std errors clustered at the individual level in brackets; * $p-value < 0.1$, ** $p-value < 0.05$, *** $p-value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	Frankfurt b/se	Heidelberg b/se	Frankfurt b/se	Heidelberg b/se
preferredoutcome				
Disclosure	1.13918	0.89673	0.48298***	0.89502
	(0.1980)	(0.1073)	(0.0893)	(0.0802)
Own IQ	0.98353	1.00494	0.97572	0.99953
	(0.0319)	(0.0170)	(0.0361)	(0.0155)
Partner IQ	1.01917	1.02277**	1.07330*	1.00420
	(0.0215)	(0.0094)	(0.0412)	(0.0174)
N	1456	6279	1456	6279

Table O.3: **Battle of Sexes with Low Inequality: Effect of disclosure on payoffs.** The dependent variable is subject payoff. The variable IQ diff. represents the absolute difference between the IQ of the two players. Panel GLS estimator with random effects and errors clustered at the individual level. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. Clustered Std errors in brackets; * $p-value < 0.1$, ** $p-value < 0.05$, *** $p-value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	1 b/se	2 b/se	3 b/se	4 b/se
Disclosure	–1.80465*	–0.38960	–2.19794**	–0.62964
	(1.0055)	(1.5490)	(1.0238)	(1.8434)
Disclosure*IQ diff.		–0.23907		–0.28198
		(0.1851)		(0.2597)
Own IQ	0.05836	0.18700	0.11187	–0.03224
	(0.1426)	(0.1797)	(0.1371)	(0.1770)
Partner IQ	0.22247**	0.08042	0.08762	0.21878
	(0.0900)	(0.1409)	(0.1440)	(0.1796)
N	7735	7735	7735	7735

Table O.4: **Battle of Sexes with Low inequality: Coordination in Heidelberg and Frankfurt**. The dependent variable is coordination on the non-zero payoff outcomes. Panel logit estimator with random effects and errors clustered at the individual level. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. Clustered Std errors in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	Frankfurt	Heidelberg
	b/se	b/se
coordboseq		
Disclosure	0.60555***	0.88571
	(0.0891)	(0.0848)
Own IQ	0.98629	1.01855**
	(0.0225)	(0.0088)
Partner IQ	1.01428	1.01904***
	(0.0128)	(0.0064)
N	2912	12558

Table O.5: **Battle of Sexes with High inequality: Effect of disclosure on payoffs.** The dependent variable is subject payoff. The variable IQ diff. represents the absolute difference between the IQ of the two players. Panel GLS estimator with random effects and errors clustered at the individual level. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames, and average profit before t are included in the regressions but omitted from the table. Clustered Std errors in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	1	2	3	4
	b/se	b/se	b/se	b/se
Disclosure	–0.31071	0.77963	1.94891***	1.12097
	(0.8332)	(1.5463)	(0.6857)	(1.1240)
Disclosure*IQ diff.		0.14285		0.13219
		(0.2015)		(0.1486)
Own IQ	0.10169	0.19704	0.17443*	0.24534*
	(0.1242)	(0.1711)	(0.0955)	(0.1396)
Partner IQ	0.34048***	–0.01020	0.00705	–0.06127
	(0.0810)	(0.1615)	(0.0896)	(0.1257)
N	7280	3760	7280	7280

Table O.6: **Battle of Sexes with High Inequality: Preferred choices in Heidelberg and Frankfurt**. The dependent variable is subject making their preferred choice. Panel logit estimator with random effects and errors clustered at the individual level. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. Std errors clustered at the individual levels in brackets; * $p-value < 0.1$, ** $p-value < 0.05$, *** $p-value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	Frankfurt b/se	Heidelberg b/se	Frankfurt b/se	Heidelberg b/se
preferredchoice				
Disclosure	1.18672	0.41634	1.58703*	0.71758
	(0.2090)	(0.2259)	(0.3951)	(0.1967)
Own IQ	1.00217	0.96233	0.96764*	0.99480
	(0.0181)	(0.0368)	(0.0176)	(0.0225)
N	5824	1456	5824	1456

Table O.7: **Battle of Sexes with High Inequality. Preferred outcomes in Heidelberg and Frankfurt**. The dependent variable is subject's preferred outcome. Panel logit estimator with random effects and errors clustered at the individual level. Panel logit estimator with random effects and errors clustered at the individual level. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. Clustered Std errors in brackets; * $p-value < 0.1$, ** $p-value < 0.05$, *** $p-value < 0.01$.

	Own IQ > Partner IQ		Own IQ < Partner IQ	
	Frankfurt b/se	Heidelberg b/se	Frankfurt b/se	Heidelberg b/se
preferredoutcome				
Disclosure	0.79990**	1.09318	1.00069	1.51427**
	(0.0910)	(0.2806)	(0.0699)	(0.2552)
Own IQ	0.99277	1.06472**	1.01093	1.01315
	(0.0128)	(0.0330)	(0.0098)	(0.0186)
Partner IQ	1.03545***	1.01663	0.99839	0.99466
	(0.0086)	(0.0233)	(0.0097)	(0.0179)
N	5824	1456	5824	1456

Table O.8: **Battle of Sexes with High Inequality: Coordination in Heidelberg and Frankfurt**. The dependent variable is coordination on the non-zero payoff outcomes. Panel logit estimator with random effects and errors clustered at the individual level. Controls for supergame, period, gender, Big 5 personality traits, risk aversion, size of session, average length of past supergames are included in the regressions but omitted from the table. Clustered Std errors in brackets; * $p - value < 0.1$, ** $p - value < 0.05$, *** $p - value < 0.01$.

	Frankfurt b/se	Heidelberg b/se
coordboseq		
Disclosure	0.79756*	1.45786**
	(0.0963)	(0.2792)
Own IQ	1.01965*	1.03359**
	(0.0107)	(0.0163)
Partner IQ	1.02237***	1.03092**
	(0.0063)	(0.0130)
N	11648	2912

Table O.9: **Prisoner's Dilemma: Expanded strategies estimation in the SGs in the first half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Waldtest: * $p - values < 0.1$, ** $p - values < 0.05$ **, $p - values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Cooperate	0.0540		0.0000		0.0000		0.0000	
	(0.0555)		(0.0327)		(0.1005)		(0.0044)	
Always Defect	0.1256	**	0.1395		0.2301	***	0.1437	
	(0.0557)		(0.0909)		(0.0750)		(0.1146)	
Grim after 1 D	0.3013	**	0.3025	***	0.2547	**	0.3561	***
	(0.1421)		(0.0983)		(0.1008)		(0.1079)	
Tit for Tat (C first)	0.4163	***	0.4005	***	0.3306	***	0.3420	***
	(0.1032)		(0.0852)		(0.0950)		(0.1001)	
Tit for Tat (D first)	0.0136		0.0350		0.0399		0.0893	
	(0.0593)		(0.0442)		(0.0254)		(0.0579)	
Grim after 2 D	0.0892		0.0351		0.0000		0.0000	
	(0.0585)		(0.0464)		(0.0426)		(0.0474)	
Grim after 3 D	0.0000		0.0000		0.0726		0.0000	
	(0.0142)		(0.0205)		(0.0660)		(0.0104)	
Tit for two Tats (C first)	0.0000		0.0874		0.0720		0.0687	
Gamma	0.4980	***	0.5510	***	0.5067	***	0.5842	***
	(0.0924)		(0.0384)		(0.0610)		(0.0416)	
beta	0.882		0.860		0.878		0.847	
Average Periods	3.625		3.625		3.625		3.625	
Observations	1,152		1,248		1,152		1,248	

Table O.10: **Prisoner's Dilemma: Expanded strategies estimation in the SGs in the second half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Waldtest: * $p - values < 0.1$, ** $p - values < 0.05$ **, $p - values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Cooperate	0.0000		0.0000		0.0000		0.0000	
	(0.0014)		(0.0157)		(0.0007)		(0.0059)	
Always Defect	0.1476	**	0.1082	*	0.1972	***	0.1252	
	(0.0712)		(0.0648)		(0.0666)		(0.0800)	
Grim after 1 D	0.4661	**	0.3478	***	0.4487	***	0.3082	**
	(0.1805)		(0.0928)		(0.1262)		(0.1219)	
Tit for Tat (C first)	0.3244	**	0.3985	***	0.1637		0.3062	***
	(0.1467)		(0.1077)		(0.1144)		(0.1169)	
Tit for Tat (D first)	0.0000		0.0178		0.0282		0.0503	
	(0.0118)		(0.0268)		(0.0476)		(0.0422)	
Grim after 2 D	0.0000		0.0000		0.0000		0.0000	
	(0.0511)		(0.1060)		(0.0516)		(0.1326)	
Grim after 3 D	0.0000		0.0000		0.0570		0.0000	
	(0.0421)		(0.0651)		(0.0719)		(0.0538)	
Tit for two Tats (C first)	0.0619		0.1276		0.1051		0.2100	
Gamma	0.3104	***	0.3826	***	0.3487	***	0.3960	***
	(0.0644)		(0.0382)		(0.0476)		(0.0453)	
beta	0.962		0.932		0.946		0.926	
Average Periods	2.818		2.818		2.818		2.818	
Observations	1,056		1,144		1,056		1,144	

Table O.11: **Battle of Sexes with Low Inequality: Expanded strategy estimation in the SGs in the first half of the session.** Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Waldtest: * $p-values < 0.1$, ** $p-values < 0.05$ **, $p-values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Preferred	0.1245	***	0.1782	***	0.1057	**	0.0823	
	(0.0453)		(0.0664)		(0.0507)		(0.0638)	
Always Concede	0.0154		0.0382		0.0269		0.0767	**
	(0.0336)		(0.0240)		(0.0320)		(0.0381)	
Forceful Naïve Alternation	0.0179		0.0000		0.0000		0.0000	
	(0.0351)		(0.0259)		(0.0260)		(0.0319)	
Submissive Naïve Alternation	0.0142		0.0000		0.0000		0.0197	
	(0.0356)		(0.0158)		(0.0367)		(0.0456)	
Forceful Tit for Tat	0.0211		0.0436		0.0480		0.0803	**
	(0.0319)		(0.0426)		(0.0498)		(0.0338)	
Submissive Tit for Tat	0.0555	**	0.0154	**	0.0186		0.0282	
	(0.0267)		(0.0069)		(0.0277)		(0.0377)	
Forceful Rev. Tit for Tat	0.3595	***	0.2361	***	0.1806	*	0.0944	
	(0.0986)		(0.0904)		(0.0934)		(0.0617)	
Submissive Rev. Tit for Tat	0.2833	***	0.1824	***	0.1844	***	0.3254	***
	(0.0752)		(0.0544)		(0.0637)		(0.0594)	
Forceful Alternating Grim	0.0000		0.0938	**	0.0303		0.0351	
	(0.0251)		(0.0440)		(0.0500)		(0.0387)	
Submissive Alternating Grim	0.0000		0.0530	*	0.0000		0.0637	
	(0.0168)		(0.0283)		(0.0149)		(0.0428)	
Submissive Teaching	0.0172		0.0585		0.1715	**	0.0693	*
	(0.0343)		(0.0393)		(0.0667)		(0.0383)	
Forceful Teaching	0.0914		0.1008	*	0.2340	***	0.1251	**
Gamma	0.6383	***	0.6838	***	0.8195	***	0.8207	***
	(0.0322)		(0.0470)		(0.0698)		(0.0507)	
beta	0.827		0.812		0.772		0.772	
Average Periods	3.625		3.625		3.625		3.625	
Observations	1,872		2,208		1,872		2,208	

Table O.12: **Battle of Sexes with Low Inequality: Expanded strategy estimation in the SGs in the second half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Waldtest: * $p-values < 0.1$, ** $p-values < 0.05$ **, $p-values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Preferred	0.0764	*	0.0954		0.1002	*	0.0599	
	(0.0424)		(0.0593)		(0.0524)		(0.0537)	
Always Concede	0.0000		0.0000		0.0000		0.0555	
	(0.0032)		(0.0060)		(0.0041)		(0.0343)	
Forceful Naïve Alternation	0.0162		0.0427		0.0612		0.0523	
	(0.0368)		(0.0395)		(0.0432)		(0.0360)	
Submissive Naïve Alternation	0.0264		0.0557	**	0.0921	**	0.0600	
	(0.0365)		(0.0262)		(0.0465)		(0.0440)	
Forceful Tit for Tat	0.0000		0.0006		0.0000		0.0440	
	(0.0078)		(0.0087)		(0.0197)		(0.0534)	
Submissive Tit for Tat	0.0192		0.0000		0.0000		0.0000	
	(0.0252)		(0.0013)		(0.0055)		(0.0110)	
Forceful Rev. Tit for Tat	0.4000	***	0.3141	***	0.3233	***	0.3193	***
	(0.1117)		(0.1116)		(0.0907)		(0.0956)	
Submissive Rev. Tit for Tat	0.3049	***	0.1850	***	0.3598	***	0.2904	***
	(0.0745)		(0.0523)		(0.0864)		(0.0870)	
Forceful Alternating Grim	0.0000		0.0561		0.0000		0.0000	
	(0.0232)		(0.0436)		(0.0186)		(0.0004)	
Submissive Alternating Grim	0.0023		0.0709	**	0.0000		0.0666	
	(0.0157)		(0.0321)		(0.0316)		(0.0485)	
Submissive Teaching	0.0000		0.0620		0.0000		0.0519	
	(0.0320)		(0.0382)		(0.0631)		(0.0499)	
Forceful Teaching	0.1547	*	0.1174		0.0633		0.0000	
Gamma	0.5767	***	0.5537	***	0.6338	***	0.6182	***
	(0.0490)		(0.0418)		(0.0614)		(0.0615)	
beta	0.850		0.859		0.829		0.834	
Average Periods	2.818		2.818		2.818		2.818	
Observations	1,716		2,024		1,716		2,024	

Table O.13: **Battle of Sexes with High Inequality: Expanded strategy estimation in the SGs in the first half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Waldtest: * $p - values < 0.1$, ** $p - values < 0.05$ **, $p - values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Preferred	0.1473	*	0.0359		0.1093	**	0.2088	***
	(0.0831)		(0.0394)		(0.0519)		(0.0721)	
Always Concede	0.0000		0.0340		0.0000		0.0000	
	(0.0137)		(0.0213)		(0.0087)		(0.0029)	
Forceful Naïve Alternation	0.0000		0.0409		0.0413		0.0000	
	(0.0288)		(0.0385)		(0.0387)		(0.0396)	
Submissive Naïve Alternation	0.0801	**	0.0000		0.0000		0.0712	*
	(0.0399)		(0.0235)		(0.0369)		(0.0413)	
Forceful Tit for Tat	0.0572	***	0.0496		0.0667		0.0341	
	(0.0189)		(0.0329)		(0.0653)		(0.0289)	
Submissive Tit for Tat	0.0000		0.0000		0.0333		0.0000	
	(0.0023)		(0.0174)		(0.0298)		(0.0162)	
Forceful Rev. Tit for Tat	0.2619	***	0.3005	***	0.1139	*	0.4213	***
	(0.0774)		(0.0983)		(0.0613)		(0.0851)	
Submissive Rev. Tit for Tat	0.2823	***	0.3204	***	0.3090	***	0.2363	***
	(0.0660)		(0.0666)		(0.0600)		(0.0609)	
Forceful Alternating Grim	0.0177		0.0000		0.0753		0.0283	
	(0.0324)		(0.0532)		(0.0635)		(0.0350)	
Submissive Alternating Grim	0.0312		0.0000		0.0311		0.0000	
	(0.0400)		(0.0188)		(0.0272)		(0.0383)	
Submissive Teaching	0.0000		0.0068		0.0530		0.0000	
	(0.0749)		(0.0346)		(0.0477)		(0.0285)	
Forceful Teaching	0.1223	**	0.2120	**	0.1670	**	0.0000	
Gamma	0.6269	***	0.7611	***	0.7822	***	0.7485	***
	(0.0634)		(0.0538)		(0.0544)		(0.0489)	
beta	0.831		0.788		0.782		0.792	
Average Periods	3.625		3.625		3.625		3.625	
Observations	1,968		1,872		1,968		1,872	

Table O.14: **Battle of Sexes with High inequality: Expanded strategy estimation in the SGs in the second half of the session.** Each coefficient represents the probability estimated using ML of the corresponding strategy. Gamma is the error coefficient that is estimated for the choice function used in the ML and beta is the probability estimated that the choice by a subject is equal to what the strategy prescribes. When beta is close to 1/2, choices are essentially random and when it is close to 1 then choices are almost perfectly predicted. Tests equality to 0 using the Waldtest: * $p - values < 0.1$, ** $p - values < 0.05$ **, $p - values < 0.01$ ***

	Own IQ > Partner IQ				Own IQ < Partner IQ			
	No Disclosure		Disclosure		No Disclosure		Disclosure	
Strategy								
Always Preferred	0.1278	*	0.0289		0.1049	**	0.1469	**
	(0.0680)		(0.0309)		(0.0492)		(0.0711)	
Always Concede	0.0157		0.0169		0.0000		0.0000	
	(0.0143)		(0.0146)		(0.0238)		(0.0012)	
Forceful Naïve Alternation	0.0000		0.0394		0.0000		0.0265	
	(0.0219)		(0.0407)		(0.0332)		(0.0424)	
Submissive Naïve Alternation	0.0284		0.0000		0.0000		0.0732	
	(0.0258)		(0.0060)		(0.0375)		(0.0454)	
Forceful Tit for Tat	0.0000		0.0000		0.0317	*	0.0000	
	(0.0181)		(0.0030)		(0.0181)		(0.0032)	
Submissive Tit for Tat	0.0000		0.0000		0.0000		0.0000	
	(0.0044)		(0.0017)		(0.0110)		(0.0010)	
Forceful Rev. Tit for Tat	0.3748	***	0.4597	***	0.3107	***	0.3808	***
	(0.0901)		(0.1013)		(0.0880)		(0.0919)	
Submissive Rev. Tit for Tat	0.3242	***	0.3002	***	0.3816	***	0.2808	***
	(0.0782)		(0.0709)		(0.0784)		(0.0715)	
Forceful Alternating Grim	0.0000		0.0328		0.0123		0.0164	
	(0.0081)		(0.0309)		(0.0321)		(0.0231)	
Submissive Alternating Grim	0.0000		0.0000		0.0094		0.0000	
	(0.0058)		(0.0074)		(0.0470)		(0.0332)	
Submissive Teaching	0.0000		0.0384		0.0133		0.0309	
	(0.0602)		(0.0792)		(0.0495)		(0.0476)	
Forceful Teaching	0.1290		0.0837		0.1361	**	0.0446	
Gamma	0.5932	***	0.5304	***	0.6936	***	0.6340	***
	(0.0394)		(0.0443)		(0.0401)		(0.0393)	
beta	0.844		0.868		0.809		0.829	
Average Periods	2.818		2.818		2.818		2.818	
Observations	1,804		1,716		1,804		1,716	

II Timeline of the Experiment

1. Participants randomly assigned a seat number.
2. Participants sat at their corresponding computer terminals, which were in individual cubicles.
3. Instructions about the Raven task were read together with an explanation on how the task would be paid.
4. The Raven test was administered (36 matrices with a total of 30 minutes allowed). Three randomly chosen matrices out of 36 tables were paid at the rate of 1 Euro per correct answer.
5. The Holt-Laury task was explained verbally.
6. The Holt-Laury choice task was completed by the participants (10 lottery choices). One randomly chosen lottery out of 10 played out to be paid.
7. The game that would be played was explained using en example screen on each participant's screen, as was the way the matching between partners, the continuation probability and how the payment would be made.
8. The infinitely repeated game was played. Each experimental unit earned corresponded to 0.003 Euro.
9. A demographics and personality questionnaire was administered.
10. Calculation of payment was made and subjects were paid accordingly.

III Session Dates, Size and Characteristics

Tables O.15, O.16 and O.17 below summarise the dates and timings of each session across all treatments.

Table O.20 summarises the statistics about the Raven scores for each session in the PD, table O.21 for the BoSLI and table O.22 for the BosHI. Figure O.1 presents the overall distribution of Raven scores across our treatments. Tables O.23 until O.28 present some summary statistics description of the main data across all our treatments. Table O.29 shows the correlations among individual characteristics.

Table O.15: **Dates and details for Prisoners' Dilemma Sessions.**

	Date	Time	Subjects	Disclosure	Location
Session 1	28/11/2018	14:00	20	Yes	Heidelberg
Session 2	10/12/2018	15:00	20	No	Heidelberg
Session 3	11/12/2018	14:00	18	Yes	Heidelberg
Session 4	13/12/2018	14:00	16	No	Heidelberg
Session 5	21/01/2019	11:00	14	Yes	Heidelberg
Session 6	22/01/2019	13:00	12	No	Heidelberg
Total Participants			100		

Table O.16: **Dates and details for Battle of Sexes (low ineq.) Sessions**

	Date	Time	Subjects	Disclosure	Location
Session 1	29/11/2018	10:00	20	Yes	Heidelberg
Session 2	29/11/2018	14:00	18	No	Heidelberg
Session 3	12/12/2018	14:00	20	Yes	Heidelberg
Session 4	19/12/2018	15:00	12	No	Heidelberg
Session 5	19/02/2019	16:00	20	Yes	Heidelberg
Session 6	26/02/2019	16:00	16	No	Heidelberg
Session 7	08/07/2019	10:00	14	Yes	Heidelberg
Session 8	10/07/2019	14:00	18	No	Heidelberg
Session 9	19/07/2019	13:00	14	No	Frankfurt
Session 10	05/09/2019	15:30	18	Yes	Frankfurt
Total Participants			170		

Table O.17: **Dates and details for Battle of Sexes (high ineq.) Sessions**

	Date	Time	Subjects	Disclosure	Location
Session 1	05/07/2019	10:00	22	Yes	Frankfurt
Session 2	05/07/2019	13:00	24	No	Frankfurt
Session 3	05/07/2019	16:00	20	Yes	Frankfurt
Session 4	12/07/2019	10:00	22	No	Frankfurt
Session 5	12/07/2019	13:00	18	Yes	Frankfurt
Session 6	12/07/2019	16:00	22	No	Frankfurt
Session 7	21/10/2019	15:00	14	No	Heidelberg
Session 8	23/10/2019	16:00	18	Yes	Heidelberg
Total Participants			160		

Table O.18: **Maximal period (T) of each SG for all treatments.**

SG	T
1	1
2	4
3	2
4	2
5	1
6	2
7	12
8	4
9	4
10	5
11	8
12	2
13	1
14	7
15	2
16	4
17	4
18	1
19	4
20	1
21	5
22	7
23	3
24	1
25	1
26	4

Figure O.1: **Distribution of Raven scores.** Top-left panel shows Raven distribution for all participants in the PD treatments, top-right shows Raven distribution for all participants in the BoS (low ineq.) treatments and bottom left panels shows Raven distribution for all participants in the BoS (high ineq.) treatments.

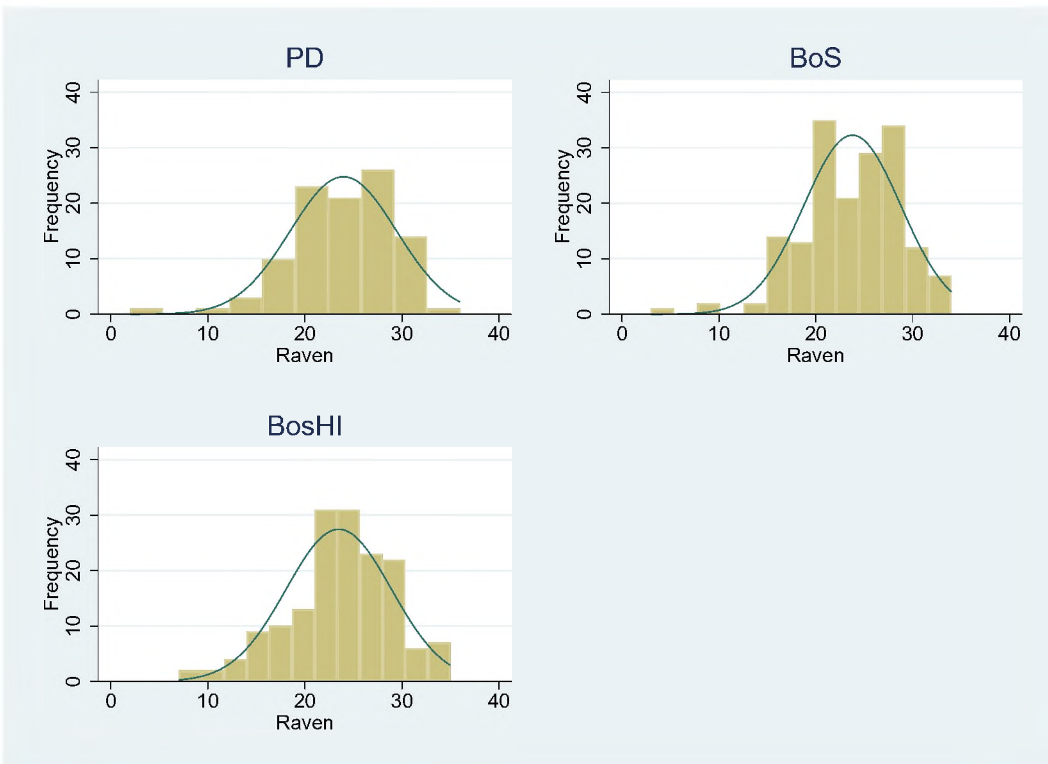

Table O.19: **Comparing Characteristics across the subject pool in Heidelberg and Frankfurt**

	Heidelberg	Frankfurt	Difference	Std. Dev.	N
Raven	23.726	23.694	0.032	0.526	430
Age	23.137	23.456	-0.319	0.385	430
Female	0.537	0.475	0.062	0.050	430
Openness	3.718	3.649	0.069	0.054	430
Conscientiousness	3.451	3.504	-0.054	0.059	430
Extraversion	3.373	3.268	0.105	0.077	430
Agreableness	3.746	3.637	0.109**	0.055	430
Neuroticism	2.864	2.923	-0.059	0.073	430
Risk Aversion	5.607	5.694	-0.086	0.165	430

Note: *** p<0.01, ** p<0.05, * p<0.10.

Table O.20: Raven Scores by Session in Prisoner's Dilemma Treatments

Variable	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**N**
PD Disclosure - Session 1	24.3	4.824	13	30	20
PD Non-disclosure - Session 1	22.55	7.729	2	36	20
PD Disclosure - Session 2	25.056	4.952	17	32	18
PD Non-disclosure - Session 2	23.625	4.193	18	32	16
PD Disclosure - Session 3	25.786	4.98	16	32	14
PD Non-disclosure - Session 3	22.5	4.777	13	29	12

Table O.21: Raven Scores by Session in Battle of Sexes (low ineq.) Treatments

Variable	Mean	Std. Dev.	Min.	Max.	N
BoS Disclosure - Session 1	22.5	4.407	14	30	20
BoS Non-disclosure - Session 1	22.444	5.305	14	34	18
BoS Disclosure - Session 2	23.85	5.019	10	30	20
BoS Non-disclosure - Session 2	23.417	4.907	17	32	12
BoS Disclosure - Session 3	22.45	5.336	3	28	20
BoS Non-disclosure - Session 3	22.313	6.107	10	31	16
BoS Disclosure - Session 4	26.5	3.322	21	32	14
BoS Non-disclosure - Session 4	24.944	4.345	17	33	18
BoS Non-disclosure - Session 5 (FRA)	25.786	5.221	16	32	14
BoS Disclosure - Session 5 (FRA)	24.556	4.866	15	33	18

Table O.22: Raven Scores by Session in Battle of Sexes (high ineq.) Treatments

Variable	Mean	Std. Dev.	Min.	Max.	N
BosHI Disclosure- Session 1	22.545	5.18	8	32	22
BosHI Non-disclosure - Session 1	22.958	5.599	10	33	24
BosHI Disclosure - Session 2	23.65	5.509	14	33	20
BosHI Non-disclosure - Session 2	24.455	4.021	15	31	22
BosHI Disclosure - Session 3	23.722	4.496	11	29	18
BosHI Non-disclosure - Session 3	22.864	5.462	12	33	22
BosHI Non-disclosure - Session 4 (HD)	26.5	6.111	12	35	14
BosHI Disclosure - Session 4 (HD)	22.222	6.916	7	33	18

Table O.23: PD Non-disclosure, Main Variables

Variable	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**N**
Choice	0.729	0.449	0	1	48
Partner Choice	0.729	0.449	0	1	48
Age	22.563	3.5	18	36	48
Female	0.646	0.483	0	1	48
Round	92	0	92	92	48
Openness	3.767	0.48	3	4.9	48
Conscientiousness	3.486	0.511	2.556	4.333	48
Extraversion	3.424	0.763	1.875	4.625	48
Agreableness	3.826	0.513	2.889	4.778	48
Neuroticism	2.927	0.642	1.75	4.5	48
Raven	22.896	5.947	2	36	48
Risk Aversion	5.75	1.695	2	10	48
Final Profit	3624.792	419.604	2796	4380	48
Profit x Period	39.4	4.561	30.391	47.609	48
Total Periods	92	0	92	92	48

Table O.24: PD Disclosure, Main Variables

Variable	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**N**
Choice	0.769	0.425	0	1	52
Partner Choice	0.769	0.425	0	1	52
Age	23.25	3.793	19	35	52
Female	0.442	0.502	0	1	52
Round	92	0	92	92	52
Openness	3.742	0.625	2.5	4.8	52
Conscientiousness	3.382	0.675	1.556	4.889	52
Extraversion	3.531	0.815	1.5	5	52
Agreableness	3.682	0.66	2.111	4.889	52
Neuroticism	2.748	0.763	1.375	4.5	52
Raven	24.962	4.851	13	32	52
Risk Aversion	5.558	1.434	3	8	52
Final Profit	3573.154	443.977	2676	4384	52
Profit x Period	38.839	4.826	29.087	47.652	52
Total Periods	92	0	92	92	52

Table O.25: BoS (low ineq.) Non-disclosure, Main Variables

Variable	Mean	Std. Dev.	Min.	Max.	N
Choice	0.551	0.501	0	1	78
Partner Choice	0.551	0.501	0	1	78
Age	23.038	3.068	18	33	78
Female	0.564	0.499	0	1	78
Round	92	0	92	92	78
Openness	3.676	0.494	2.3	4.8	78
Conscientiousness	3.46	0.679	2	4.778	78
Extraversion	3.304	0.781	1.5	4.75	78
Agreableness	3.781	0.59	2.222	4.667	78
Neuroticism	2.904	0.759	1.25	4.875	78
Raven	23.744	5.256	10	34	78
Risk Aversion	5.654	1.536	2	9	78
Final Profit	2268.615	345.573	1498	2964	78
Profit x Period	24.659	3.756	16.283	32.217	78
Total Periods	92	0	92	92	78

Table O.26: BoS (low ineq.) Disclosure, Main Variables

Variable	Mean	Std. Dev.	Min.	Max.	N
Choice	0.565	0.498	0	1	92
Partner Choice	0.565	0.498	0	1	92
Age	23.457	4.321	18	57	92
Female	0.478	0.502	0	1	92
Round	92	0	92	92	92
Openness	3.668	0.566	2.3	4.9	92
Conscientiousness	3.502	0.544	2.111	4.556	92
Extraversion	3.357	0.71	1.875	4.875	92
Agreableness	3.763	0.497	2.333	4.778	92
Neuroticism	2.772	0.673	1.375	4.625	92
Raven	23.793	4.823	3	33	92
Risk Aversion	5.554	1.693	0	10	92
Final Profit	2180.478	381.597	1048	2812	92
Profit x Period	23.701	4.148	11.391	30.565	92
Total Periods	92	0	92	92	92

Table O.27: BoS (high ineq.) Non-disclosure, Main Variables

Variable	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**N**
Choice	0.561	0.499	0	1	82
Partner Choice	0.561	0.499	0	1	82
Age	23.841	4.744	18	45	82
Female	0.488	0.503	0	1	82
Round	92	0	92	92	82
Openness	3.737	0.507	2.5	4.7	82
Conscientiousness	3.514	0.566	2.333	4.556	82
Extraversion	3.306	0.736	1.75	4.75	82
Agreableness	3.648	0.498	1.889	4.667	82
Neuroticism	2.927	0.776	1.125	4.625	82
Raven	23.939	5.350	10	35	82
Risk Aversion	5.695	1.733	0	10	82
Final Profit	1707.073	321.213	792	2424	82
Profit x Period	18.555	3.491	8.609	26.348	82
Total Periods	92	0	92	92	82

Table O.28: BoS (high ineq.) Disclosure, Main Variables

Variable	**Mean**	**Std. Dev.**	**Min.**	**Max.**	**N**
Choice	0.603	0.493	0	1	78
Partner Choice	0.603	0.493	0	1	78
Age	23.051	3.154	17	34	78
Female	0.5	0.503	0	1	78
Round	92	0	92	92	78
Openness	3.612	0.549	2.3	4.7	78
Conscientiousness	3.447	0.599	2.111	4.556	78
Extraversion	3.178	0.815	1.625	5	78
Agreableness	3.564	0.578	2.222	4.889	78
Neuroticism	3.029	0.752	1.625	4.625	78
Raven	23.026	5.501	7	33	78
Risk Aversion	5.654	1.772	0	10	78
Final Profit	1705.385	291.184	1032	2472	78
Profit x Period	18.537	3.165	11.217	26.87	78
Total Periods	92	0	92	92	78

Table O.29: All participants: Correlations Table (p$-$*values* in brackets)

Variables	Raven	Female	Risk Aversion	Openness	Conscientiousness	Extraversion	Agreableness	Neuroticism
Raven	1.000							
Female	-0.152	1.000						
	(0.002)							
Risk Aversion	-0.035	0.134	1.000					
	(0.467)	(0.005)						
Openness	0.101	0.044	-0.008	1.000				
	(0.036)	(0.361)	(0.871)					
Conscientiousness	0.100	0.180	-0.005	0.098	1.000			
	(0.039)	(0.000)	(0.911)	(0.043)				
Extraversion	-0.031	0.000	0.005	0.292	0.202	1.000		
	(0.524)	(0.994)	(0.912)	(0.000)	(0.000)			
Agreableness	0.090	0.071	0.009	0.204	0.202	0.132	1.000	
	(0.063)	(0.139)	(0.852)	(0.000)	(0.000)	(0.006)		
Neuroticism	-0.148	0.340	0.064	0.005	-0.137	-0.260	-0.166	1.000
	(0.002)	(0.000)	(0.187)	(0.920)	(0.004)	(0.000)	(0.001)	

IV Experimental Instructions & Invitation Email

BoS: Experimental instructions

Thank you everyone for coming to our experiment today.

Before coming into the room, each one of you received a card number. This card corresponds to your seat number. Please make sure you are seated on the correct seat. If you're not on the correct seat, the money you end up receiving will not correspond to your own decisions.

The first section is to solve some puzzles, a pattern game. On the screen, you will see a set of abstract pictures with one of the pictures missing. You need to choose a picture from the choices below to complete the pattern. You will have a total of 30 minutes to complete 36 such puzzles. During these 30 minutes you will be able to move forwards and backwards and change your answers using the red buttons on your screens. Once the 30 minutes have passed you will no longer be able to change any answers. You can submit all your answers and wait for the others to finish once you reach the last puzzle by clicking on the grey button that will appear and be labelled 'DONE WITH PATTERN GAME'. The first picture you will see will only be an example. You will be paid for a random choice of three out of these 36 puzzles. For each correct choice, you will receive 1 Euro. [In disclosure sessions only:] A range including the number of your correct answers will be shown to other participants during a task later in the session. This will be presented anonymously, and there is no way others can trace the score back to you.

If you have any questions, please raise your hand and we will come to help you. Please remain silent while we are running the exercise, as otherwise we will be forced to terminate the session!

START RAVEN

The second section now is a choice task. On your screen, you will see a list of 10 lottery choices and for each case; you will be asked to indicate which of the lotteries you would prefer to play. One out of these 10 lottery choices will be randomly picked and then the choice you have made will be played out and you will be paid according to the probabilities indicated.

START HL

I will explain the next task while you look at an example screen on your monitors. Please feel free to ask any questions you might have. But make sure the questions are only clarifying questions. Any comments during the explanation will force me to terminate the session.

In this task, each of you will be randomly matched with someone in this room to make decisions in several rounds.

On your screen, you will a similar screen like what you see now. [In disclosure sessions only:] On the top of your screen, there is a graph that shows the results of the pattern game. The shaded grey line represents the possible range of 0 to 36 correct answers. You can also see a solid black line; this indicates the actual range of scores of people in this room, from lowest to highest score. The number of your correct answers will be highlighted by a yellow point on the line, the yellow point you see now is only for the example, your true own score will be revealed once we load that actual task. Finally, the green range you see indicates a series of scores within which your partner's score is in.

In the center of the screen, the computer will ask you to make a choice between R and Q. Your payoff will be presented on the left table, left side of the screen, and your partner's payoff will be presented on the right table, right side of the screen. In each table, your decisions (R or Q) are represented in the rows, looking up or down on either side of the screen, and your partner's decisions are represented in the columns, looking left or right on either side of the screen.

The payoffs of each round will depend on both your decisions as well as your partner's. I will now go through an example following the table on your screens. As I am doing so, please keep in mind that the numbers are for example purposes, this is meant to help you understand how to read the table and determine payoffs within each round.

- If you choose R, that is up, and your partner chooses Q, that is left, your payoff, looking at the left table, will be 48 and your partner's payoff, looking at the right table, will be 25.
- If you choose Q, that is down, and your partner chooses R, that is left, your payoff, looking at the left table, will be 0 and your partner's payoff, looking at the right table, will be 0.
- If you choose R, that is up, and your partner chooses Q, that is right, your payoff, looking at the left table, will be 0 and your partner's payoff, looking at the right table, will be 0.
- And finally, if you choose Q, that is down, and your partner chooses Q, that is right, your payoff, looking at the left table, will be 25 and your partner's payoff, looking at the right table, will be 48.

For each sequence of rounds (match) you will be randomly matched with someone from this room. This is done completely anonymously and no-one will ever know who you have been matched with.

After each round, there is a 75% probability that the match will continue for at least another round. That is, if there were 100 trials, in 75 of these the match would be repeated and in 25 the match would stop. So, for example, if you are at the second round of the match, the probability there will a third round is 75% and similarly if you are at round 9, there will be a 75% probability for a further round. Once each match is finished, you will again be randomly matched with someone from this room and play a new sequence of rounds accordingly to the 75-25 probability. Whenever this happens, I will be announcing *'New Partners',* if I say nothing that means you are still playing with the same person as in the previous round.

The sum of the units that you will collect through all the matches, will determine your payoff. Each unit corresponds to 0.3 cents. Keep in mind that the game will be repeated many times and so you can potentially earn a lot of money!

Any questions? If you have any questions during the experiment, please raise your hand and we will come to help you. Please remain silent throughout the session as otherwise, we will be forced to terminate the exercise.

Again, let me remind you that the length of each match is randomly determined. After each round, there is a 75% probability that the match will continue for at least another round. You will play with the same person for the entire match. In addition, once a match is finished you will be randomly matched with another person for a new match.

START BoS

The fourth and last section is a questionnaire. It is relevant to your background and a personality. Your payment is not affected by these. Again I would like to remind you that everything is anonymous so please answer as truthfully as possible as this is critically important for our research.

If you have any questions, please raise your hand and we will come to help you.

START QUESTIONAIRE

Invitation Email

Dear %FIRST_NAME% %LAST_NAME%!

Earn money for less than 90 minutes of your time, by participating in our research project "AMRE Study".

You will be asked to solve some puzzles and complete a questionnaire and some decision tasks. The sessions will be run in English.

We have a session running this next Wednesday 23rd October at 16:00-17:30.

All sessions will take place in the AWI-Experimentallabor.

If you want to participate, you can sign up by clicking the below link:

https://heidelberg-awi.sona-systems.com/default.aspx?p_return_experiment_id=195

(If you can not directly click on the link in your e-mail program, just mark it and copy it to the clipboard by right-clicking and selecting "Copy", then launch your web browser and paste the address there in the address window by clicking right there and choosing "Paste".)

For any further questions, please contact the researcher, Andis Sofianos (A.Sofianos@uni-heidelberg.de)

Kind Regards,

Andis Sofianos