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# Mine Vs. Our money: An ultimatum game experiment with groups

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**Abstract:** Behavioural economics has emphasised the study of individual decision-making. Although in real life decisions are often made by groups rather than individuals, group behaviour has received less attention. Nevertheless, this literature suggests that groups behave more rationally and selfishly than individuals in experiments with social considerations, aligning more closely to the homo economicus model. However, these experiments have not considered the possible impact of a prior task, a factor that could foster selfishness. This study aims to address how behaviour may differ between groups and individuals in an experiment based on the ultimatum game. It incorporates a pre-task that introduces a merit component, setting it apart from earlier research. Contrary to previous evidence, in this experiment groups do not behave more selfishly than individuals. Groups tend to reject higher offers and there are no significant differences in the offers made. There are also no differences between groups and individuals in the offers made to the best-performing participants in the task. The role of social norms, such as fairness, could help explain these results.

**CÓDIGOS JEL:**
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**PALABRAS CLAVE:**
Experimento económico; Economía del comportamiento; Juego del ultimátum, Decisión de grupo; Dinero ganado; Meritocracia; Normas sociales; Equidad

**Resumen:** La economía del comportamiento ha hecho hincapié en el estudio de la toma de decisiones individuales. A pesar de que en la vida real las decisiones suelen ser tomadas por grupos y no por individuos, el comportamiento grupal ha recibido menor atención. No obstante, esta literatura sugiere que los grupos se comportan de forma más racional y egoísta que los individuos en experimentos con consideraciones sociales, ajustándose en mayor medida al modelo del homo economicus. Sin embargo, estos experimentos no han considerado el posible impacto de una tarea previa, factor que podría fomentar el egoísmo. Este estudio, pretende abordar cómo puede diferir el comportamiento entre grupos e individuos a partir de un experimento basado en el juego del ultimátum incorporando una tarea previa que introduce un componente de mérito, diferenciándose así de investigaciones precedentes. Contrariamente a la evidencia anterior, en este experimento los grupos no se comportan de forma más egoísta que los individuos. Los grupos tienden a rechazar ofertas mayores y no existen diferencias significativas en las ofertas realizadas. Tampoco se aprecian diferencias entre grupos e individuos en las ofertas propuestas a los participantes con mejor rendimiento en la tarea. El papel de las normas sociales, como la equidad, podría ayudar a explicar estos resultados

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## 1. Introduction

One of the most important contributions of behavioural economics is that contrary to the rational model of "homo economicus", which assumes individuals are motivated solely by self-interest, individuals have limited self-interest (Thaler, 2015). This limited self-interest means that, when making decisions, people not only consider what is beneficial to themselves. They also have ideas about what is fair, and they can consider other's welfare (in a positive way, through cooperation or solidarity, and in a negative way, such as through jealousy or malice).

This has been evidenced in ultimatum and dictator games, which have long been key research tools. In ultimatum games, two players receive a fixed amount of money to divide, with the first player making a "take-it-or-leave-it" offer to the second player (Güth & Kocher, 2014). If the proposal is rejected by the second player both players get nothing. From the perspective of homo economicus, the rational strategy would be for the first player to offer the smallest possible amount to the second player, who should then accept this offer, as any amount is better than nothing.

However, contrary to the neoclassical economic theory prediction, research findings reveal that subjects often offer a significant portion of their endowment (Tisserand, 2014), and they tend to reject offers higher than 0, which they perceive as unfair (Cameron, 1999). This behaviour is not easily reconcilable with the self-interest assumption of homo economicus, as the second player is seemingly willing to incur a personal cost to punish what they perceive as an unfair offer.

One critique towards behavioural economics is that it is based on studying individuals' behaviour while economics is based on group behaviour (Levine, 2009). As most of the important decisions in real life are made by groups (families, boards of directors or legislatures) it is essential to analyse the group's behaviour and the possible differences with subjects' behaviour. If group behaviour differs from individual behaviour, then much of the contributions of behavioural economics should be relativised and we cannot generalize.

Is the group's behaviour different from individual behaviour? And especially, are group decisions more rational than individuals? Even though research has focused much less on group behaviour than on individual behaviour, most of the literature shows that in many experimental games, including dictator and ultimatum games, groups tend to be more selfish than individuals, behaving more similarly to theoretical predictions (Kugler et al., 2012; Charness & Sutter, 2012).

However, these studies, including ultimatum game experiments, have typically used windfall money, where participants receive an endowment without any prior effort or task. In contrast, some evidence indicates that when participants play ultimatum (or dictator games) with earned money— gained through completing a task before playing— they tend to behave more selfishly. This raises the question: how might group behaviour change with earned money? Would groups become even more selfish and align more closely with theoretical predictions, or might introducing a piece rate paid task strengthen social norms about merit and reciprocity, leading to decisions that contradict rational self-interest?

To address this gap, I conducted an experiment using a within-subjects and two-factor design involving economics students. After completing an effort task, participants played the ultimatum game individually and in groups. The introduction of a task in the experiment allows us to analyse also how abilities and effort can affect the decisions about the endowment´s distribution. Additionally, I examined the correlation and significance of other variables such as gender, age, and socioeconomic factors.

This master thesis is organised in the following way: First, in the literature, I analyse briefly the most relevant articles about the possible differences between individuals and groups in decision-making. Then, I outline possible research questions and hypotheses about how individuals and groups might react in this experiment. Following this I describe the experiment. In the VI section, I describe the variables included in the experiment and why are included. The main results are exposed and discussed in the VII section. Finally, I describe the principal findings and limitations of the experiment and suggest possible new lines of research. Other results and the questionnaire used in this experiment are shown in the appendix.

## 2. Literature

In this section, I review the key literature on group decision-making, focusing on ultimatum and dictator games as experiments involving social considerations. In addition, I explore the effects of endowment origins that have not considered in existing research on groups:

Charness and Sutter (2012) analyse evidence of group behaviour across various experiments, including beauty contest games, the prisoner's dilemma, and investment games. They conclude that groups tend to make more rational decisions than individuals in several ways. Groups are better at overcoming behavioural biases, such as self-control problems, leading to more desirable decision-making. But they, tend to make rational choices, even when these decisions decrease social welfare[1]. For example, in games with a single, socially inefficient pure-strategy Nash equilibrium, such as trust games or the prisoner's dilemma, groups are less likely to trust, which reduces social welfare. Charness and Sutter (2012) suggest this may be because groups prioritize their own payoffs more heavily than individuals. Similarly, a review conducted by Kugler, Kausel, and Kocher (2012) also found that groups generally behave more rationally and selfishly, aligning more closely with theoretical predictions.

In the ultimatum game individuals do not behave according to the rational strategy predicted by the concept of homo economicus. Proposers typically offer around 40% of the

[1] See Kugler et al 2007 and Son (2008) for trust games and Charness, Rigotti, and Rustichini (2007) for Prisoner´s dilemma game with groups.

endowment, while responders often reject offers perceived as unfair, typically, those below 30%. Does this behaviour differ also in groups?

Bornstein and Yaniv (1998) with a three-person group experiment, found that groups tend to make smaller offers and are more inclined to accept lower proposals compared to individuals. This result supports the hypothesis that groups would be more rational than individuals, rejecting the "competitive hypothesis" based on the assumption that, within a group, members can support each other to have more competitive or aggressive behaviours (Insko and Schopler, 1992). In that case, if groups were more competitive, they would offer less, but, the same groups would also reject lower offers.

Similarly to Bornstein and Yaniv (1998), Robert and Carnevale (1997) found that group offers in the ultimatum game were lower than individual offers, and when group members played individually afterwards, their offers remained lower, indicating a lasting influence of the group dynamics on individual behaviour. The most competitive members within a group had the most significant impact on the group's decisions, showing that group offers were best predicted by these individuals[2]. Elbittar et al (2011) found similar results in a structured voting environment without direct group interaction, reinforcing the idea that groups are more rational, and groups support shared self-interest. Thus, it seems that group behaviour is more selfish, as groups tend to offer less than individuals in the ultimatum game and this could be due to peer support for the shared interest. However, it is difficult to determine whether this behaviour is due solely to selfishness or to a better understanding of the game and a better strategic approach. The dictator game, an experimental setting related to the ultimatum game, can shed more light on the debate.

Unlike in the ultimatum game, the allocation in the dictator game is entirely controlled by the sender, and the receiver has no power to influence the outcome. Since the receiver cannot refuse the assignment in the dictator game, it is useful to distinguish between fear and selfishness as motives for the senders' decisions[3].

Experiments with groups with the dictator game have produced mixed results. Cason and Mui (1997) reported that groups tend to be more generous than individuals, in line with the Social Comparison Theory (SCT) that defends that people have the motivation to be presented in a socially desirable way. However, Luhan, Koecher and Sutter (2009) found that groups made significantly smaller transfers than individuals. These differences could be attributed to variations in group size and the level of anonymity. Cason and Mui's (1997) study used two-member groups, where participants were easily identified, and the discussion engaged by group members was face-to-face, whereas Luhan, Koecher and Sutter (2009) used groups of three members and discussions were computer-mediated. The reduced level of anonymity in Cason and Mui's (1997) experiment may have encouraged participants to adhere to social norms of generosity.

Thus, most evidence suggests that group behaviour in games with social considerations (such as ultimatum and dictator games) may be driven by support for selfishness (among group members) rather than simply a better understanding of the game. However, in situations with less anonymity and some social pressure (from outside the group) generosity rather than egoism may drive decisions.

One potential limitation of these studies is that research on group behaviour uses a windfall endowment ("house money"), where participants receive an endowment without any effort beyond their participation in the experiment. But does the origin of the endowment influence participant behaviour? Is there a "house money effect"?[4]

Some authors, such as Cherry et al. (2005) and Clark (2002), did not find a significant effect of earned endowments in experiments with public good games[5]. However, evidence from the ultimatum game (and also the dictator game) seems to be different. Leen and Shahriar (2017) in an ultimatum game experiment showed that receivers tend to accept lower offers as the earned-income fraction increases. In Barber and English (2018) ultimatum game, subjects earn the money at stake: The most common response moves away from equal sharing, and instead, proposals are anchored around comparative gains. The authors argued that these results indicate that equity norms, rather than equality norms, become the dominant norm when endowment is earned. Similarly, Carlsson et al (2012) found in a dictator game experiment that participants donated more when the endowment was a windfall gain (both in laboratory and field experiments).

However, although the origin of the endowment might matter, literature on group behaviour has not typically considered a non-windfall endowment. Therefore, the question arises as to how introducing an effort task in an ultimatum game with groups might affect the offers made and accepted/rejected by participants in individual and group experiments.

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[2] Unfortunately, this article focused only on the proposer, leaving the behaviour of group responders compared to individual receivers unexamined.

[3] Engel (2011) in a meta-analysis of dictator game studies that included 129 papers and 616 experimental treatments found that on average, dictators gave away 28% of the endowment and only 36% of dictators behaved as the conventional "selfish economic man" taking as much money as they could. Also, 17% of the dictators chose an equal split. These results suggest that individuals have a strong preference for fairness.

[4] The house money effect refers to a phenomenon where people are more willing to take risks with money that they perceive as not their own or as a gain, such as winnings from gambling or unexpected windfall

[5] A public good game is a game in which individual players can take an action that would be costly to themselves but would produce benefits for all players (including themselves).

## 3. Research Questions

This study's main question is to provide further evidence on group decision-making in a context that involves social considerations. I ask whether introducing a merit component (the results from an effortful task) can produce different results from those obtained in previous experiments, in which group behaviour was typically more selfish than individual behaviour.

One possibility is that the origin of endowment (house money effect) affects group behaviour as much as it affects individuals. Then, groups would prioritize their payoffs even more heavily. However, this possibility is not consistent with a rational perspective. Neither in terms of self-interest (or egoism) nor in terms of strategic behaviour or understanding of the game, since the introduction of a task should be seen as a sunk cost from the perspective of homo economicus.

Alternatively, based on Social Comparison Theory (SCT) and contrary to the rationality hypothesis, participants in groups may seek to present themselves in a socially desirable way by conforming to social norms. However, what prevailing social norm would emerge, and why might it differ from other experiments? In this context, introducing a task could heighten perceptions of fairness and meritocracy more than in windfall endowment games, resulting in harsher punishment for those who fail to complete the task and greater rewards for those who perform well, even more so than individuals would. This would mean that concerns about equity (or reciprocity) are stronger than equality.

Another research question concerns how anonymity affects social decisions. Given that the experiment was conducted face-to-face (although players did not know who they were playing against), as explained in Section V, the reduced anonymity compared to computer-based games might encourage participants to adhere to social norms of generosity.

## 4. Hypotheses

The main hypotheses that we test are:

**Hypothesis 1**: Groups offer less than individuals.

- Null Hypothesis $H_0$: On average, group offers are lower than individuals:

$$H_0^1: u_0 < u_{1?}$$

- Alternative Hypothesis $H_1$: On average, groups offer the same amount or more than individuals.

$$H_1^1: u_0 \geq u_2$$

**Hypothesis 2:** Groups reject less than individuals (rationality hypothesis).

- Null Hypothesis: On average, groups reject less than individuals (rationality hypothesis).:

$$H_0^2: u_0 < u_2$$

- Alternative Hypothesis: On average, groups reject the offer more or the same than individuals.

$$H_1^2: u_0 \geq u_2$$

Both hypotheses (1 and 2) are grounded in the "rationality hypothesis of groups." This hypothesis posits that groups exhibit behaviour more closely aligned with the theoretical model of homo economicus than individuals, a notion supported by much of the existing literature.

## 5. Experimental design

I conducted the experiment in three sessions in April 2023. Two sessions took place at the University of Vigo and one at the IES Alexandre Bóveda in Galicia, northern Spain. Seventy students of economics from high school and university level participated in the experiment. The process was the same in the three classrooms.

First, I gave all individuals a questionnaire with instructions. The instructions explained that, depending on their decisions during the experiment, they could win up to 20 euros. Before participating in the ultimatum game, participants solved matrices by finding two numbers that added up to 10 in each matrix. They were required to write down these numbers below each matrix. There were 20 matrices spread across two pages, and participants had 4 minutes to complete as many matrices as possible. Instructions stress that the performance in this task may influence potential earnings.

**Illustration 1**: Example of an experiment matrix

| | | |
|---|---|---|
| 9,3 | 6,7 | 8,1 |
| 5,1 | 6,6 | 3 |
| 9,7 | 0,9 | 4,8 |
| 3,6 | 4,8 | 6,4 |

After the task, participants played the ultimatum game with an endowment of 100 points, equivalent to 10 euros. In this game, participants propose a division of the amount with another player, who did not receive any endowment. If the other player accepted the offer, both players received the proposed amounts. If the offer was rejected, both players lost the endowment and the chance to earn money in this round.

The design followed the strategy method, in which participants stated what they would do in the situations exposed. Within ten minutes they decided what offer they would make to someone who had not solved any matrices, to a person who solved 1 to 9 matrices, and to a person with 10 or more matrices solved. Then, during those ten minutes, participants also switched roles to become responders, indicating the minimum offer they were willing to accept under the same conditions.

The experiment follows a within-subject design. Participants played the ultimatum game as groups in the second part. They were randomly separated into groups, mostly in groups of three people (16 groups of three people, two groups of four people and one group of two people). I provided them with a similar questionnaire with indications like in the first part of the experiment. They had 100 points per person, and they decided, considering that the receiver group also had the same number of people, to share the points (100

points per person). Each group had 15 minutes to discuss and agree on offers, with decisions based on the performance of the receiver group in the matrix task. Specifically, they considered three performance categories: (1) groups where no members completed the matrix task, (2) groups with members solving an average of 1 to 9 matrices, and (3) groups with members solving an average of 10 or more matrices. If groups failed to reach an agreement within the time limit, they forfeited potential earnings. The groups then switched roles and played as receivers under the same conditions.

**Table 1:** Summary of the experimental design

| | **Individuals** | **Groups** |
|---|---|---|
| No matrix solved | Baseline | Treatment 1 |
| 1 to 9 matrices solved | Treatment 2 | Treatment 3 |
| 10 or more matrix | Treatment 4 | Treatment 5 |

Each group had three additional minutes to respond to the questionnaire. Besides their decisions, they described their arguments and indicated to what extent they knew each other.

When they finished, participants were separated individually again, and they completed a sociodemographic and attitudinal survey designed to collect background information and gauge their understanding of the experiment. They answered the survey after the ultimatum game to avoid a priming effect.

Finally, when everyone had answered the questionnaires, I conducted four draws, randomly assigning two subjects (receiver and allocator) to each treatment group (as an individual and as a group). They were paid the endowment corresponding to their responses. I did this at each session (a total of 3)[6].

## 6. Variables

In this section, I describe the variables of the study and their relevance.

### 6.1 Main variables

- **Groups:** It is the main treatment variable, participants either made decisions individually or with a group of two, three or four participants. This study questions whether individuals' behaviour differs from that of groups. According to most of the literature, groups tend to be more rational than individuals.
- Gender**:** Participants indicate their gender (male, female, or other). Analysing gender differences helps to identify whether males and females approach fairness, competition, or risk aversion differently. One hypothesis is that females are more generous, offering more than males and tend to accept lower offers more frequently than males (Eckel and Grossman, 2001).
- **Socioeconomic position:** Participants rank their position in the community on a scale of 1 to 10, with the top rung representing the highest socioeconomic status (in terms of education, money, etc.) and the bottom rung representing the lowest. As the concept of community can vary, the form instructs participants to interpret "community" in the most meaningful way for them. This variable can reveal how economic backgrounds influence perceptions of fairness and offers, with the possibility that those in higher socioeconomic positions, having more resources, may value money less and be more willing to reject offers they consider unfair.
- **Ideological position:** Participants choose their ideological position on a scale from 1 (left) to 10 (right). Ideological beliefs can affect perceptions of fairness, with those holding more egalitarian views (typically on the left) potentially offering more equitable splits. However, individuals with more conservative views (typically on the right) might also exhibit greater risk aversion, offering a considerable amount to avoid rejection.
- **Knowledge of the game:** Participants are also asked if they knew about the ultimatum game before this session. It takes the value 0 if they did not know and 1 if they did. Familiarity with the game might lead participants to behave more rationally or strategically.
- **Control Question:** To assess participants' attention and engagement in the experiment, I asked them if they could win money from the experiment (as previously explained and indicated in the form). If participants do not comprehend this control question, it may indicate a lack of attention or incentive, suggesting that their responses may not be well-considered.
- **Matrices Solved:** The number of matrices solved reflects the performance on the task and serves as a proxy for the effort expended. This could influence your decision based on the performance of others. The more matrices solved (compared to the others), the more participants might consider that they deserve more and that those who have not done any matrices do not deserve anything.

Other variables

- **Age:** Participants indicate their age. Age could be an interesting variable in an ultimatum game as different life experiences might impact perceptions of fairness or rationality. However, since most participants are between 16 and 22, age differences within this sample are minimal.

[6] This lottery method, instead of paying every participant, is a valuable tool that efficiently elicits risk preferences by leveraging the incentive structure of probabilistic rewards, thereby ensuring that participants' choices reflect their true risk aversion levels without incurring the high costs associated with compensating every individual (Harrison and Rutström, 2008).

- **Participants meet each other (inside the group):** I also ask if the group members know each other, as this could lead to attitudes or decisions influenced by social pressure or the roles that already exist within the group.

## 7. Results

### 7.1 Descriptive statistics

The first table presents key descriptive statistics by gender and overall. The study involved 587 participants, comprising 27 men (47.37%) and 30 women (52.63%), with an average age of 19 years. On average, participants solved 6.4 matrices. Everyone did the task, solving more than one matrix, and 10 participants solved more than nine matrices. The socioeconomic status, rated on a scale from 1 (lowest) to 10 (highest), averaged 6 across participants, with men averaging 5.6 and women averaging 6.4. Ideologically, participants leaned more towards the left, with an overall stance of 4.7 (1 being the most left-leaning and 10 being the most right-leaning), with women being more left-leaning than men (4.2 versus 5.3). Additionally, 10 participants were familiar with the ultimatum game, and 9 participants did not understand that they could win money from the experiment[8].

**Table 2:** Descriptive statistics of participants

| Descriptive statistics | | | |
|---|---|---|---|
| | **Men** | **Women** | **Total** |
| Nº | 27 | 30 | 58* |
| % | 47,37% | 52,63% | 100% |
| Age (average) | 19,5 | 19,0 | 19,2 |
| Matrices solved (average) | 6,9 | 6,0 | 6,4 |
| Socioeconomic status (average) | 5,6 | 6,4 | 6,0 |
| Ideology (average) | 5,3 | 4,2 | 4,7 |
| Knowledge of the game (count) | 5 | 5 | 10 |
| Control question (count) | 4 | 5 | 9 |

* Identification variables (sex, gender, ideology…) of one participant are not available.

Table 2 shows the main descriptive statistics of individual offers and group offers. We see that offers grow with the receiver's individual and group higher performance. However, offers made by groups tend to be slightly higher than those made by individuals in all categories of solved matrices. When the receiver did not solve any matrix or solved between 1 and 9, individual offers were 2.4 lower than group offers, but when the receiver solved more than 9, this difference decreased, with group offers being 0.6 points higher. This suggests that group collaboration may positively influence the generosity of offers made in the ultimatum game. Variability in offers is high in all cases, indicating a wide range of decisions in individual and group conditions.

**Table 3**: Descriptive statistics of the offers by the performance level of the receiver (individuals and groups)

| Individual offers (N=58) | | | |
|---|---|---|---|
| **Matrix solved** | **0** | **1 to 9** | **10 or more** |
| Mean | 17,58 | 40,65 | 54,55 |
| Median | 10 | 40 | 50 |
| Standard Deviation | 15,30 | 14,24 | 18,05 |
| Max | 50 | 80 | 100 |
| Min | 0 | 1 | 1 |

| Group offers (N=19) | | | |
|---|---|---|---|
| **Matrix solved** | **0** | **1 to 9** | **10 or more** |
| Mean | 20,02 | 43,08 | 55,17 |
| Median | 16,67 | 50 | 50 |
| Standard Deviation | 18,16 | 18,03 | 17,76 |
| Max | 50 | 93,33 | 86,67 |
| Min | 0 | 1 | 1 |

Table 3 shows the main descriptive statistics of individual and group minimum acceptances/demand. The minimum demand decreases as participants assume that the receiver has solved more matrices. Like the senders, the big difference appears with individuals who did not solve one matrix and the other performance levels. Comparing individuals and groups, it can be observed that groups demand more than individuals in all the categories with the matrix solved. Despite the small difference of 0.6 points on average when participants did not solve any matrices, the discrepancy becomes substantial when the sender solved between 1 and 9 matrices (9.8 points) or more (8.5 points). This could point in the direction that groups are more competitive than individuals. Regarding variation, the standard deviation is relatively high, especially in demand to individuals without one matrix solved.

[7] One of the participants could not finish the form and then we could not identify in terms of gender, age, ideology or socioeconomic position.

[8] However, these observations are included in the analysis as their effect is controlled in the regressions and the statistical power of the results is increased. Moreover, removing these observations does not change main conclusions (see table 3 in appendix).

**Table 4**: Descriptive statistics of the acceptances according to the level of the sender's performance (individuals and groups)

| Minimum demand from individuals (N=58) | | | |
|---|---|---|---|
| **Matrix solved** | **0** | **1 to 9** | **10 or more** |
| Mean | 46,31 | 35,17 | 32,71 |
| Median | 50 | 40 | 30 |
| Standard Deviation | 30,63 | 16,32 | 20,51 |
| Max | 100 | 60 | 85 |
| Min | 0 | 1 | 0 |

| Minimum demand from groups (N=19) | | | |
|---|---|---|---|
| **Matrix solved** | **0** | **1 to 9** | **10 or more** |
| Mean | 47,8 | 45,0 | 41,3 |
| Median | 50 | 50 | 48,33 |
| Standard Deviation | 35,98 | 16,88 | 16,72 |
| Max | 96,67 | 72,50 | 66,67 |
| Min | 0 | 1 | 1 |

### 7.2 Hypothesis Testing

Beyond the descriptive statistics, to test our hypothesis and see if there is a significant difference between individuals and groups, we use the non-parametric test Man Whitney U-Test to compare means. This test does not require the assumption of normality; it is robust to outliers and is suitable for small sample sizes.

First, we compare the offers between individuals and groups at the three performance levels. As the next table shows, there is no significant difference between group and individual offers at any performance level.

**Table 5**: (Mann-Whitney U Test Summary for comparing offers. / N=77)

| | **Standard Error** | **Asymptotic Sig. (2-sided test)** |
|---|---|---|
| Offer to no matrix solved | 83,627 | ,747 |
| Offer to 1 to 9 matrices solved | 83,012 | ,466 |
| Offer to 10 or more matrices solved | 81,973 | ,751 |

Thus, we must reject our first hypothesis that groups tend to offer less than individuals and behave more rationally. These results contrast with most of the evidence in ultimatum games with groups.

The second hypothesis to be tested examines whether groups, when compared to individuals, tend to accept lower offers than individuals. If groups tend to accept lower offers than individuals, then groups would have more rational behaviour. In contrast, if groups tend to reject lower offers more than individuals, groups, in line with SCT, follow social norms that in this case would be related to fairness concerns. Moreover, if the demand is higher for those groups that have not performed the task and lower for those with higher performance, the social norm would also be related to equity and meritocracy.

As we can see in table 4, there is no significant difference between individuals and groups in the minimal acceptance for people who have not solved any matrix. However, in the other performance levels, the difference in rejection is significant at a 0.05 level. In other words, groups tend to demand higher amounts than individuals, except for people with no matrix-solved, where minimal amount demand is high for both (individuals and groups tend to demand around the half of amount). Thus, we must reject our second hypothesis that groups tend to reject less than individuals.

In sum, since groups neither offer more than individuals and tend to reject higher amounts than individuals, this experiment is not consistent with the thesis that groups behave more rationally. This difference could be explained by the introduction of an effort task in the game. A possible explanation could be that groups, following a social norm, demand a more equitable distribution, once the opposite player makes a minimal effort (at least one matrix). Thus, social fairness could be seen as a more powerful social norm than meritocracy, as groups don't reward participants with a higher performance more than individuals (minimal demand to players with high performance is higher in groups than individuals). This would be supported by the comments of some participants in the questionnaire, who stressed that making a fair decision was their point of discussion.

**Table 6**: Mann-Whitney U Test Summary for comparing minimal acceptance. (N=77)

| | **Standard Error** | **Asymptotic Sig. (2-sided test)** |
|---|---|---|
| Offer to no matrix solved | 84,367 | ,910 |
| Offer to 1 to 9 matrices solved | 83,233 | ,017 |
| Offer to 10 or more matrices solved | 84,343 | ,029 |

Finally, I conducted OLS regressions to examine the potential effects of various variables on offers and minimal demands (rejection) in this experiment. The results are included in the appendix. Variables such as gender and ideology were not significant in any model. However, familiarity with the game appeared to have an impact, with participants behaving more rationally by sending less to those with no matrices solved and more to those who solved more than nine matrices (Tables 5.1 and 5.3). Participants who did not realize they could have earned money (control question) tended to demand lower amounts (Tables 5.5 and 5.6), which was also

significant[9]. Another influential variable is socioeconomic level; as it increases, offers tend to be smaller to participants in the average performance (Table 4.2).

## 8. Discussion & Conclusion

This experiment aimed to investigate the rational behaviour of individuals and groups in an ultimatum game by introducing a merit component as an effort task. The findings reveal that groups do not offer lower amounts than individuals but tend to reject higher offers. Consequently, these results do not support the thesis that groups behave more rationally than individuals. This deviation from most evidence may be attributed to the introduction of two main factors, a task within the game and the level of anonymity.

According to Social Comparison Theory, individuals in social interactions are motivated to present themselves in a socially desirable manner by adhering to social norms. It is plausible that groups also follow these norms, demanding a more equitable distribution, especially when the opposing player has made some effort, such as completing at least one matrix. This is consistent with the fact that individuals are significantly more willing to offer more to people with better performance than people in the average (1 to 9 matrix) in comparison with groups, whose offer does not vary that much. This suggests that fairness concerns might be a more influential social norm than meritocracy in this context.

In support of this alternative explanation, some participants' comments emphasised that their discussions focused on making fair decisions. These insights could underscore the importance of fairness concerns as a guiding principle in group decision-making within the ultimatum game. Overall, this experiment's results suggest that group behaviour could differ from individuals in a non-rational way and social norms and context-specific factors can play critical roles in shaping economic decisions.

Anonymity could be an important variable since discussions were face-to-face rather than computer-based. The literature suggests that face-to-face discussions might reduce anonymity, fostering social considerations in group decisions. However, results suggest that this is not the case, as group offers are not statistically higher than those made by individuals and groups tend to reject more lower offers.

Two limitations of this study are that subjects played first as individuals and then as groups, and they played first as proposers and then as receivers. This order could affect the decisions they made. However, evidence from the ultimatum game where individuals repeat the game, suggests that people as they play more times, tend to accept more offers, in contrast to findings from this experiment (for example, Camerer and Thaler, 1995; Slonim and Roth, 1999). Thus, it seems that these constraints do not significantly affect the findings.

Finally, introducing an ultimatum game in groups with earned money, where participants gamble with the amount they have won, or incorporating a group task rather than an individual one, could provide deeper insights into group behaviour. Playing with earned money and the collaboration involved in a shared task may foster a group identity, potentially leading to more competitive behaviours, such as lower offers and higher rejection rates. Additionally, since social norms are context-dependent, these findings may vary in different contexts where social fairness is not the prevailing norm. Further research exploring these variables could significantly enhance our understanding of decision-making behaviours in economic games.

[9] This result would be counter-intuitive, since if participants believed that they could not earn money, one would expect less rejection.

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## Appendix

**Other results**

**1. Average offers and demands by gender**

| Average offers by gender (N=57) | | | |
|---|---|---|---|
| **Matrix solved** | **0** | **1 to 9** | **10 or more** |
| Men | 20,85 | 41,52 | 54,07 |
| Women | 14,90 | 40,23 | 55,13 |

| Minimum average demand by gender (N=58) | | | |
|---|---|---|---|
| **Matrix solved** | **0** | **1 to 9** | **10 or more** |
| Men | 47,33 | 33,85 | 31,33 |
| Women | 45,26 | 36,20 | 33,70 |

**2. Average offers and demands Ideology[10]**

| Average offers by ideology (N=57) | | | |
|---|---|---|---|
| **Matrix solved** | **0** | **1 to 9** | **10 or more** |
| Left | 18,98 | 41,12 | 56,64 |
| Right | 13,94 | 39,44 | 49,06 |

| Minimum average demand by ideology (N=57) | | | |
|---|---|---|---|
| **Matrix solved** | **0** | **1 to 9** | **10 or more** |
| Left | 48,48 | 36,71 | 32,36 |
| Right | 40,63 | 31,13 | 33,63 |

**3. Average individual offers and minimum demands (only those who answer the control question correctly)**

| Average offers N=48) | | | |
|---|---|---|---|
| **Matrix solved** | **0** | **1 to 9** | **10 or more** |
| Mean | 18,48 | 40,75 | 56,27 |

| Minimum average demand (N=48) | | | |
|---|---|---|---|
| **Matrix solved** | **0** | **1 to 9** | **10 or more** |
| Mean | 44,85 | 36,92 | 35,06 |

**4. Regressions I (without matrices solved)**

4.1 Offers to people who have not solved any matrix (N=56)

| | **Coefficient** | **Standard Error** | **T statistic** | **P value** | **Signification** |
|---|---|---|---|---|---|
| **Constant** | 31.6599 | 8.84796 | 3.578 | 0.0008 | *** |
| **Groups** | 18.7753 | 15.6660 | 1.198 | 0.2364 | |
| **Gender** | -5.20833 | 4.51973 | -1.152 | 0.2547 | |
| **Socioeconomic** | -1.49075 | 1.50728 | -0.9890 | 0.3274 | |
| **Ideology** | -5.35203 | 4.91732 | -1.088 | 0.2816 | |
| **Control** | -6.28169 | 5.64457 | -1.113 | 0.2711 | |
| **R2** | **0.144756** | | | | |
| **F (5, 50)** | **1.69257** | | | | |
| **P value (F)** | **0.153649** | | | | |

[10] Individuals between 1 and 5 on the scale are categorised as left-wing, while those who scored above 5 are categorised as right-wing.

4.2 Offers to people who solved between 1 and 9 matrices (N=56)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 58.2962 | 8.41171 | 6.930 | 7.71e-09 | *** |
| **Groups** | 7.94876 | 14.8936 | 0.5337 | 0.5959 | |
| **Gender** | 1.89456 | 4.29688 | 0.4409 | 0.6612 | |
| **Socioeconomic** | -3.03500 | 1.43296 | -2.118 | 0.0392 | ** |
| **Ideology** | -0.0524001 | 4.67487 | -0.01121 | 0.9911 | |
| **Control** | 0.237295 | 5.36627 | 0.04422 | 0.9649 | |
| **R2** | 0.086485 | | | | |
| **F (5, 50)** | 0.946722 | | | | |
| **P value (F)** | 0.459303 | | | | |

4.3 More than 9 matrices solved (N=56)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 70.9065 | 10.7207 | 6.614 | 2.41e-08 | *** |
| **Groups** | 0.498560 | 18.9818 | 0.02627 | 0.9792 | |
| **Gender** | 1.71964 | 5.47637 | 0.3140 | 0.7548 | |
| **Socioeconomic** | -2.34357 | 1.82631 | -1.283 | 0.2053 | |
| **Ideology** | -5.86513 | 5.95812 | -0.9844 | 0.3297 | |
| **Control** | -8.55833 | 6.83930 | -1.251 | 0.2166 | |
| **R2** | **0.104393** | | | | |
| **F (5, 50)** | **1.165610** | | | | |
| **P value (F)** | **0.339174** | | | | |

4.4 Minimum demand to people who have not solved any matrix (N=56)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 40.4720 | 18.8066 | 2.152 | 0.0362 | ** |
| **Groups** | -2.33913 | 33.2985 | -0.07025 | 0.9443 | |
| **Gender** | -5.48969 | 9.60683 | -0.5714 | 0.5703 | |
| **Socioeconomic** | 1.69530 | 3.20377 | 0.5292 | 0.5990 | |
| **Ideology** | -9.82568 | 10.4519 | -0.9401 | 0.3517 | |
| **Control** | 9.49780 | 11.9977 | 0.7916 | 0.4323 | |
| **R2** | 0.031502 | | | | |
| **F (5, 50)** | 0.325268 | | | | |
| **P value (F)** | 0.895411 | | | | |

4.5 Minimum demand to people who have solved between 1 and 9 matrices (N=56)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 34.3126 | 9.85559 | 3.482 | 0.0010 | *** |
| **Groups** | -8.11993 | 17.4501 | -0.4653 | 0.6437 | |
| **Gender** | 0.746346 | 5.03445 | 0.1482 | 0.8827 | |
| **Socioeconomic** | 0.543908 | 1.67893 | 0.3240 | 0.7473 | |
| **Ideology** | -4.29399 | 5.47732 | -0.7840 | 0.4368 | |
| **Control** | -9.93995 | 6.28740 | -1.581 | 0.1202 | |
| **R2** | 0.073847 | | | | |
| **F (5, 50)** | 0.797354 | | | | |
| **P value (F)** | 0.556806 | | | | |

4.6 Minimum demand to people who have solved more than 9 matrices (N=56)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 28.2482 | 11.9562 | 2.363 | 0.0221 | ** |
| **Groups** | -15.1153 | 21.1694 | -0.7140 | 0.4785 | |
| **Gender** | -0.0147731 | 6.10751 | -0.002419 | 0.9981 | |
| **Socioeconomic** | 0.981010 | 2.03679 | 0.4816 | 0.6322 | |
| **Ideology** | 0.191034 | 6.64477 | 0.02875 | 0.9772 | |
| **Control** | -13.2004 | 7.62751 | -1.731 | 0.0897 | * |
| **R2** | 0.064749 | | | | |
| **F (5, 50)** | 0.692319 | | | | |
| **P value (F)** | 0.631613 | | | | |

**5. Regressions II (matrices solved)**

5.1 Offers to people who have not solved any matrix (N=57)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 11.1723 | 7.38895 | 1.512 | 0.1367 | |
| **Groups** | 16.9167 | 14.9441 | 1.132 | 0.2629 | |
| **Gender** | -4.06840 | 3.98959 | -1.020 | 0.3127 | |
| **Control** | -10.4870 | 5.42875 | -1.932 | 0.0590 | * |
| **Matrices solved** | 0.0122759 | 0.578373 | 0.02122 | 0.9831 | |
| **Don't know the game** | 11.8373 | 5.54140 | 2.136 | 0.0375 | ** |
| **R2** | 0.180171 | | | | |
| **F (5, 50)** | 2.241617 | | | | |
| **P value (F)** | 0.064139 | | | | |

5.2 Offers to people who solved between 1 and 9 matrices (N=57)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 39.1149 | 7.06599 | 5.536 | 1.08e-06 | *** |
| **Groups** | 2.50246 | 2.55766 | 0.9784 | 0.3325 | |
| **Gender** | -0.919378 | 4.13153 | -0.2225 | 0.8248 | |
| **Control** | -2.36938 | 8.07014 | -0.2936 | 0.7703 | |
| **Matrices solved** | -0.221685 | 0.739052 | -0.3000 | 0.7654 | |
| **Don't know the game** | 4.71274 | 5.68076 | 0.8296 | 0.4106 | |
| **R2** | 0.023150 | | | | |
| **F (5, 50)** | 1.210497 | | | | |
| **P value (F)** | 0.317648 | | | | |

5.3 More than 9 matrices solved (N=57)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 48.0540 | 7.32339 | 6.562 | 2.68e-08 | *** |
| **Groups** | -2.48167 | 3.73780 | -0.6639 | 0.5097 | |
| **Gender** | 1.98979 | 5.20221 | 0.3825 | 0.7037 | |
| **Control** | -13.2964 | 9.87971 | -1.346 | 0.1843 | |
| **Matrices solved** | -0.191782 | 0.840405 | -0.2282 | 0.8204 | |
| **Don't know the game** | 10.5784 | 6.06848 | 1.743 | 0.0873 | * |
| **R2** | 0.098150 | | | | |
| **F (5, 50)** | 1.030406 | | | | |
| **P value (F)** | 0.409846 | | | | |

5.4 Minimum demand to people who have not solved any matrix (N=57)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 31.7212 | 15.8040 | 2.007 | 0.0500 | * |
| **Groups** | 6.46009 | 31.9634 | 0.2021 | 0.8406 | |
| **Gender** | -0.298076 | 8.53319 | -0.03493 | 0.9723 | |
| **Control** | 10.7600 | 11.6114 | 0.9267 | 0.3585 | |
| **Matrices solved** | 2.10425 | 1.23706 | 1.701 | 0.0950 | * |
| **Don't know the game** | -0.806804 | 11.8523 | -0.06807 | 0.9460 | |
| **R2** | 0.067993 | | | | |
| **F (5, 50)** | 0.744118 | | | | |
| **P value (F)** | 0.594114 | | | | |

5.5 Minimum demand to people who have solved between 1 and 9 matrices (N=57)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 24.4082 | 8.40760 | 2.903 | 0.0054 | *** |
| **Groups** | -5.60442 | 4.04134 | -1.387 | 0.1715 | |
| **Gender** | 3.61365 | 4.67644 | 0.7727 | 0.4432 | |
| **Control** | -10.9782 | 6.30498 | -1.741 | 0.0877 | * |
| **Matrices solved** | 0.852060 | 0.794761 | 1.072 | 0.2887 | |
| **Don't know the game** | 6.08385 | 6.32205 | 0.9623 | 0.3404 | |
| **R2** | 0.101635 | | | | |
| **F (5, 50)** | 3.176560 | | | | |
| **P value (F)** | 0.014271 | | | | |

5.6 Minimum demand to people who have solved more than 9 matrices (N=57)

| | Coefficient | Standard Error | T statistic | P value | Signification |
|---|---|---|---|---|---|
| **Constant** | 37.0773 | 12.6337 | 2.935 | 0.0050 | *** |
| **Groups** | -14.8131 | 5.47565 | -2.705 | 0.0093 | ** |
| **Gender** | 1.66275 | 6.29044 | 0.2643 | 0.7926 | |
| **Control** | -14.3327 | 5.85492 | -2.448 | 0.0178 | ** |
| **Matrices solved** | -0.681028 | 0.812344 | -0.8383 | 0.4057 | |
| **Don't know the game** | 1.82203 | 8.50681 | 0.2142 | 0.8313 | |
| **R2** | 0.081027 | | | | |
| **F (5, 50)** | 5.549711 | | | | |
| **P value (F)** | 0.000372 | | | | |

## Model form: Instructions

Esto es un experimento económico. Después del experimento vamos a realizar un sorteo. Consecuentemente con las decisiones que hayas tomado tienes la posibilidad de ganar hasta 20 euros.

**Declaración de voluntario:**

Usted es un voluntario. La decisión de participar en este estudio es por su propia voluntad. Si decide formar parte de este estudio, puede dejarlo en cualquier momento. No se le tratará de forma diferente si decide no participar o dejar de hacerlo después de haber empezado.

**Anonimato:**

Los datos recogidos no contendrán ninguna información identificativa ni ningún vínculo con usted o con su participación en este estudio. No se recogerá su nombre.

He leído la información contenida en este formulario de consentimiento. He tenido la oportunidad de hacer preguntas sobre este estudio, y esas preguntas han sido contestadas satisfactoriamente. Entiendo que al comenzar el cuestionario estoy dando mi consentimiento informado para que mis respuestas sean utilizadas en este estudio de investigación.

**Instrucciones:**

Antes de realizar el juego del ultimátum, debes encontrar los dos números de cada matriz que suman 10. Escribe debajo de cada una de ellas cuales son esos números. Hay un total de 20 matrices (en dos hojas). Completa tantas matrices como puedas en 4 minutos:

Tu rendimiento en esta tarea podría afectar a la cantidad de dinero que puedes ganar.

| | | |
|---|---|---|
| 9,3 | 6,7 | 8,1 |
| 5,1 | 6,6 | 3 |
| 9,7 | 0,9 | 4,8 |
| 3,6 | 4,8 | 6,4 |

| | | |
|---|---|---|
| 3,8 | 5,5 | 9,2 |
| 0,1 | 4 | 8,1 |
| 4,5 | 1,6 | 7,6 |
| 9,5 | 2,1 | 6,9 |

| | | |
|---|---|---|
| 4,2 | 7,1 | 6,9 |
| 3,1 | 8,2 | 9,6 |
| 5,1 | 3,4 | 1,1 |
| 0,9 | 4,3 | 6,3 |

| | | |
|---|---|---|
| 1,3 | 5,8 | 6,7 |
| 7,9 | 0,1 | 3,9 |
| 4,6 | 9,3 | 2,9 |
| 8,2 | 6,1 | 4,5 |

| | | |
|---|---|---|
| 2,1 | 7,6 | 5,5 |
| 3,2 | 8,9 | 4,3 |
| 2 | 7,9 | 9,8 |
| 6,4 | 1 | 8,3 |

| | | |
|---|---|---|
| 8,9 | 2 | 3,9 |
| 4,3 | 5,5 | 7,3 |
| 8 | 1,2 | 6 |
| 9,1 | 3,4 | 4,6 |

| | | |
|---|---|---|
| 5,6 | 8,2 | 3,2 |
| 1,4 | 4,3 | 6,7 |
| 9,4 | 0,9 | 8,6 |
| 2,8 | 6,3 | 3,1 |

| | | |
|---|---|---|
| 2,3 | 7,1 | 8,3 |
| 1,2 | 5,7 | 6,9 |
| 3,7 | 4,3 | 3,3 |
| 6,2 | 0,9 | 9,5 |

| | | |
|---|---|---|
| 1,1 | 5,9 | 6,4 |
| 7 | 0,9 | 8,9 |
| 4,9 | 9,8 | 2,2 |
| 8,4 | 1,1 | 4,8 |

| | | |
|---|---|---|
| 5,1 | 3,3 | 7,6 |
| 3,5 | 4,3 | 0,9 |
| 8,1 | 9,7 | 3,4 |
| 2,3 | 6,7 | 1,2 |

| | | |
|---|---|---|
| 5,9 | 3,7 | 7,1 |
| 3,6 | 4 | 0 |
| 8,3 | 9,1 | 3,6 |
| 2,9 | 6,2 | 1,1 |

| | | |
|---|---|---|
| 4,1 | 7,9 | 5,8 |
| 3,4 | 8,5 | 3,1 |
| 2,7 | 5,9 | 9,9 |
| 6,3 | 1,9 | 8,9 |

| | | |
|---|---|---|
| 2,4 | 7,1 | 8,8 |
| 1,2 | 5,5 | 6,3 |
| 3,9 | 4,4 | 3 |
| 6,4 | 0,6 | 9,9 |

| | | |
|---|---|---|
| 5,6 | 8,1 | 7,3 |
| 3,9 | 4,5 | 0,1 |
| 8,1 | 9,1 | 3,3 |
| 2,4 | 1,9 | 1,1 |

| | | |
|---|---|---|
| 5,8 | 8,9 | 3,1 |
| 2,4 | 4,7 | 6,7 |
| 9,1 | 0,1 | 7,6 |
| 2,2 | 6,6 | 3,8 |

| | | |
|---|---|---|
| 9,1 | 6,3 | 8,8 |
| 5,9 | 6,1 | 3,2 |
| 9,3 | 0,1 | 4,6 |
| 8,6 | 3,3 | 1,4 |

| | | |
|---|---|---|
| 3,3 | 9,4 | 9,1 |
| 5,4 | 4,1 | 8,4 |
| 0,6 | 1,1 | 7,7 |
| 9,7 | 2,1 | 6,3 |

| | | |
|---|---|---|
| 9,3 | 6,7 | 8,1 |
| 5,1 | 6,6 | 3 |
| 9,7 | 0,9 | 4,8 |
| 3,6 | 4,8 | 6,4 |

| | | |
|---|---|---|
| 1,3 | 5,6 | 6,2 |
| 7,3 | 0,2 | 1,9 |
| 4 | 9,3 | 2,6 |
| 8,9 | 8,1 | 4,9 |

| | | |
|---|---|---|
| 2,2 | 7,4 | 5,1 |
| 3,5 | 8,3 | 4,7 |
| 2,7 | 7,8 | 9,1 |
| 6,9 | 1,9 | 8,9 |

Ahora vas a jugar al juego del ultimátum. Tienes una dotación de 100 puntos (que representan 10 euros). Tienes que hacer una oferta para dividir la cantidad con otro jugador. Si éste acepta, ambos podréis ganar el dinero correspondiente al reparto. Si el otro jugador rechaza la oferta que has hecho, ambos perdéis la dotación y por tanto la posibilidad de ganar esa cantidad en este juego.

PD. Eres libre de hacer la oferta que consideres en cada cuestión. En cada pregunta considera que tienes una dotación de 100 puntos.

**Tienes 10 minutos para responder:**

- ¿Cuántos, de tus 100 puntos, le ofrecerías a una persona que no haya realizado la anterior tarea (es decir, no ha resuelto ninguna matriz)?
- ¿Cuántos, de tus 100 puntos, le ofrecerías a una persona que haya resuelto entre 1 y 9 matrices?
- ¿Cuántos, de tus 100 puntos, le ofrecerías a una persona que haya resuelto 10 o más matrices?

**Ahora juegas como receptor:**

Eres tú el que tiene que aceptar o rechazar la oferta que te propongan. Recuerda que la dotación total de quien te hace la oferta es también de 100 puntos.

Debes señalar **la oferta mínima que estarías dispuesto a aceptar**. Si la oferta del proponente fuese inferior a la oferta que estás dispuesto a aceptar, significa que rechazas la oferta y por lo tanto ambos perdéis la posibilidad de ganar esa dotación en este juego.

- ¿De los 100 puntos, de cuanto es la oferta más baja que estás dispuesto a aceptar por una persona que no haya realizado la última tarea (es decir, ¿no ha resuelto ninguna matriz)?
- ¿De los 100 puntos, de cuánto es la oferta más baja que está dispuesto a aceptar por una persona que ha resuelto entre 1 y 9 matrices?
- ¿De los 100 puntos, cuál es la oferta más baja que está dispuesto a aceptar por una persona que haya resuelto más de 10 o más matrices?

**Ahora os toca jugar al juego del ultimátum esta vez como grupo/equipo:**

En este caso, tenéis una cantidad total de 300 puntos (100 puntos por cada participante). El receptor también es un grupo de 3 personas. Si en algún punto no llegáis a un acuerdo, perderéis el derecho a ganar la cantidad pertinente en este juego.

Tenéis hasta **15 minutos** para discutir y llegar a un acuerdo sobre las ofertas.

- ¿De los 300 puntos, cual es vuestra oferta para un grupo en el que ninguno de sus miembros realizó la tarea?
- ¿De los 300 puntos, cual es vuestra oferta para un grupo que en media resolvió entre 1 y nueve matrices?
- ¿De los 300 puntos, cual es vuestra oferta para un grupo en el que, en media, resolvió diez o más matrices?

**Ahora como receptores de la oferta:**

Recuerda que la dotación total del grupo oferente es de 300 puntos, es decir, 100 puntos por cada miembro del grupo.

- ¿De los 300 puntos, cuál es la oferta más baja que estáis dispuestos a aceptar por un grupo que no ha resuelto ninguna matriz?
- ¿De los 300 puntos, cuál es la oferta más baja que estáis dispuestos a aceptar por un grupo que haya resuelto, en media, entre 1 y 9 matrices?
- ¿De los 300 puntos, cual es la oferta más baja que estáis dispuestos a aceptar por un grupo que haya resuelto, en media, 10 o más matrices?

Finalmente, tenéis **tres minutos** para responder brevemente las últimas preguntas:

- ¿Podríais resumir las principales discusiones que hayáis tenido?

- ¿Os conocíais antes de realizar el experimento?

  ☐ Ninguno de nosotros se conocía antes de realizar el experimento.

  ☐ Sólo nos conocíamos dos de los tres.

  ☐ Los tres nos conocíamos con anterioridad al experimento.

**Para acabar:**

1. ¿Podría indicar su género?
   - Mujer
   - Hombre
   - Otro

2. ¿Podría indicar su edad?

3. ¿Conocía el juego del ultimátum?
   - Si
   - No

**Instrucciones:** Piense que esta escalera representa el lugar que ocupan las personas en sus comunidades. La gente define la comunidad de diferentes maneras; por favor, defínela de la manera que sea más significativa para ti. En la parte superior de la escalera están las personas con mayor prestigio en su comunidad (dinero, educación...). En la parte inferior están las personas que tienen la posición más baja.

4. Del uno al diez, siendo el uno la parte más baja, y el diez la más alta, ¿en qué peldaño se situaría?

5. Cuando se habla de política, se utilizan habitualmente las expresiones izquierda y derecha. A continuación, hay una serie de casillas desde la izquierda (con el valor 1) hasta la derecha (con el valor 10). ¿En qué casilla se colocaría usted?

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 |
|---|---|---|---|---|---|---|---|---|---|
| ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ | ☐ |

6. Para verificar que ha entendido el experimento. ¿Puede ganar dinero con este experimento?