

FAIRNESS AND ALTRUISM IN THE CONTEXT OF A PUNISHMENT GAME: A GENDER APPROACH

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ABSTRACT

Most literature on gender differences in the field of economics suggests that women are more risk averse and less trustful than men and, in the context of a dictator game, women seem to be less selfish, more reciprocal and more concerned by fairness and altruism than men. In this dissertation, a survey is carried out in order to test the existence of gender differences regarding fairness and altruism in the context of a dictator game. The survey is based on the setting of the experiment included in the study by Eckel and Grossman (1996b). The results show, contrary to the general perception, that women are more selfish than men, and less altruistic. Moreover, fairness is a principle for them, as they will always or never be fair regardless of the circumstances surrounding the decision.

JEL Codes: A13, C83, C91

Keywords: Fairness, altruism, punishment, gender, dictator game.

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1. Introduction

This dissertation aims at testing the existence of gender differences related to fairness and altruism in the context of a dictator game, as well as to the willingness to punish unfair subjects. Specifically, these ideas are examined through the replication of an experiment already carried out and published, in order to test the results derived from it, as well as to provide new findings inferred from the variations included in the design.

The personal motivation to perform this work is to make a first approach to the experimental methodology, particularly to the topics of gender differences and altruism or fairness concerns. These issues are of great interest in the field of Economics and, in recent years, quite a lot of research has been done on them. That is the reason why it is interesting the replication of a study already carried out in order to check the consistency of the results and to include additional conditions so as to derive new conclusions. Furthermore, this project allows the broadening of knowledge about a more specific area of economics, in particular regarding Game Theory and Behavioural Economics, making feasible at the same time the implementation in practice of theoretical notions acquired throughout the degree of Economics.

Regarding experimental economics, bargaining is one of the main areas of study, of which several experiments have been carried out over the years, and which implies a huge range of everyday life situations. Some examples which illustrate a bargaining process are the following ones: the decision of a labour market reform between employers and unions, the negotiation of the wage between employers and employees for the latter, the divorce agreement of a couple, or even simpler, the bargaining process between an individual and a telecommunications company.

There are other situations in which there is just one person (part) who makes a decision that will affect both parts participating in the interaction, while the other one has no bargaining power at all. This is the setting of the so-called dictator game, very much related to the present research. The dictator game is a kind of interaction in which two subjects participate, but only one of them makes a decision; that is, the dictator, who has to decide the division of a determined amount of money between him/her and the other player, who cannot reject the offer. In equilibrium, the theory

predicts that the proposer or dictator offers zero to the responder, who has no other choice than accepting it.

The simplicity of this game facilitates its implementation in the laboratory, but the theoretical prediction is not fulfilled in this context, that is to say, playing in the lab with real money. Moreover, Guala and Mittone (2010, p.578) affirm that the interaction between subjects is nearly non-existent, so that the term "game" may not be accurate when defining this situation.

The present project is based on the study by Eckel and Grossman (1996b), through which they test the existence of gender differences in the willingness to pay for punishing unfair subjects. They use a punishment game, a restricted adaptation of the dictator game, in which subjects are given two choices, one of them is to share a greater amount of money with a player type A, an unfair subject as he/she had chosen an uneven allocation in a previously carried out experiment, while the other is to divide a smaller amount with a player type B, who had chosen an equal option, being a fair subject. With this framing players need to give up money if they want to compensate a fair subject.

In this setting, the relative price of punishment varies among two treatments, to which subjects are randomly and equally allocated. In the first one, the price of punishing is relatively lower with respect to the other one. That is to say, in the latter subjects have to renounce to a higher amount of money in order to punish the player who had previously been unfair. Or, in other words, they have to sacrifice a greater own payoff so as to compensate the fair subject.

Even though the setting used follows closely the setting by Eckel and Grossman (1996b), it includes some relevant differences. The most important one is that it is a survey, so the results and findings are hypothetical. Moreover, it is a computer-assisted survey, and it is shared online. This may be a limitation as the reached conclusions are not totally certain, but it might have some advantages, for instance the scope of the sample is wider and makes it feasible to compare the results regarding various socio-demographic characteristics (gender, age...). The other variation is the addition of a third 'relative price treatment', that is to say, an additional condition in which the relative price of punishment varies; in this case it is not the amount to share with the fair player the one that decreases, but the money to divide with the unfair subject increases instead. In that way, in order to punish the unfair player and compensate the fair one, they have to renounce to a much higher amount (compared with the quantities corresponding to the two other treatments).

This project may contribute to corroborate the existence of concerns of fairness on subjects, specifically, to confirm gender differences on this issue, as well as to broaden the conclusions, through the implementation of the third treatment, and to obtain more generalised results, as the sample used may be much diverse and wide.

In particular, the first question to be answered is whether women are more concerned by fairness than men, thus they will punish more the unfair behaviour. Moreover, a hypothesis to confirm is the one that affirms that men are not influenced by variations in the relative price of punishment. Furthermore, and related to the previous hypothesis, it will be analysed whether the variations in the relative price of punishment have an impact on women's behaviour. Finally, it will be tested the idea that age affects the willingness to punish unfair subjects. These hypotheses are mainly derived from the results of the study by Eckel and Grossman (1996b), but the underlying ideas of gender differences with respect to altruism and fairness concerns are also found in the literature regarding gender differences and dictator game experiments.

The main results obtained show a higher willingness to punish unfair behaviour for men than for women. This result refutes the general perception of women being less selfish than men. Moreover, neither men nor women are influenced by the relative price of punishment, so that fairness may be a principle for both of them, since they will either always or never be concerned with fairness motivations. In particular, their main decision is the one of punishing in the three treatments. Finally, older subjects are found to be more willing to reward fairness.

The remaining part of the dissertation is organised as follows. In section 2 a review of the literature on the main topics in which it focuses is included. In section 3 the methodology used to carry out the analysis is explained. Section 4 shows the main results obtained. In section 5 some conclusions are stated. An Appendix at the end of the dissertation includes the survey presented to subjects.

2. Literature review

This section includes a revision of the literature about dictator game experiments as well as the role of gender in this kind of interaction.

As already stated in the introduction, the behaviour of subjects playing a dictator game in the lab significantly differs from the theoretical equilibrium, and many examples which support this affirmation can be found in the literature.

Forsythe et al. (1994, pp.361-362) implement the dictator game in its one-shot version without the opportunity for subjects to see or meet their opponents, thus dividing them into two separate rooms, and they find that the majority of subjects playing the role of the dictator renounce to important shares of the available amount of money in order to give it to the other player. There exist different hypotheses that try to explain such behaviour, such as the lack of rationality of the subjects, related to altruism and fairness.

In this respect, Kahneman, Knetsch and Thaler (1986) obtain evidence of altruism and fairness motivations on subjects, who are willing to give up a higher payoff for themselves in order to punish a player who has been selfish or unfair when deciding the distribution of the initially available amount of money. Specifically, in the first part of their article¹ they try to analyse the relevance of fairness assumptions in economic analysis, and through three experiments they conclude that subjects are concerned about fairness enforcement. The first experiment is an ultimatum game in which each subject has to choose among a range of allocations of \$10, from \$9.5;\$0.5 to \$5;\$5, with variations of \$0.5 each time, deciding the ones that are acceptable and unacceptable for them. Later on, they have to make the decision of the division of the given amount of money between them and another subject. The results show that many subjects consider positive offers unacceptable, and the distributions are generous, contrary to the theoretical prediction.

The second experiment consists in a dictator game divided in two parts; in the first one, subjects have to divide \$20 with just two possible allocations: \$18 for them and \$2 for the other person, or \$10 for each one, while in the second one they have to share an amount of money with two other subjects. Regarding the payment, in the first part 16 subjects out of 161 were randomly chosen to be paid, and the rest of them played the second part, in which 15 groups of 3 participants were paid, that is, 45 subjects. One of the possible situations in the second part of the experiment, and which is the most interesting case, is the one in which the player is paired with two subjects who behaved in a different way in the previous part of the experiment. The first one of them showed a fair behaviour, while the other one was unfair, that is to say, the first one decided to share the \$20 evenly, while the second one chose the other possibility (\$18;\$2). The authors call these subjects E (even) and U (uneven). The decision the subject has to make is to give \$5 to subject E, \$5 to himself/herself and nothing to subject U, or \$6 to subject U, \$6 to himself/herself and nothing to subject E. The main

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¹ The authors carried out three different studies, regarding the same issue. The other two studies consisted of telephone surveys aimed at testing which were the community standards for actions affecting customers, employees and firms.

results are that the majority of the subjects divide the \$20 evenly in the first part, and that they are willing to give up \$1 in order to punish an unfair subject, that is to say, to choose the allocation (\$5;\$5;\$0) by which the U (uneven) subject receives nothing, while the E (even) one, as well as the dictator get \$5.

The third experiment is the replication of the second part of the previous one, with a different set of subjects who are matched with a player that participated in the first part of the second experiment but was not paid. In this case, results are similar to the previously obtained.

The main conclusions then are that fairness assumptions are relevant to subjects, and that there exist a willingness to punish subjects which behave unfairly even if this implies lower own payoffs.

It is also important to name, in the context of ultimatum games, the main conclusions stated by Falk, Fehr and Fischbacher (2003). They examine the effect of fairness considerations by the sensitivity of subjects to the distribution of income and find that identical offers in an ultimatum game steadily generate diverse rejection rates depending on the other available alternatives for the proposer. The authors implement four mini-ultimatum games, being the role of proposers and respondents randomly assigned to subjects. The proposer can choose between two allocations; the first one is the same in the four games, and the other one differs from game to game. Each respondent has to indicate his/her response in both decision nodes without knowing the choice of the proposer.

The main result of this study is that subjects are more willing to reject an uneven offer when the proposer has more equitable alternatives to choose, than if the other possible options are more uneven, since identical actions may indicate different facts about the intention of the proposer. For that reason, the authors state that the utility of an action is very much related to the other disposable options. In this sense, a good fairness model should include both intentions and distributional concerns as key elements to explain this kind of behaviour.

As for altruism, Eckel and Grossman (1996a, p.182) conclude in their experimental study that: "altruism is a motivating factor in human behaviour in general and in dictator games in particular". Nevertheless, Winking and Mizer (2013) find in their natural-field study that altruism is not observed in dictator games when played under natural contexts, in fact, no player decided to share the money with the other subject when asked to divide an initially-given endowment. More recently, Falk and Fischbacher (2006) develop a theoretical model of reciprocity which states that this behaviour, that

is, to reciprocate to other's decisions or acts, is a reply to a kind or unkind action. The authors measure the kindness degree of a response through its immediate effects and also through its underlying purpose.

Regarding gender differences, there is quite a lot of recent research performed on this topic, due to its relevance within several fields. In fact, the spectrum covers numerous domains of knowledge like medicine, psychology, sociology, geography and economics, among others. Gender differences is a topic of great importance in the scientific literature, as in some situations it helps to explain the showed divergences in behaviour between men and women. In general terms, the observed variations in the performance of females and males are due to differences in personality or, more precisely, in the cognitive traits of the individuals. The literature on this issue shows relevant dissimilarities on personality among sexes. For instance, Feingold (1994) concludes from a meta-analysis on gender differences in personality that men show higher self-esteem than women, with a small difference between them, and also that the degree of assertiveness is generally greater in men. Moreover, women are more extroverted, anxious, altruistic and trustful than men.

Differences between women and men have been analysed for a long time, and the general conclusion is that there exist essential divergences among them. However, in the last years, in the domain of psychology, a new theory has been developed, based on the gender similarities hypothesis, which states that, contrary to the general view, men and women are alike on the majority of psychological variables, but not on all of them. This idea has been firmly supported by Hyde (2005;2006;2014).

In the field of economics, many experiments have been carried out concerning different areas and using various designs; in order to analyse the role of gender in economic behaviour the main aspects studied are the differences in risk attitudes and trust in decision-making between men and women.

Croson and Gneezy (2009) conclude from their review of the experimental literature on gender differences regarding risk preferences, social preferences and competitive preferences that, in general terms, women are more risk averse than men, and that is the common result of the vast literature on the topic. For instance, Borghans et al. (2009) analyse gender differences regarding risk aversion but also ambiguity aversion, by the willingness of subjects to pay for different lotteries, using for that urns with 10 balls, some of them yellow and the other ones blue; in some of them the distribution is known, while in the others it is unknown, so that in each case subjects have to bet on a colour. Moreover, García-Gallego, Georgantzís and Jaramillo-Gutiérrez (2009) study

gender differences in individual decision making under ambiguity. They follow the methodology introduced by Sabater-Grande and Georgantzís (2002), in which expected payoffs increase in a linear way through four lottery-panels. Thus, this procedure makes feasible the analysis of the sensitivity of subjects towards these variations in the payoffs as an incentive to choose riskier options, that is to say, the sensitivity to risk premia. The same authors carry out a more recent experimental study in the context of employee-employer negotiations over salaries in an ultimatum game, and find that gender differences in these kinds of bargaining situations are not explained by different risk attitudes (García-Gallego, Georgantzís and Jaramillo-Gutiérrez, 2012).

Nevertheless, Eckel and Grossman (2008) state that there are some uncontrolled elements which might bias the results when studying gender differences with respect to risk aversion, like knowledge, marital status, wealth or other demographic factors.

With respect to the second aspect, Chaudhuri and Gangadharan (2003) affirm that men generally show higher levels of trust than women. Dittrich (2015) also finds men more trusting than women, and Buchan, Croson and Solnick (2008, p.472) reach the same conclusion.

Gender differences have also been tested in a dictator game experimental context. For example, the experiments in Eckel and Grossman (1998) confirm that women are less selfish than men, in fact the former gave away twice as much as the latter when deciding as a dictator. The same result is derived from Rigdon et al. (2009) and Andreoni and Vesterlund (2001), with the restriction of the price of giving being a one-for-one dollar transfer. Nevertheless, Bolton and Katok (1995) carry out a basic dictator game and find no gender differences regarding altruistic behaviour.

Regarding reciprocity, Ben-Ner et al. (2004) conduct a two-part dictator game experiment, in which subjects who play the role of the recipient in the first stage are assigned the role of the dictator in the second stage, and they conclude that reciprocity is a behaviour more commonly showed by women.

Even more, Eckel and Grossman (1996b) find that the behaviour of men is more stable when deciding whether to punish or not regardless of the relative price of punishment. Their study tries to test the existence of gender differences in the willingness to pay for punishing unfair subjects. For that purpose, they use a punishment game, that is to say, a restricted adaptation of the dictator game. Their framing follows that of the second part of the dictator game in Kahneman, Knetsch and

Thaler (1986), previously described, with the difference of subjects being matched with just one player, of the type chosen by the own subject.

Let us remind some details that will be useful for our own design. Subjects in this experiment are told that a previous experiment had been carried out, in which subjects had to decide the division of \$20 with two possible allocations: \$18;\$2, or \$10;\$10. A set of players of that game, who were not chosen to be paid, is matched with them, so that their decisions will determine the payoffs for the two of them. The type A player is the one that had chosen the first option in the previous experiment, so that it is an unfair subject, while the type B had chosen the other option, being a fair subject. Thus, under this setting, in order to compensate a fair player, subjects have to give up money.

The additional factor included in this experiment is the variation of the relative price of punishment, by distinguishing between the Low Relative Price treatment and the High Relative Price treatment, being half of the subjects randomly allocated to each treatment. The difference between the two treatments is that, if the chosen type of subject is A, subjects share always evenly \$12 (\$6;\$6), independently of the treatment, whereas if the chosen type is B, in the Low Relative Price treatment the amount to be divided is \$10 (\$5;\$5) and in the High Relative Price treatment the amount is \$8 (\$4;\$4).

Regarding the results, Eckel and Grossman (1996b) find that in the High Relative Price treatment, 59.2% of men choose the type A subject, so that they decide not to punish the unfair behaviour, while in the case of women the percentage is 67.3%, and this difference is not significant. In the Low Relative Price treatment the pattern for men is similar, as 60.7% do not punish, but women differ, since most of them (64%) decide to punish in that case, that is, to choose the type B subject. This means that the decision to punish unfair behaviour by women varies depending on the relative price of punishment, while men behave in a similar way independent of that price.

Moreover, the authors obtain a highly significant interaction between punishment choice, low and high relative price and gender. The regression results lead to the following statements: 1) Women are more likely than men to punish unfair behaviour. 2) Men are not sensitive to price, they choose the type A subject independently of the treatment. 3) Women are price sensitive, in the High Relative Price treatment they mostly choose type A, while in the Low Relative Price treatment they are more likely to choose type B. 4) The younger the subject, the more likely he/she is to punish unfair behaviour.

The main conclusions derived from this study are that for men fairness is a principle, so that they will behave in the same way when facing a determined situation (in this case of unfairness) regardless of the price, whereas women vary their actions depending on the circumstances, so that they are concerned by fairness motivations, but regarding the price attached. So, if social norms or concerns of women differ from men, their behaviour in economic contexts may be different. Thus, modifications to some market models should be applied in order to get more accurate behaviour predictions.

To sum up, the review of the literature concerning gender differences and dictator game experiments leads to some conclusions which can be summarized as follows: the dictator game is a sort of interaction in which just one of the parts has decision power. The SPE in this game is not reached when playing with real money. Two factors that may explain this behaviour are altruism and fairness motivations. In a general context, gender differences do exist in decision-making, mainly regarding risk-aversion and trust, showing that females are more averse to risk and less trustful than males. In a dictator game context, some differences have been found between men and women with respect to selfishness (or altruism), showing that women are less selfish than men. Also, regarding reciprocity (or punishment decisions), reciprocal behaviour is more frequently showed by women.

3. Methodology

The aim of this dissertation is to test the existence of gender differences related to fairness and altruism in the context of a dictator game, as well as to the willingness to punish unfair subjects. For that purpose, a survey is carried out following the structure of the experiment by Eckel and Grossman (1996b), which, in fact, is based on the setting of the second part of that by Kahneman, Knetsch and Thaler (1986). Specifically, it is a dictator game in which each participant has to decide the type of subject with whom they want to play, and this decision involves a specific payoff for both of them, varying according to the treatment in which they are randomly allocated, as the relative price of punishing changes among them. In particular, subjects in the Low Relative Price Treatment have to choose whether to share evenly \$12 with subject type A, or \$10 with subject type B, while in the High Relative Price Treatment they have to make a decision on dividing the \$12 with type A player, or \$8 with the type B, being type A an unfair player and type B a fair subject.

As previously explained, type A and type B players correspond to a set of subjects who, in a previous experiment where they had to decide the division of \$20 with two possible allocations (\$18;\$2-\$10;\$10), were not chosen to be paid, so that those ones who selected the first option (type A) are considered unfair, whereas the others (type B) are fair players.

Even though it will be described with more detail later on, apart from other questions, this survey differs from the main experiment by Eckel and Grossman (1996b) in the fact that a third treatment is introduced in which the relative price of punishment varies. Specifically, it is an additional condition in which it is not the amount to share with the fair player the one that decreases, like in the other two treatments, but the amount to be divided with the unfair subject increases instead. Thus, under this setting, subjects have to give up a higher amount of money so as to punish the unfair player and compensate the fair subject.

In order to clarify this idea, the three treatments are explained below:

- Treatment 1: the feasible divisions are 12€ (6€;6€) with a 'Type 1' player or 10€ (5€;5€) with a 'Type 2' subject.
- Treatment 2: the choice is set between 12€ (6€;6€) with a 'Type 1' player or 8€ (4€;4€) with a 'Type 2' subject.
- Treatment 3: subjects have two possible allocations, the sharing of 18€ (9€;9€)
 with a 'Type 1' player, or the division of 10€ (5€;5€) with a 'Type 2' subject.

Therefore, this framing allows for the evaluation of fairness motivations on subjects, as the choice of sharing an amount of money with a type B player instead of a higher quantity with type A indicates concerns of fairness or altruism. In fact, they are compensating a fair player by giving up a higher payoff for themselves; or, in other words, they are willing to sacrifice some money in order to punish a subject who behaved unfairly.

3.1. Testable hypotheses

Our experimental setup has been designed having in mind the following hypotheses to be tested:

H1- Women are more willing to punish unfair behaviour than men. Therefore, women are more concerned with fairness.

This hypothesis is directly derived from the conclusions by Eckel and Grossman (1996b), since they find that the probability of choosing the option of not punishing the unfair subject is significantly higher for men than for women. Moreover, as previously

shown in the literature review, women are generally found to be less selfish than men, a fact that supports this hypothesis.

H2- Men's behaviour is not affected by the relative price of punishment.

As already stated, fairness is found to be a principle for men, so that they will either always or never be concerned with fairness motivations, independently of the circumstances surrounding the situation. That is the reason why Eckel and Grossman (1996b) found no variation in the decision of men in the two implemented treatments; in particular, they did not punish in any of them. Thus, men are expected to make the decision of not punishing in the three treatments that will be implemented through the survey.

H3- Women are sensitive to the relative price of punishment. Women punish when this price is low, and will not punish for high prices of punishment.

As the results from the experiment by Eckel and Grossman (1996b) indicate, in the 'Low Relative Price' treatment (\$6;\$5) most women decided to punish the unfair behaviour, thus choosing the \$5;\$5 option, while in the 'High Relative Price' condition (\$6;\$4) the majority did not punish, by selecting the \$6;\$6 option instead of the \$4;\$4 share. In the third additional treatment they will decide not to punish since the relative price of doing it is really high (\$9; \$5).

H4- Willingness to punish is negatively correlated with age, independently of the gender.

This is a conclusion derived from the experiment by Eckel and Grossman (1996b), since younger subjects were more willing to punish unfair behaviour. However, the mean age of the subjects participating in that experiment was 21 with a standard deviation of four and in this survey, the age range is expected to be wider, so that the same conclusion may be stated, or the hypothesis may be rejected.

3.2. Survey design

The design of the survey includes different sections and subsections, each one with a number of questions, according to its purpose. All of them are required so as to continue answering the questionnaire. In order to control that each person can fill out the form just once, they are asked to log in to their google account. In that way, their response is linked to their account, making it impossible to access twice.

The first section gives the general guidelines to fulfil the survey and then introduces the first question, which is the choice between three alternatives (A, B or C). Subjects are asked to choose at random one of the alternatives, since no one is better than the others. In fact, this decision determines the treatment to which they are allocated, corresponding option A to the first treatment $(12 \in : 10 \in)$, option B to the second one $(12 \in : 8 \in)$ and option C to the third treatment $(18 \in : 10 \in)$.

The following subsection corresponds to the condition linked to the selected alternative in the first section. Independently of the treatment, subjects are given an explanation of the context in which they have to make the decision, that is to say, a description of the previously carried out experiment, the available options for subjects and the existing type of subjects depending on the decision made. After that, they have to choose one of the two possible allocations of money, which vary among treatments. In the first one, they can share evenly 12€ with a subject 'Type 1', or 10€ with a subject 'Type 2'; in the second treatment they can divide equally 12€ with a 'Type 1' player, or 8€ with a 'Type 2'; and in the third one they have to choose between sharing symmetrically 18€ with a 'Type 1' or dividing 10€ with a 'Type 2'. As previously explained, 'Type 1' player is an unfair subject and 'Type 2' is fair, since in the previous experiment the first one chose the allocation 18€;2€ when deciding the division of 20€, while the second one decided to share the amount evenly (10€;10€).

This subsection allows for testing the existence of some concern for fairness by subjects. In fact, those who are willing to share a lower amount of money with a 'Type 2' player, instead of a higher quantity with a 'Type 1' show an altruistic or fair behaviour, that is to say, they punish the unfair subject and compensate the one who showed a fair behaviour by giving up a higher own payoff.

The subsequent section is a set of nineteen questions aimed at evaluating some personality traits on subjects, related to the main issues analysed in this dissertation, namely, reciprocity, fairness, trust and altruism. In particular, the possible answers to each one of them are: 'Totally agree', 'Agree up to a point', 'Disagree up to a point', or 'Totally disagree'. These questions make it feasible to analyse the personality of the subjects, and to compare it with their responses in the previous section of the survey.

Finally, the last part of the survey includes three questions. The first one requires the age of the subject, the second one the gender and the third one the level of education (primary, secondary or tertiary). Subjects are told that the information will be only used for statistical purposes and that their anonymity is guaranteed.

The Appendix at the end of the dissertation includes screenshots of the whole questionnaire, showing the instructions and questions presented to the subjects.

4. Results

The first part of this section is aimed at showing some descriptive statistics which may help to understand the main characteristics of the sample answering the survey, as well as the main findings derived from their responses.

The survey is computer-assisted, and it was shared online. Specifically, it was shared for the first time the 14th of March and people answered it during one month, being the total number of observations 128.

As Figure 1 shows, the choice of most of them is option A in the first question, and option C is the least chosen. This is an interesting fact because, in order to avoid the selection of the first-appearing option, the question was designed in a way in which the possible options (A, B, C) were randomly mixed. Therefore, there were eight different combinations of the options order, but subjects still selected option A in most cases. This pattern demonstrates an existing tendency to choose the first option in a group of three consecutive letters, independently of the appearing order. This behaviour might be avoided by the use of three independent letters, for instance T, D, and S.

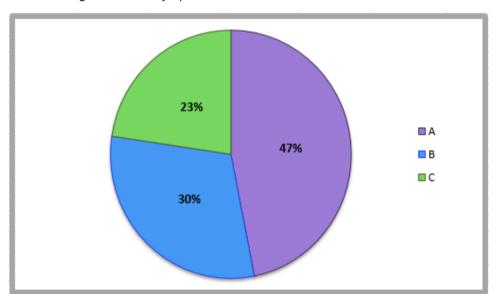


Figure 1: Percentage of choice by option in the first section

Figure 2 includes the number and percentage of subjects choosing a 'Type 1' or 'Type 2' player in the treatment to which they are allocated depending on their response to the first question. As it can be observed, in the first two treatments the percentage of subjects choosing the 'Type 2' player is higher, that is to say, the number of subjects who are willing to share a lower amount (4€ or 5€) with a fair player rather than a higher quantity (6€) with an unfair player is greater. Nevertheless, in the third

treatment the percentages for each type of subject are similar, being the one corresponding to the 'Type 1' slightly higher.

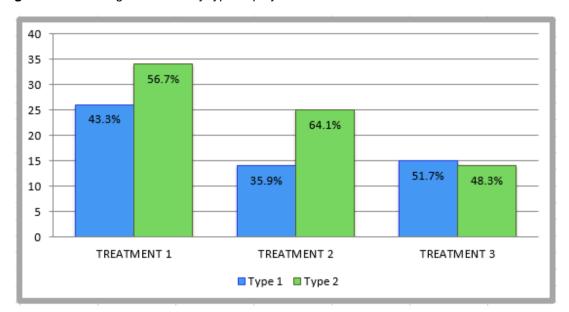


Figure 2: Percentage of choice by type of player and treatment

With respect to gender, age and level of education, Figure 3 presents the percentage and number of women and men who answered the survey. The number of women (72) is higher than the number of men (56). Figure 4 shows the frequency distribution of the age of subjects, which varies from 14 to 67 years old. The average age of the sample is 36.5, the standard deviation is 14.6 and the mode is 22. Finally, regarding the educational level, most subjects have attained tertiary education, and a few have just a primary level of education (see Figure 5).

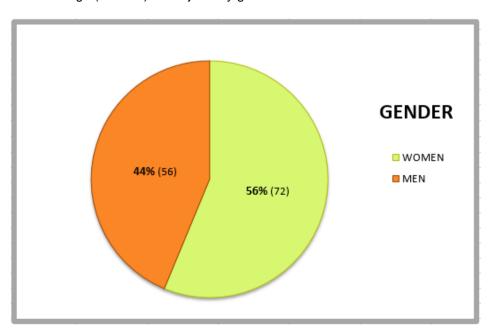


Figure 3: Percentage (number) of subjects by gender

Figure 4: Frequency distribution by age

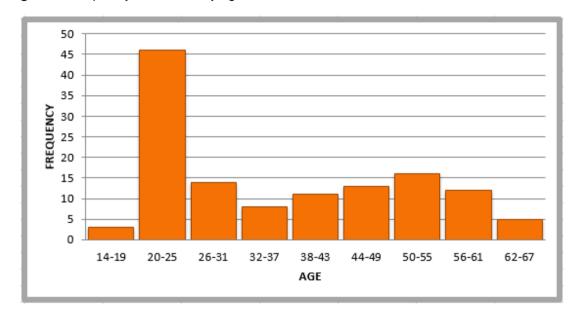
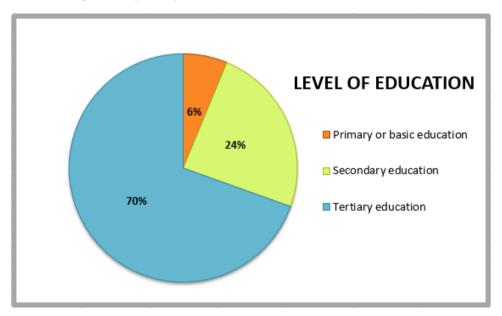


Figure 5: Percentage of subjects by level of education



The responses to the different nineteen questions to be answered in order to evaluate some personality traits on subjects such as reciprocity, trust, fairness and altruism, are quite diverse. For some of the questions, the answers are either mainly positive or mainly negative, and there are few subjects who break the 'general rule'. On the contrary, there are others for which the response is not commonly shared, and important differences can be found between subjects. For instance, in some of the questions the majority of subjects totally agree or agree up to a point (Figures 7, 8, 9, 10, 11, 12, 13, 15, 17, 18, 20, 21, 22 and 24), while in the rest of the questions, the majority totally disagree or disagree up to a point (Figures 6, 14, 16, 19 and 23).

Moreover, in the case of some of the questions, particularly for figures 7, 10, 11, 13, 15, 18, 22 and 24, the majority of the responses (let us consider more than 80%) are of the common type (either positive or negative), whereas the others present some divergence (6, 8, 9, 12, 14, 16, 17, 19, 20, 21 and 23).

In order to understand better the figures, and before showing them, the nineteen questions are included. The order in which they are presented corresponds to that of the original questionnaire, included in the appendix:

- If I suffer an injustice, I will take revenge as soon as possible, no matter the cost.
- 2. I care about others.
- 3. I anticipate the needs of others to mine.
- 4. In general, I believe one can trust people.
- 5. I value cooperation over competition.
- 6. I am willing to incur personal costs in order to help somebody who has previously helped me.
- 7. I believe that people have high moral principles.
- 8. I strive to help somebody who has been kind to me before.
- 9. I find it difficult to forgive others.
- 10. I always have a good word for everyone.
- 11. If somebody puts me in a difficult situation, I will do the same to him/her.
- 12. I believe that most people would take advantage of others if they had the opportunity to do it.
- 13. If someone does me a favour, I will be willing to return it to him/her.
- 14. If somebody offends me or hurts me, I will do the same to him/her.
- 15. I have always been completely fair to others.
- 16. I believe that most people would lie in order to win or triumph.
- 17. I take time out for others.
- 18. Nowadays, one cannot trust anyone.
- 19. In general, people act in their own interest.

Figure 6: Percentages by response for the question of revenge on an injustice

Figure 7: Percentages by response for the question on care about others

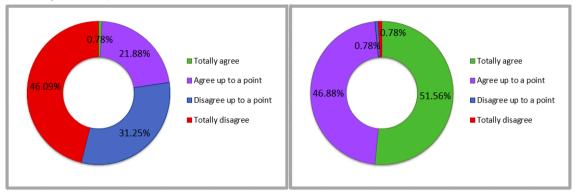


Figure 8: Percentages by response for the question Figure 9: Percentages by response for the question on the anticipation of the needs of others

on trusting people

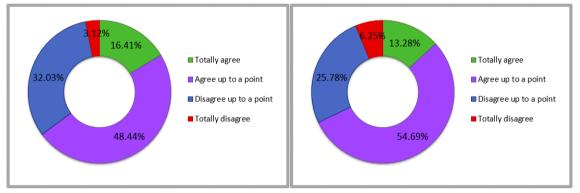


Figure 10: Percentages by response for the Figure 11: Percentages by response for the question on valuing cooperation over competition question on reciprocity (incur personal costs)

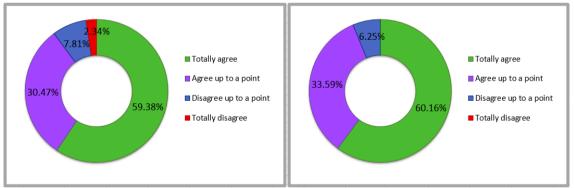


Figure 12: Percentages by response for the Figure 13: Percentages by response for the question on reciprocity (strive to help somebody) question on people having high moral principles

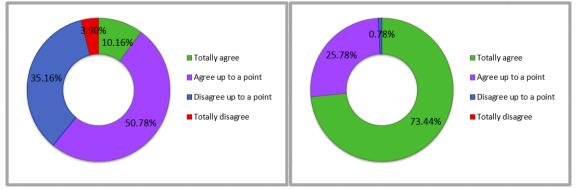


Figure 14: Percentages by response for the **Figure 15:** Percentages by response for the question on forgiveness to others question on having a good word for everyone

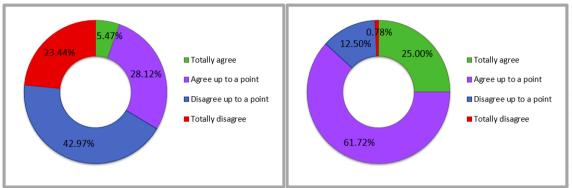


Figure 16: Percentages by response for the **Figure 17:** Percentages by response for the question on negative reciprocity (difficult situation) question on people taking advantage of others

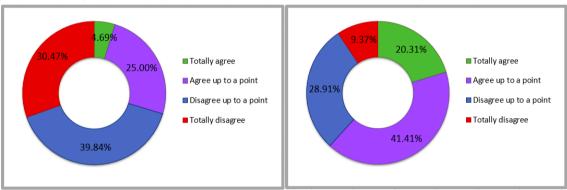


Figure 18: Percentages by response for the **Figure 19:** Percentages by response for the question on reciprocity (doing a favour) question on reciprocity (offence or hurt)

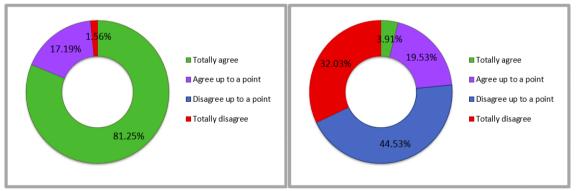


Figure 20: Percentages by response for the question **Figure 21:** Percentages by response for the on fairness (have always been fair to others) question on lying in order to win or triumph

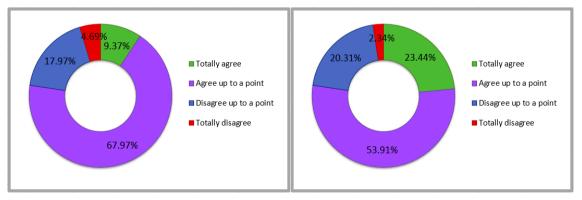


Figure 22: Percentages by response for the **Figure 23:** Percentages by response for the question on taking time out for others question on trust (cannot trust anyone)

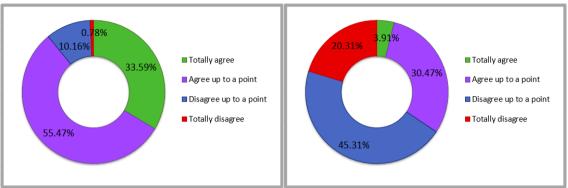
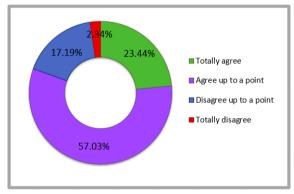


Figure 24: Percentages by response for the question on selfishness (people act in their own interest)



Tables 1 and 2 show the number and percentage of subjects choosing the 'Type 1' or 'Type 2' player in each one of the treatments, as well as the breakdown of these data in two groups, namely 'Women' and 'Men'. Regarding the global data, in the first treatment there are 60 responses, in the second one 39, and in the third one 29. As already stated, in treatments 1 and 2, there are more subjects who choose the 'Type 2' player rather than the other type (34-26; 25-14), while in the third treatment the choice of the 'Type 1' is higher, with a difference of just one person (15-14). With respect to the percentages, women's behaviour varies among treatments, for instance, in the first one, half of them decide to punish, that is to say, to choose the 'Type 2' player and thus obtain a lower amount of money and, at the same time, punish the player 'Type 1' who previously behaved unfairly. In the second treatment, the percentage of women punishing (52.2%) is higher than the one of women who do not punish (47.8%), but it is in the third treatment when this difference between the chosen option greatly increases, being much higher the percentage of women punishing (72.7% - 27.3%). In the case of men, the pattern varies, as they punish more than women in the two first treatments (68.2% - 81.2%), and then they change their behaviour by mainly deciding not to punish in the third treatment (66.7%).

Table 1: Number of subjects by gender, treatment and choice

| | TREATMENT 1 | | TREATMENT 2 | | TREATMENT 3 | |
|-------|--------------------------|--------------------|--------------------------|--------------------|--------------------------|--------------------|
| | TYPE 1 (No punish) | TYPE 2 (Punish) | TYPE 1 (No punish) | TYPE 2 (Punish) | TYPE 1 (No punish) | TYPE 2 (Punish) |
| TOTAL | 26 | 34 | 14 | 25 | 15 | 14 |
| WOMEN | 19 | 19 | 11 | 12 | 3 | 8 |
| MEN | 7 | 15 | 3 | 13 | 12 | 6 |

Table 2: Percentage of subjects by gender, treatment and choice

| | TREATMENT 1 TREATMENT 2 | | TREATMENT 3 | | | |
|-------|--------------------------|--------------------|--------------------------|--------------------|--------------------------|--------------------|
| | TYPE 1 (No punish) | TYPE 2 (Punish) | TYPE 1 (No punish) | TYPE 2 (Punish) | TYPE 1 (No punish) | TYPE 2 (Punish) |
| TOTAL | 43.3% | 56.7% | 35.9% | 64.1% | 51.7% | 48.3% |
| WOMEN | 50.0% | 50.0% | 47.8% | 52.2% | 27.3% | 72.7% |
| MEN | 31.8% | 68.2% | 18.8% | 81.2% | 66.7% | 33.3% |

The second part of this section presents the results of the regressions implemented. Thus, a statistical inference process is carried out, which will help to test the initial hypotheses.

First of all, as the dependent variable does not follow a normal distribution (p-value~0), the methods used are non-parametric.

In particular, in order to test differences between groups the Pearson's chi-squared test is used but, for some of the cases, as the expected frequency is really small (<5) or the total sample size is lower than 20, the method used is the Fisher's exact test.

As it can be observed in Tables 1 and 2, the percentage of women choosing the punishment option in the first treatment is 50%, while in the second treatment it is 52.2%. The corresponding figures for men are 68.2% and 81.2%, respectively. The test for these differences shows that the relative proportions of the treatment variable are independent of the gender variable (p-value=0.549); that is to say, there are no significant differences between treatments 1 and 2 in the choice of punishing by gender.

In the case of treatments 1 and 3, when comparing the percentage of women choosing the option of not punishing (50%; 27.3%) with the percentage of men

choosing that option (31.8%; 66.7%), the test confirms the existence of highly significant differences (p-value=0.001) between treatments and gender in the choice of not punishing.

Moreover, when testing each treatment independently, for the case of treatments 1 and 2 (p-values: 0.171; 0.093) the differences between gender in the decision of punishing or not are not significant. Nevertheless, in the third treatment the difference is significant (p-value: 0.046).

Additionally, two regressions are carried out, the first one for treatments 1 and 2, and the second one for treatments 1 and 3.

In the first case, as no significant differences are found between treatments 1 and 2, the regression includes the following variables:

- <u>Dependent variable</u>:

Choice → Equals if the chosen option is 6€, and 0 if it is 5€ or 4€

- Independent variables:

Gender → Equals 1 if women and 0 if men

Age → Subject's age

Level of education → Equals 1 if primary education, 2 if secondary and 3 if tertiary education

The second regression includes two additional variables, since for treatments 1 and 3 the results show the existence of significant differences between them by gender. Thus, the corresponding regression includes the variables which follow:

- Dependent variable:

Choice → Equals 1 if the chosen option is 5€, and 0 if it is 9€ or 6€

- Independent variables:

Gender → Equals 1 if women and 0 if men

Age → Subject's age

Level of education \rightarrow Equals 1 if primary education, 2 if secondary and 3 if tertiary education

M95 → Equals 1 if men and treatment 3

W95 → Equals 1 if women and treatment 3

The Logit results² of the regressions are presented below, in tables 3 and 4.

Specifically, as Table 3 shows, the variable 'Gender' has a positive and significant coefficient, which means that men are more likely than women to punish unfair behaviour. In other words, the probability of choosing the 6€ option (no punishment) is higher for women than for men. And this is the only significant variable in the first regression.

Moreover, the negative coefficient for 'Age' suggests that older subjects are more willing to reward fairness than younger subjects. And, finally, the variable 'Level of education' has a positive coefficient, which implies a lower willingness to punish unfair behaviour as the level of education increases.

Table 3: Logit first regression results (Treatments 1 and 2)

| Variable | Coefficient (p-value) |
|---------------------------------|-----------------------|
| Constant | -0.492 (0.709) |
| Gender | 0.955 (0.036) ** |
| Age | -0.022 (0.144) |
| Level of education | 0.122 (0.742) |
| Number of observations | 99 |
| Percentage of right predictions | 65.7 |

^{**} Statistically significant at 5%**

Table 4 presents the results of the regression for treatments 1 and 3.

As for the variable 'Gender', in this case it presents a negative (but not significant) coefficient, meaning that the probability of choosing the option of punishing ($5 \in$) is higher for men than for women. This is the same as saying that making the decision of not punishing (choosing either $6 \in$ or $9 \in$) is more probable for women than for men.

The coefficient for 'Age' is positive and significant, which implies that older subjects are more willing to punish unfair behaviour. And the variable 'Level of education' shows a negative and not significant coefficient which, again, implies a lower willingness to punish unfair behaviour as the level of education increases.

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² The regressions were also carried out using the Probit model, and the results are similar to the Logit results.

Table 4: Logit second regression results (Treatments 1 and 3)

| Variable | Coefficient (p-value) |
|---------------------------------|-----------------------|
| Constant | 0.449 (0.763) |
| Gender | -0.638 (0.279) |
| Age | 0.038 (0.043) ** |
| Level of education | -0.476 (0.239) |
| M95 | -1.173 (0.099) * |
| W95 | 1.436 (0.071) * |
| Number of observations | 89 |
| Percentage of right predictions | 64 |

^{**}Statistically significant at 5%

Regarding the two additional variables in this regression, both are significant at a level of 10%, and the negative coefficient for 'M95' suggests that men are more willing to punish unfair behaviour in the first treatment than in the third treatment. And in the case of women, the positive coefficient for 'W95' indicates a higher probability of choosing the punishment option for women in the third treatment with respect to the first one.

Having these results in mind, the hypotheses included in the dissertation to be tested can be now accepted or rejected:

The null hypothesis of women being more concerned with fairness than men is rejected, since the result derived from the regressions, mainly from the first one, in which the variable 'gender' is significant, indicates that men are more willing to punish unfair behaviour than women. Thus, men are more concerned than women with fairness.

Moreover, data shows that the behaviour of men does not significantly vary from treatment 1 to 2, being the main choice in both cases punishing, but it varies in treatment 3, in which the main decision is not to punish. The variable 'M95' included in the second regression shows this fact but, as its coefficient is not significant (at a

^{*} Statistically significant at 10%

significance level of 5%), the hypothesis which states that men's behaviour is not affected by the relative price of punishment cannot be rejected.

Regarding the behaviour of women, it is similar in treatments 1 and 2, and the main choice of punishing does not vary in treatment 3 either (the percentage increases for this case). Moreover, the coefficient for 'W95' confirms this observation, and as it is not significant, the corresponding hypothesis is rejected. Women are not price sensitive when making the decision of punishing or not; in fact, their main decision is the one of punishing for the three treatments.

The hypothesis related to the negative correlation between punishment decision and age is rejected, as the conclusion derived from both regressions is that older subjects are more willing to punish unfair behaviour. The significant coefficient for 'Age' in the second regression confirms this idea.

5. Conclusions

Gender differences has become a topic of great importance in recent years in the scientific literature. Quite a lot of research has been performed on it, showing differences in the behaviour of women and men when facing the same situation. For instance, in the field of economics, several experiments have been carried out concerning different areas, such as risk attitudes and trust, showing that women are more risk-averse and les trustful than men. More specifically, and in the context of a dictator game, evidence has been found regarding gender differences on selfishness (being women less selfish than men), reciprocity (a behaviour more commonly showed by women) and fairness or altruism (being women more concerned by fairness and altruism than men).

In this dissertation, in order to test the existence of gender differences related to fairness and altruism in the context of a dictator game, a survey has been carried out. In this survey, based on the setting of the experiment by Eckel and Grossman (1996b), subjects faced a dictator game situation, in which they had to decide between two options, the first one corresponding to the even division of an amount of money with an unfair subject, and the second one corresponding to the even division of a lower quantity with a fair subject. In particular, there were three different treatments through which the amount to which they had to renounce in order to punish the unfair player increased. Under this framing, subjects had to give up money in order to compensate the fair subject and punish the unfair subject. Thus, it allowed testing the existence of gender differences on fairness and altruism motivations.

The results show that, contrary to the conclusions derived from Eckel and Grossman (1996b) and from the general literature on the topic, women are found to be more selfish than men, that is to say, men are more concerned by fairness and altruism motivations than women.

Moreover, neither women nor men are found to be influenced by the relative price of punishment when making the decision of punishing or not. In this sense, fairness is a principle for both of them; that is to say, they will behave in the same way when facing a determined situation (in this case of unfairness) regardless of the price. In particular, they will always punish an unfair subject, regardless of the amount to which they have to renounce in order to do it.

Finally, older subjects are found to be more willing to punish unfair behaviour. This result is, again, contrary to the one obtained by Eckel and Grossman (1996b). However, this finding is not unexpected, since in their experiment the mean age of the subjects was 21 with a standard deviation of 4 and, in this survey, it was 36.5 with a standard deviation of 14.6.

The method used has some limitations, since the results from the survey are hypothetical, as subjects are not motivated to make their decisions by a real payoff. Moreover, the sample was not as large as expected; 128 subjects answered it, but the distribution among treatments was quite unbalanced, since for treatment 1 there were 60 observations, for treatment 2, 39, and for treatment 3 just 29.

For these reasons, further research could be done using this setting but implementing an experiment rather than a survey, in order to control for the number of subjects included in each one of the treatments, as well as to motivate their responses through a real monetary payoff.

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Appendix: Questionnaire in original version (Spanish)

This section includes screenshots of each part of the questionnaire, showing the instructions and questions presented to subjects. The questionnaire was designed using the tool of Google Forms, which allows to create a questionnaire including the sections and questions wanted, to choose the kind of responses required, as well as to limit the values of the possible answers and to establish obligatory questions. Moreover, it is able to control and limit the number of responses by subject, in fact, in this case each person could fill out the form just once, and so they were asked to log in to their google account.



CUESTIONARIO

El presente cuestionario trata de recrear una situación factible para la toma de una decisión real. Es importante leer con detenimiento las instrucciones, ya que éstas permiten comprender el contexto en el que se deberá tomar la decisión.

Se permite una única respuesta a cada una de las preguntas, así como al formulario completo, por lo que se debe responder cuidadosamente y de forma sincera.

Muchas gracias por su colaboración

* Necessari

Antes de contestar al cuestionario, debe elegir una de las siguientes tres opciones. Tenga en cuenta que ninguna de ellas es necesariamente mejor que las demás, por lo que su elección puede ser totalmente al azar. *

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CUESTIONARIO

Con anterioridad se llevó a cabo un experimento económico en el que una serie de sujetos tuvo que decidir sobre el reparto de 20€ con otra persona. Las opciones disponibles eran:

- Opción 1: 18€-2€; es decir, la persona que decidía se quedó 18€ y le dio a la otra 2€
- Opción 2: 10€-10€; es decir, la persona que decidía se quedó 10€ y le dio a la otra 10€

Los sujetos que escogieron la primera opción serán 'Tipo 1', y los que escogieron la segunda 'Tipo 2'.

Ahora, usted deberá decidir entre una de las dos opciones siguientes para repartirse la cantidad correspondiente con el sujeto escogido.

Estas son las dos opciones posibles. Debe escoger una de ellas.

- Reparto de 12€ con un sujeto Tipo 1 (6€ para cada uno)
- Reparto de 10€ con un sujeto Tipo 2 (5€ para cada uno)

ENRERE

SEGÜENT

No envieu mai contrasenyes a través de Formularis de Google.

CUESTIONARIO

Con anterioridad se llevó a cabo un experimento económico en el que una serie de sujetos tuvo que decidir sobre el reparto de 20€ con otra persona. Las opciones disponibles eran:

- Opción 1: 18€-2€; es decir, la persona que decidía se quedó 18€ y le dio a la otra 2€
- Opción 2: 10€-10€; es decir, la persona que decidía se quedó 10€ y le dio a la otra 10€

Los sujetos que escogieron la primera opción serán 'Tipo 1', y los que escogieron la segunda 'Tipo 2'.

Ahora, usted deberá decidir entre una de las dos opciones siguientes para repartirse la cantidad correspondiente con el sujeto escogido.

Estas son las dos opciones posibles. Debe escoger una de ellas.

- Reparto de 12€ con un sujeto Tipo 1 (6€ para cada uno)
- Reparto de 8€ con un sujeto Tipo 2 (4€ para cada uno)

ENRERE

SEGÜENT

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CUESTIONARIO Con anterioridad se llevó a cabo un experimento económico en el que una serie de sujetos tuvo que decidir sobre el reparto de 20€ con otra persona. Las opciones disponibles eran: Opción 1: 18€-2€; es decir, la persona que decidía se quedó 18€ y le dio a la otra 2€ Opción 2: 10€-10€; es decir, la persona que decidía se quedó 10€ y le dio a la otra 10€ Los sujetos que escogieron la primera opción serán 'Tipo 1', y los que escogieron la segunda 'Tipo 2'. Ahora, usted deberá decidir entre una de las dos opciones siguientes para repartirse la cantidad correspondiente con el sujeto escogido. Estas son las dos opciones posibles. Debe escoger una de ellas. Reparto de 18€ con un sujeto Tipo 1 (9€ para cada uno) Reparto de 10€ con un sujeto Tipo 2 (5€ para cada uno)

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CUESTIONARIO

| * Necessari |
|--|
| En esta sección se pide valorar cada uno de los siguientes enunciados, variando las posibles respuestas desde 1 (Totalmente de acuerdo) hasta 4 (Totalmente en desacuerdo) |
| Si sufro una injusticia me vengaré tan pronto como sea posible, sin importar el coste que ello suponga. * |
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |
| |
| 2. Me preocupo por los demás. * |
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |
| |
| 3. Anticipo las necesidades de los demás a las propias. * |
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |
| |

| | _ |
|--|---|
| 4. En general, creo que se puede confiar en las personas. * | |
| 1 (Totalmente de acuerdo) | |
| 2 (Más o menos de acuerdo) | |
| 3 (Más o menos en desacuerdo) | |
| 4 (Totalmente en desacuerdo) | |
| | |
| 5. Valoro la cooperación por encima de la competencia. * | |
| 1 (Totalmente de acuerdo) | |
| 2 (Más o menos de acuerdo) | |
| O 3 (Más o menos en desacuerdo) | |
| 4 (Totalmente en desacuerdo) | |
| | |
| 6. Estoy dispuesta/o a incurrir en costes personales para ayudar a alguien que me ha ayudado en el pasado. * | |
| 1 (Totalmente de acuerdo) | |
| 2 (Más o menos de acuerdo) | |
| O 3 (Más o menos en desacuerdo) | |
| 4 (Totalmente en desacuerdo) | |
| | |
| 7. Creo que las personas tienen altos valores morales.* | |
| 1 (Totalmente de acuerdo) | |
| 2 (Más o menos de acuerdo) | |
| 3 (Más o menos en desacuerdo) | |
| 4 (Totalmente en desacuerdo) | |

| 8. Me esfuerzo por ayudar a alguien que ha sido amable conmigo en el pasado. * |
|--|
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |
| |
| 9. Me resulta difícil perdonar a los demás. * |
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |
| |
| 10. Siempre tengo una palabra amable para todo el mundo. * |
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |
| |

| 11. Si alguien me pone en una situación difícil, le haré lo mismo. |
|--|
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |
| |
| 12. Si tuvieran oportunidad, la mayoría de las personas se aprovecharían de otras. * |
| O 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| O 3 (Más o menos en desacuerdo) |
| O 4 (Totalmente en desacuerdo) |
| |
| 13. Si alguien me hace un favor, estoy dispuesta/o a devolvérselo. * |
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |

| 14. Si alguien me ofende/hiere, le haré lo mismo. * |
|--|
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |
| |
| 15. Siempre he sido totalmente justo/a con los demás. * |
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |
| |
| 16. Considero que la mayoría de la gente mentiría para ganar/triunfar. * |
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| O 4 (Totalmente en desacuerdo) |
| |

| 17. Saco tiempo para los demás. * |
|---|
| 1 (Totalmente de acuerdo) |
| 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| 4 (Totalmente en desacuerdo) |
| |
| 18. Hoy en día no se puede confiar en nadie. * |
| 1 (Totalmente de acuerdo) |
| O 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| O 4 (Totalmente en desacuerdo) |
| |
| 19. En general, las personas actúan en su propio beneficio. * |
| O 1 (Totalmente de acuerdo) |
| O 2 (Más o menos de acuerdo) |
| 3 (Más o menos en desacuerdo) |
| O 4 (Totalmente en desacuerdo) |
| |

