



UNIVERSIDADE CATÓLICA PORTUGUESA

The impact of the perceived leader's
empathy, group commitment, and
individualism/collectivism on
cooperation

An experimental study

by

Catarina Geraldine Freire Martins

Católica Porto Business School

2021



UNIVERSIDADE CATÓLICA PORTUGUESA

The impact of the perceived leader's
empathy, group commitment, and
individualism/collectivism on cooperation

An experimental study

Master Final Work

submitted to Universidade Católica Portuguesa
for the obtainment of the Management Master Degree

by

Catarina Geraldine Freire Martins

under orientation of

Eva Dias de Oliveira, Rita Pasion, and Tiago O. Paiva

Católica Porto Business School, Universidade Católica Portuguesa

March 2021

Acknowledgements

This thesis would not have been possible without the help and support of so many people who surround me. I wish to express my deepest gratitude to all of them.

First of all, I would like to thank my three supervisors, Professors Eva Dias de Oliveira, Rita Pasion and Tiago O. Paiva, who made all of this possible. Their knowledge, constant support, and availability for all my questions were essential and deeply valued during this process.

To my mum, dad, and brother, for always teaching me that any goal is achievable, supporting me through my whole academic path and challenging me to be better every day.

To my boyfriend Alex, for always believing in everything I do, being present and willing to help me with all the questions I had, and for the endless patience in reading every word I ever wrote for this thesis.

To my friends, Daniela, Francisca, Nuno, and Francisco. Even though I have met them in different stages of my life, each one of them has unique qualities who have inspired me and will certainly continue to do so.

To my grandparents, who always chose to look on the bright side of things during a difficult year. Their example and resilience are something that will always make me proud.

Lastly, I would like to thank all the people who participated, or tried to participate, in my experiment and the team of collaborators, Hélió, Alex, Andreia, Andreia, David, Helena, and João, who helped me through this new experience. I am very thankful that you took the time and energy to assist me in my study.

Resumo

Os humanos cooperam entre si há centenas de anos, ainda que, muitas vezes, e especialmente em ambientes competitivos, não exista nenhum incentivo lógico para tal. Porquê? O que leva os humanos a cooperar? Este estudo pretende responder a esta pergunta, identificando três dimensões principais que podem impactar na cooperação: as tendências individuais para individualismo ou coletivismo, os níveis de compromisso ao grupo e a empatia percebida do líder. De modo a estudar estes temas, realizou-se um “Jogo do Bem Público” sob contingências monetárias que contou com 256 participantes. A empatia do líder foi manipulada (líder empático, neutro e não empático) e foram recolhidos dados acerca dos níveis de compromisso ao grupo e individualismo/coletivismo dos participantes. Adicionalmente, os participantes foram divididos entre grupos com o líder participante e não participante, dependendo da presença do líder dentro do grupo. Os resultados mostraram que não houve diferenças significativas entre as condições com níveis de empatia distintos e a cooperação. O compromisso ao grupo mostrou uma relação positiva com a cooperação e o individualismo mostrou uma relação negativa com a cooperação. Algumas das medidas de compromisso ao grupo e individualismo/coletivismo foram identificadas como preditores significativos da cooperação. Este foi o caso do compromisso normativo (preditor positivo), da competitividade e da supremacia de interesses individuais (preditor negativo). Tanto a participação do líder dentro do grupo, como a interação entre esta participação e a empatia do líder, não criaram um impacto significativo na cooperação.

Palavras-chave: cooperação; empatia; liderança; compromisso ao grupo; individualismo/coletivismo

Abstract

Humans have been cooperating for hundreds of years, even though, on some occasions and especially in highly competitive environments, there are no logical reasons for them to do so. Why? What leads people to cooperate? The present research aims to answer this question by identifying three main dimensions that can impact cooperation: the individual's tendencies for individualistic or collectivistic attitudes, the level of commitment towards the group, and the perceived leader's empathy. In order to study these topics, a "Public Goods Game", with monetary contingencies, was organized involving the participation of 256 subjects. The empathy displayed by the leader was manipulated (empathic, neutral, and non-empathic leader), whilst collecting data regarding the participant's levels of group commitment and individualism/collectivism. Participants were also divided between participating and non-participating leader groups depending on the presence of the leader within the group. Results showed that there was no significant difference between the conditions with distinct empathy and cooperation. Moreover, group commitment was found to be positively related to cooperation and individualism negatively related to cooperation. Some measurements of group commitment and individualism/collectivism were found as significant predictors of cooperation. This was the case for normative group commitment (positive predictor), competitiveness and supremacy of individual interests (negative predictors). The participation of the leader within the group and the interaction between participation and empathy of the leader did not create an impact on cooperation.

Keywords: cooperation; empathy; leadership; group commitment; individualism/collectivism

Index

Acknowledgements.....	iv
Resumo.....	vi
Abstract.....	viii
Index.....	x
Table Index.....	xiii
Introduction.....	15
The Theoretical Background Behind Cooperation.....	19
1. The Individualism and Collectivism tendencies.....	21
2. The Organizational and Group Commitment.....	23
3. The Perceived Leader's Empathy.....	25
4. The Experimental Approach on Cooperation and Leadership.....	32
Goals and Hypotheses of the Present Study.....	36
Method.....	39
1. Sample.....	39
2. Instruments and measures.....	39
2.1 "Public Goods Game".....	40
2.2 Interpersonal Reactivity Index (IRI).....	41
2.3 Individualism/collectivism scale.....	41
2.4 Group commitment.....	42
3. Experimental manipulation.....	43
4. Procedure.....	44
5. Statistical analysis.....	48
Results.....	50
1. Manipulation Check.....	50
2. Hypotheses testing.....	51
3. Exploratory analyses on the effects of leaders' participation and non-participating protocol.....	55
Discussion, conclusion, and future directions.....	56

References	69
Annex	78
Annex 1: Enrolment in the experiment.....	78
1.1 Initial survey	78
1.2 Email sent to the participants	80
Annex 2: Game instructions and questionnaires presented participants.....	84
2.1 Information consent letter.....	84
2.2 Game Instructions	85
2.3 Decision of contributed amount.....	87
2.4 Game understanding questions	88
2.5 Perceived leadership questions.....	89
2.6 Empathy perception, Individualism/Collectivism and Group Commitment questions	89
2.7 Demographic questions.....	95
2.8 Final information.....	98
Annex 3: Guidelines provided to the actors (leader and late participant) to apply during the experimental manipulation	98
3.1 Participating leader protocol	98
3.2 Non-Participating leader protocol.....	106

Table Index

Table 1. Means, standard deviation and one-way ANOVA statistics for group comparisons on perceived leadership and perceived total empathy.	51
Table 2. Means, standard deviation and one-way ANOVA statistics for group comparisons on contributions.	52
Table 3. Pearson coefficients for associations between perceived empathy, individualism/collectivism, group commitment and respective subscales (df = 254).	53
Table 4. Model statistics and standardized Beta coefficients for the multiple linear regression models.	54

Introduction

Western culture tends to value competition and competitive behaviors. People who display competitive attributes and stand out from the others, are usually rewarded. In an organizational context, that reward may be presented as a promotion or a raise, what leads to an encouragement of these behaviours. Competitiveness is seen as an advantage, an incentive to do better, but it can also negatively impact cooperation among teams. This may present a problem as the majority of work in organizations is performed in teams and, in order for teams to function, cooperation is vital.

Cooperation is conceptualized as a phenomenon by which someone incurs in a cost for another person to collect a benefit (Rand & Nowak, 2013). The need for cooperation is highly present in organizations. For instance, a lot of companies (e.g. Ernst & Young) state that they wish to recruit employees who are great team-workers. This happens since, for employees and organizations, cooperation poses many advantages, namely it fosters the alignment between individual and team goals, it increases the feeling of peer support and cooperation can even contribute to increased performance (Johnson et al., 1980).

To better gain insight about what may influence people to cooperate, this research will try to understand if empathy can be a defining factor. There is evidence in how empathy can shape behaviours and lead to cooperation in different areas of an organization (e.g. Rumble et al., 2010), namely in marketing and in what concerns managing the relationship between customers and

organizations (Tripp, 2013). Even though there is no consensus on the meaning of empathy (Davis, 2006), Davis defined it as the phenomenon which leads to a change in someone's thoughts or feelings created by the observation of another individual. In organizations, empathy in leadership has proved to be especially important (e.g. Barbuto & Burbach, 2006), so if a clear connection between empathy in leadership and cooperation is found, that could help organizations adjust their leadership and communication strategies towards employees. Additionally, if this is verified and leaders start focusing on empathy, it could create a stronger employee engagement which would lead to a better team performance and, therefore, to a more sustainable and profitable organization. This may also increase the well-being of employees, their quality of work environment and general satisfaction towards an organization. As such, even though empathy is an extremely complex topic, if one finds its link with cooperation and overall employees' satisfaction, it could have a vital impact in organizational life.

There are other variables that can impact cooperation besides empathy, namely, group commitment and individual tendencies towards individualistic or collectivistic behaviours. Group commitment is described as the feeling of obligation, necessity and desire to preserve and continue the relationship with a specific group (Meyer & Allen, 1991). It would be plausible to hypothesize that the level of connection to a group could impact a team's cooperation. Regarding the individualism and collectivism dichotomies, individualism can be looked at as the prioritization of personal goals (instead of ingroup goals) and collectivism as the prioritization of ingroup goals (instead of personal goals) (Triandis et al., 1985). Similarly to what happens with commitment, research suggests that cooperation can be fostered by people that are more collectively oriented, when compared to more self-oriented individuals (e.g. Cremer, 2002). Taking this into consideration and given that there are a limited number of studies that analyse

these variables in relation to cooperation, both the levels of group commitment and individualism/collectivism require further research.

As the importance of cooperation becomes clearer, different studies on the subject arise. For example, Núncio's (2020, unpublished) aimed to understand the role of perceived leader's empathy, group commitment and individualism have on team cooperation under a "Public Goods Game" experimental environment. To achieve that, there was a manipulation of the empathy of the leader, separating three empathy conditions (empathic, neutral, and non-empathic leader). The study revealed a negative correlation between individualism/collectivism and cooperation, as well as a positive correlation between group commitment and cooperation. It also found a positive relationship between the empathy of the leader and cooperation. However, it failed to find significant differences of behaviours for the participants in different empathic environments. Lastly, Núncio stated that, to better test the influence of the empathy of the leader, one methodology variation should be implemented: the leader should be embedded within the group. The present study aims to build on Núncio's research by addressing that specific limitation; thus, offering new results on the impact of empathy on cooperation, adding empirical strength to the results, and increasing its applications.

As such, the current study's key research question is how the perceived leader's empathy, group commitment and levels of individualism/collectivism impact the team's cooperation in a "Public goods game". To answer this question, firstly, the study will present a literature review on the topics, followed by a description of the current study: hypothesis and goals of the conducted experiment. Secondly, the methodology will be presented. This section will contain information regarding the sample, instruments and measures, experimental manipulation, procedure, and statistical analysis. Lastly, the results

and its implications (e.g. managerial and economic) will be discussed, leading to final conclusions and further suggestions for future studies.

Chapter 1

The Theoretical Background Behind Cooperation

Rand and Nowak (2013) defined cooperation as the phenomenon by which someone incurs in a cost that facilitates another person to collect a benefit. Cooperation within Human societies is unique and fundamentally different from cooperation within animal societies (Henrich et al., 2003). Whilst animal cooperation is natural, human cooperation is a prevalent socially constructed phenomenon with interest for a broad range of social sciences, including economics, sociology, and psychology.

Human cooperation is indeed closely linked to social norms (Fehr & Fischbacher, 2004). Many authors (e.g. Elster, 1989; Voss, 2001) define them as rules of conduct, based on principles that are common to a large number of people. More specifically, these roles of conducts somewhat define how humans should behave in a situation and in a group. If people do not obey these social norms, they are at risk of being shamed by others or, in some cases, their own feelings will hold them accountable (embarrassment, anxiety). In fact, one of the things that makes human cooperation exceptional is that humans have the capacity to create and enforce social norms (Fehr & Fischbacher, 2003). Many authors believe that a new social norm can be created when people's actions originate the need for it, for example when someone's actions create consequences that affect other people. These consequences can be either positive

or negative, but they have to impact people's lives in some way (Coleman, 1994). For instance, when working in a team, the actions of one member of the team affect the whole group in terms of performance, output and even salary, thus creating interest in other group member's actions. Fehr and Fischbacher (2004) argue that it is this interest in the behaviors of the individuals in a group that builds the need for a social norm. In the same line of thought, it is also the consequences of someone's action in a group that tends to build cooperation (Fehr & Fischbacher, 2004).

Previous research draws the attention to the importance of cooperative environments and cooperation in organizations. As an example, Johnson et al. (1980) tested the impact of cooperative and competitive conditions on children's problem-solving performance. They also studied the possible influence of cooperative and competitive conditions on the success of the group. This was done through a practical experiment, where, in the cooperative condition, subjects were told to chat amongst each other, share ideas and supplies, help each other and achieve a result that all agreed on. This condition allowed for the alignment of the participants' goals (if a member of the group achieves their goal, all benefit from it and achieve their goals too). In the competitive condition, the subjects were told to compete for first, second and third place and to work individually. There were rewards and demotions for the winners and losers, respectively. In this condition, there was no alignment between individual goals and team goals (if a member of the group achieved its goal, the others couldn't achieve theirs).

When analyzing the results, Johnson et al. (1980) found a significant number of students that achieved higher results in a cooperative condition when compared to a competitive condition. Additionally, subjects inserted in the cooperative condition engaged in better quality strategies and felt more peer

support and encouragement than the ones in the competitive condition. The authors believed that the exchange of ideas between participants in the cooperative condition allowed subjects to achieve better cognitive strategies. This discussion moment was also relevant when it came to the abilities of the students that participated. Medium and low ability students benefited from the exchange of ideas with higher ability students. Nonetheless, high ability students also benefited from this discussion, because, when they did not know the solution to a task, the discussion proved itself useful in finding an answer. Furthermore, evidence showed that high ability subjects achieved a higher performance in the cooperative environment when compared to high ability students in the competitive environment.

Despite the benefits of cooperation regarding performance, Rand and Nowak (2013) pose cooperation in a competitive atmosphere as something out of the ordinary. This happens because, often, there is not a clear reason to help a competitor and logic thinking indicates that it is not beneficial to help someone who might surpass one's current position. However, although it may be against common sense, the fact remains that, even in competitive environments, cooperation is still present and observable. Currently, there is still uncertainty as to why people choose to cooperate (Fehr & Fischbacher, 2004). In the current study, three factors will be analyzed. The first is related with the traits of the individual that chooses to cooperate, namely individualistic and collectivistic tendencies. The second relates to the group in which people cooperate, specifically group commitment. The third one concerns leadership, specifically the characteristics and behaviors representing the leaders' empathy.

1. The Individualism and Collectivism tendencies

The behaviors and personality traits of each single individual are important factors to understand cooperation. In this context, the more prominent characteristic that arises is each person's tendencies towards individualism or collectivism. The Individualism and collectivism dichotomies can be looked at as, basically, different displays of value emphases (Schwartz, 1990). Triandis et al. (1985) argue that the main meaning of individualism is prioritizing personal goals instead of ingroup goals. On the other hand, the main meaning of collectivism is prioritizing ingroup goals instead of personal goals. Other authors (e.g. Markus & Kitayama, 1991; Marcus & Le, 2013) characterize these different worldviews by stating that individualists display looser ties between people, have a greater inclination towards isolation (more independency), separation and have a higher tendency to choose the individual over the collective. In turn, collectivists tend to be more naturally inserted into robust and cohesive groups, forming more transparency, communication, and unity.

There is some literature on individualism/collectivism in relation to cooperation. Wagner (1995) reported that collectivism had a positive impact on cooperation. In the same line of thought, Cremer (2002) also conducted an experiment on cooperation and found that people who are pro-socials (collectivists) contributed (cooperated) more than people who are pro-selfs (individualists). Interestingly, this effect was particularly observed in the condition where participants were confronted with a benefiting leader (unwilling to choose risky actions to achieve the goals of the team and prioritizing their one interests) and not so much when facing a sacrificing leader (opposite to a benefiting leader). Hence, from past research, it can be suggested that individual differences in individualism may reduce cooperation, being that these traits can be partially mitigated by contextual factors, such as contexts where leadership promotes cooperation.

2. The Organizational and Group Commitment

When looking at the group characteristics, an important factor that could impact and help foster cooperation is organizational commitment. This is a concept that has been highly explored, and so there are multitudes of definitions for commitment. Reichers (1985, p.465) views commitment as the “(...) process of identification with the goals of an organization’s multiple constituencies.”¹. The link with identification is also mentioned by Porter et al. (1974) who see organizational commitment as the strength of a person’s identification, bond and participation in a specific organization. Normally, it involves at least three aspects: (1) a strong alignment between the employee and the organization in terms of goals and mission; (2) a willingness to work hard to serve the organization; and (3) a determination to keep the participation and employment in the organization. Meyer & Allen (1991) also talk about three components, but they argue that these are: (1) a desire (affective commitment), (2) a need (continuance commitment), and (3) an obligation (normative commitment). To these authors, affective commitment is related to emotional attachment and it happens when employees remain in the organization because they wish to. Continuance commitment is linked to the switching costs that arise from going to another organization. Normative commitment happens when employees feel an obligation to provide continuity to the organization and their role in it.

Now that organizational commitment is defined, it is important to explore its outcomes. Mowday et al. (1974) found that highly-committed employees can display higher levels of performance. Moreover, some researchers (e.g. Steers, 1975) believe that commitment may lead to the effectiveness of the organization. Organizational commitment can also have an impact on cooperation. Guo (2018)

¹ For example: clients and top management

studied the role of organizational commitment and team cohesion on the environment of cooperative of teams. The study found that there is a positive relationship between organizational commitment and the cooperative organizational climates. In a more recent study, Hwang-Bo (2013) studied the impact of organizational commitment (among other factors) on the cooperative behaviors of railway controllers and engineers. The research showed that organizational commitment, empowerment, and emotional control had positive impacts on cooperative behaviors.

Even though organizational commitment is presented as an important factor, it bears some criticism. Reichers (1985) states that, when researches discuss commitment, it is often questioned what the employees are committed to. Reichers clarifies that the concept of “organization” is, for many employees, an abstraction, which makes it difficult to understand the type of commitment experienced by these subjects and how it may be achieved. Given that organizations as a whole are often mental constructs, organizational commitment can be dismantled to several types of commitment (for instance, commitment to a leader or to a group) and may encompass several dimensions. The author clarifies that the measurement of organizational commitment could be easily adapted to reflect group commitment and assess identification with goals of the specific team. This adaptation is pertinent as the use of group commitment is helpful when addressing the fact that organizational commitment is very abstract. Moreover, group commitment better assesses group-related variables (such as cohesiveness) and is more strongly associated with satisfaction with the leader (Zaccaro & Dobbins, 1989). Given this, group commitment is found to be more relevant. Furthermore, the dimensions of commitment to be analyzed will follow the proposals of Meyer and Allen (1991) and will focus specifically in two dimensions: affective and normative commitment. Lastly, it should be clarified

that group commitment is significant for several dimensions of organizational and has the potential to affect cooperation among teams.

3. The Perceived Leader's Empathy

As most groups (including organizational groups) deflect to some form of an authority structure, the leader of a group may also be considered as a support to enhance cooperation. Those authority structures (e.g. leaders) and their traits, such as empathy, are key to influencing cooperative behaviors within members of a group (Messick et al., 1983; Tyler, 2002). However, before further exploring this connection, it is vital to understand two things: what exactly is empathy and how someone becomes perceived as a leader.

The idea that humans engage in responsivity behaviors to the situation of others has been a focus of many social scientists for a long time (Davis, 1980). In fact, in 1759, Adam Smith introduced the idea of sympathy to describe feelings that happen within oneself because of the situation of others. According to Davis (1996), in later years, sympathy was often a different term for empathy. Since its origins, the concept of empathy has evolved and Davis, in 2006, created a more commonly used definition of empathy: the phenomenon which leads to a change in someone's thoughts or feelings created by the observation of another individual. Due to its complexity, empathy doesn't seem to have a consensual definition (Davis, 2006). Early contributions on empathy claimed that it was a unidimensional concept. This means that empathy was treated as one unique and cohesive concept. In this unidimensional approach, some of those authors see empathy as cognitive - understanding the emotions of others - e.g. (Woodall & Hill, 1982), others believe it is emotional – experiencing the emotions of others - (e.g. Stotland, 1969) and some simply look at empathy as a whole, without

separating different dimensions. However, most researchers now agree (e.g. Davis, 1980) that empathy is a multinational concept which englobes the two types of empathy: cognitive and emotional empathy. Nowadays, this multidimensional perspective on empathy is widely accepted by authors (e.g. Decety & Jackson, 2004 ; Cuff et al., 2016; Davis, 1983).

Adding to the complexity, Davis (1996, 2006) created the concept of studying an empathetic episode distinguishing the target (the person who is being observed) from the observer (the person who responds to the behavior demonstrated by the target). In each episode, there are four components that happen in a specific order and impact the following one: (1) antecedents, (2) processes, (3) intrapersonal outcomes and (4) interpersonal outcomes. The last component of the emphatic episode is especially relevant for the present research. Interpersonal outcomes refer to the empathic behavioral responses directed at the target. These include *helping* (when the observer offers help to the target in need of it), *aggression* (when the observer displays less hostile or aggressive behaviors directed at the target because of empathic processes) and *social behavior* (when empathy functions as a mechanism to avoid some conflict with others). Interpersonal outcomes are highlighted as they represent the externalization of the empathic episode and the behaviors coming from the observer. In organizations and during an empathic response, what is actually observable and can be identified as empathy are these interpersonal consequences (especially helping behaviors) coming from the observes. As such, empathy represents a relevant and powerful concept for the daily lives of organizational environments.

In order to analyze how empathy can provide some help in understanding cooperation within an organization, one should first understand how it takes place and if it has an influence in the generation of helping behaviors. Batson et

al. (1997) suggests that, for empathy to create helping behavior, it is necessary for an individual to both (1) perceive that someone is in need and (2) imagine their emotions and current situation. As such, those authors debate that perception is not enough to trigger helping behaviors. However, this approach is not undisputed, since Van Lange (2008) found that a social cue (in that case, written cue) displaying severe need is enough to trigger empathic emotions and concern for the other's outcome. To test if empathy generates generous behaviors, Rumble et al. (2010) developed an experiment using participants in high and low empathy situations. Individuals were informed on the misfortune of someone and, afterwards, were either told to imagine what would be like to be in that person's situation (high-empathy condition) or to have an objective perspective over the situation (low-empathy condition). Researchers found that the subjects on the high-empathy condition showed higher levels of cooperation than the subjects in the low-empathy condition. Furthermore, the study also explored the concept of "negative noise" in relation to empathy and cooperation. In this context, negative noise refers to unintended mistakes and situations where the displayed behavior is less cooperative than the actor intended (for example, when someone arrives late to an event because of a personal emergency). Rumble et al. (2010) found that negative noise created detrimental effects on cooperation but, more importantly, empathy seems to mitigate or even eliminate the effects of negative noise.

In a related study, Batson and Moran (1999) suggested that altruistic motivations could play an important role in cooperative decisions. According to the researchers, the existing theory on empathy-altruism hypothesis proposes that when someone experiences empathy for a person in need, they are altruistically motivated to favor the wellbeing of that person. To test this, in their experiment, the authors induced empathy by experimental manipulation to check if that induction would introduce a new prosocial motive (altruism) and,

as such, increase cooperation. It was concluded that the induction of empathy increased cooperation.

After exploring the concept of empathy and its association with cooperation, one should now turn to the role that leadership plays in this relationship. Firstly, one should understand why and how people perceive someone as a leader. As such, questions like “what characteristics make someone feel like a leader?” and “how do perceived leaders arise?” are particularly relevant. Morris and Hackman (1969) state that many studies found that someone is perceived as a leader solely by participating more than others. Supporting this, Jones and Gerard (1967) argue that the level of participation is a major measure of leadership qualities, despite the quality of the participation itself or the conduct of the participator. Morris and Hackman (1969) found that there is a relation between participation and perceived leadership, as a greater level of participation is associated with higher perceived leadership. However, participation did not prove to be enough to predict the association with leadership, nor was high participation required. When it came to test behavioral differences between leaders and non-leaders, Morris and Hackman (1969) discovered that there are not many behavioral differences, but the activities they choose to emphasize are distinct. As such, leaders tend to highlight facilitative activities (which are actions that are correlated with higher group effectiveness) and non-leaders tend to highlight detrimental activities (which are actions that are correlated with lower group effectiveness).

In a different approach, Goleman (2004) strongly relates emotional intelligence with perceived leadership. Goleman defends that there are important traits traditionally connected to leadership. These include vision, cognitive intelligence and abilities, and willpower, for example. However, even though those traditional abilities are necessary, they are not enough to associate someone to a

leader as they function like entry-level qualifications for higher level positions. Emotional intelligence appears as the main distinguishing mark of effective leadership, being empathy one important component of emotional empathy and the most easily recognized.

Kellett et al. (2002) further suggests that there are two distinct behavioral paths for one to be perceived as a leader. The first one is more cognitive. People respect the leader's mental capacities and ability to solve complex tasks. In fact, their study found Grade Point Average (GPA) and complex task performance to be related to leadership. It is important to highlight that complex tasks proved to have double the weight of GPA in perceived leadership and, as such, represent the more important variable in perceived leadership based on mental abilities. The second path to perceived leadership is more emotional and has points of convergence with emotional intelligence and empathy. People tend to associate emotional abilities with leadership. In their study, Kellett et al. (2002) use empathy as the main emotional ability associated with perceived leadership, as Salovey & Mayer (1990) suggest that empathy could be a fundamental trait of emotional intelligence. They found a strong relation (higher than GPA and complex task performance) between empathy and leadership. As such, empathy presents itself as a key factor in leadership. Importantly, both routes (mental abilities and emotional abilities) towards perceived leadership show similar importance but empathy displays roughly the same relation to leadership as GPA and complex task solving combined.

In the same vein, one can observe that empathy is a central construct when examining different leadership styles. In 1978, Burns identified two types of leadership: transformational leadership and transactional leadership. Transactional leaders look at interactions with their followers as exchanges or agreements by highlighting the outcomes that the followers will face if they do

something right or wrong (Bass & Avolio, 1993). Transformational leadership, however, has very different characteristics. To better research this concept, Avolio et al. (1991) developed a theory, called the 4 Is of transformational leadership, that states that transformational leaders display four main characteristics: (1) idealized influence, (2) inspirational motivation, (3) intellectual stimulation, and (4) individualized consideration. When observing these characteristics, it is notable that some of them, especially individualized consideration, could be looked at as empathetic traits. For instance, Avolio et al. (1991), believe that some behaviors of transformational leadership (in general) and individualized consideration (in particular) include paying attention to the needs of individual employees without generalizing and assuming that the needs of some followers are the needs of every single employee. Moreover, leaders who display individualized consideration take the time to listen to their employees' individual concerns, contribute to building confidence and, more importantly, diagnose and evaluate the needs of the followers. This description is in line with the behaviors of an empathic leader as, to pay such attention and diagnose needs of each employee, some level of empathy is required. In fact, transformational leadership implies emotional connections and transformational leaders tend to have higher levels of empathy as to understand the follower's different perspectives (Barbuto & Burbach, 2006).

In the same line of thought and focusing on an organizational context, Bass and Avolio (1993) argue that, in innovative organizational environments, it is likely to see transformational leaders who follow values like "all people can contribute with their unique view" and "people are trustworthy and have purpose". Other studies about transformational leadership identified some other correlations with behaviors, namely studies on emotional intelligence measuring the empathetic component (Barbuto and Burbach, 2006). The authors highlighted the positive relationship between empathic response and all the subscales of

transformational leadership. Therefore, the literature seems to suggest that transformational leaders are more prone to exhibit empathy behaviors.

Transformational leadership is not the only leadership style that can positively impact organizations. For instance, Choi (2006) studied the impact that a charismatic leader can have on followers, namely on motivation. Even though there are several ways to explain the characteristics of a charismatic leader, the study assumes three main personality traits that charismatic leaders should display toward followers: envisioning (e.g. high standards of performance), empathy (e.g. creating emotional bonds with leaders), and empowerment (e.g. creating a sense of self-efficacy in the followers). Focusing on the empathy characteristic of a charismatic leader, Choi (2006, p.28) proposes that a charismatic leader engages in "(...) empathic behavior by being sensitive to their followers' needs and emotions, sharing their emotions, and helping them realize their objectives." The author found that a charismatic leader could achieve better outcomes for the organization and people that are part of it since the paper argues that, when a leader shows envisioning, empathy and empowerment, the needs of the followers adapt. Moreover, Cremer (2002) created an experiment to test if charismatic leaders can motivate the participants' (decision-maker's) cooperative behaviors in a public goods situation. It was hypothesized that a charismatic leader would have the ability to shape people's motivation from wanting to fulfill their interests to wanting the group to succeed (and thus, display higher cooperation levels). The study found that an established leader can influence cooperation. Cremer (2002) also proved the impact of a charismatic leader in influencing decision-makers to make less self-interested decisions, increase cooperation and increase group efficiency.

In sum, empathic leadership is extremely relevant for organizations due to a number of reasons. Firstly, research suggests a positive relationship between

leadership with greater levels of empathy, employee performance and effectiveness (e.g. Lowe et al., 1996, Barbuto and Burbach, 2006). Another study (Zhang et al., 2011) revealed the positive impact of leaders with higher empathetic emotion on team coordination and performance. This study highlighted the benefits of a cooperative approach on conflict resolution when compared to a competitive approach. Even though the study only suggests a positive relation between empathic leadership and cooperation regarding conflict resolution contexts, it is possible that this relationship could be applied to interactions in other group settings. This seems to suggest that leaders with higher levels of empathy can shape the response of the employees towards more cooperative behaviors.

4. The Experimental Approach on Cooperation and Leadership

In recent years, experimental designs have been gaining increasing attention in scientific articles related with organizational behaviors (Podsakoff & Podsakoff, 2019). This happens due to a number of factors. The first is that experimental research can provide evidence of causality (e.g. Falk & Heckman, 2009). Furthermore, experimental methods are vital to establish cause-and-effect relationships and allow investigation of specific aspects of complex phenomena (Aronson et al., 1985). Given this, some researchers refer to experimental design as the “gold standard” for causal evidence and scientific research (e.g. Antonakis, 2017). Most behavioral scientists (e.g. Podsakoff & Podsakoff, 2019) argue that, to establish an effective cause-effect relationship three factors are necessary: (1) covariation between the independent and dependent variables, (2) the variation in the independent variable needs to precede the changes in the dependent

variable and (3) different explanations for the found results in the dependent variable need to be excluded.

There are multiple advantages to experimental studies (Podsakoff & Podsakoff, 2019). For instance, in a laboratory experiment, it is possible to manipulate the independent variable and control settings. This allows the control over inessential variables to be high, which is essential to exclude different explanations to the found results. It's also easier to isolate participant's behaviors or the outcomes of their behavior instead of the intended actions. As such, validity of the found results can be, in times, significantly higher than field experiments (conducted in a real-life environment). Furthermore, laboratory research, increases the likelihood of finding relationships between variables and it is able to examine more than one independent variable in relation to the same dependent variable (Podsakoff & Podsakoff, 2019).

Like all methods, laboratory environments have disadvantages. Compared to field experiments, the generalizability of the findings can be lower, participants are usually more aware that they are participating in an experiment and the realism of the setting is also more questionable. Another possible issue is that it could be hard to correctly manipulate complex behaviors (for instance, empathy). However, it is not impossible to control and assess phenomena like empathy and cooperation by using experimental designs, since there are mechanisms to do so. As such, the "Public Goods Game" is a laboratory experiment used by a large number of scientists to study phenomena like cooperation (e.g. Güth et al., 2004). The "Public Goods Game" or *voluntary contribution mechanism* tests the behavior of subjects when facing a public goods problem. In social situations, it is common that people must decide between fulfilling their own interest or contributing to the well-being of the group they are inserted in (Cremer, 2002). This constitutes a social dilemma or, the more commonly named, public goods dilemma. Given

this, a public good dilemma occurs when someone needs to decide on their contribution towards a defined group and their common project (this contribution is, many times and in experimental scenarios, a monetary one). If all group members choose to cooperate highly, this will be financially beneficial for all group members but, if one defects from that contribution, the group as a whole will “suffer”, and that specific individual will gain higher benefits (e.g. Rand et al., 2009). It is common that people who choose not to contribute to the group (or to contribute very little) are viewed as acting in line with their one self-interest and people who contribute higher amounts to the group are seen as following the goals of the whole group. Given all of this, even though complex behaviors as empathy, cooperation, and leadership are hard to study and manipulate, it is possible since there are some studies that used laboratory experiments to successfully study leadership, for example (e.g. Dóci & Hofmans, 2015).

Núncio (2020, unpublished) developed a study on the impact of individualism/collectivism, group commitment and the empathy of leaders on cooperation is particularly relevant. Núncio’s work involved a “Public Goods game” with the manipulation of the empathy displayed by the leader. Participants were divided into three conditions depending on the level of empathy (high/low) displayed by the leader. During the experiment, a supposed participant (which was an actor behaving according to guidelines provided by Núncio) would enter the room late, while displaying physical cues of injury (limping and using a crutch). The controlled participant would claim that they had to go to the hospital and were late because of that. At this point, the leaders had three different reactions. The empathic leader would say the delay was not a problem and offer help. The neutral leader would not show any reaction to the delay. The non-empathic leader would react poorly to the delay and claim that the participant should have planned ahead. This experimental manipulation was

meant to test if the levels (low/high) of empathic leadership that the participants were exposed to would impact their cooperative decisions. Nuncio (2020, unpublished) found that the leader's perceived empathy and group commitment are positively related to cooperation and individualism is negatively related to cooperation.

Given all the presented evidence, it is considered that an experimental approach is appropriate to study the effect of the individual, the group and leadership characteristics on cooperation. More specifically, it allows the study of the goal of the present research, which is to clarify the effects of empathic leadership (independent variable) on group cooperation (dependent variable).

Chapter 2

Goals and Hypotheses of the Present Study

The main goals of the current study are to understand in which circumstances cooperation is enhanced and how to create environments that foster those circumstances. The research will focus on three main dimensions that can impact cooperative behaviors of individuals in groups. These dimensions include (1) the individuals themselves, (2) the group in which the individuals are inserted and (3) the leader of that specific group. The individualism/collectivism levels of each person are going to be assumed as the main factor to explore personal characteristics of the individuals. When it comes to the effect of the group on cooperation, group commitment is going to be chosen as the defining factor. Finally, there will be a strong focus on the empathic facet of leadership when studying the impact of leaders in cooperation. The existing research on cooperation shows a clear link between the three selected variables and cooperation, since, people with a tendency for collectivism, people who display higher group commitment, and people who interact with empathic leaders, engage in a higher number of cooperative decisions (compared to people in an opposite situation). However, there are very few studies that test the effect of all these factors in relation to cooperation in a laboratory experiment.

In order to develop the existing research on cooperation and bring empirical strength to past studies, the current study will undertake a one-trial “Public Goods Game” with monetary contingencies. In addition to this and with the

intent to analyze the impact of empathy displayed by a person who is perceived to have power, experimental manipulation of the leader's shown empathy will be put into place.

As such, during the experiment, similar experimental conditions and designs to the one developed by Nuncio (2020, unpublished) will be implemented. This includes the three experimental conditions depending on the empathy shown by the leader. In the different experimental groups, the leader will either respond empathically, neutrally or non-empathically towards the delay of a participant. Moreover, two different protocols are going to be applied. In the first one, the only role of the leader will be conducting the session (e.g. giving out information). This will be the non-participating leader which was the protocol used by Nuncio (2020, unpublished). In the second protocol, besides having a conducting role, the leader will also participate in the "Public Goods Game". This will be the participating leader. The additional protocol is meant to correct a limitation pointed out by Nuncio's study, which suggested that the presence of the leader should be explored, as it could influence cooperative decisions. Moreover, this presence is found relevant since, in organizations, most leaders are part of the group and contribute to their output.

In line with the existing literature and the goals of the current study, four hypotheses are presented.

H1: Subjects exposed to the empathic leader condition will display higher contributions to the group compared to the non-empathic and neutral leader condition.

H2: Subjects exposed to the non-empathic leader condition will display lower contributions to the group compared to the neutral leader condition.

H3: Higher levels of individualism will be associated with lower contributions.

H4: Higher scores of group commitment will be associated with higher contributions.

Besides these hypotheses, and as stated before, there will also be an exploration regarding the differences between a participating leader and a non-participating leader. Sufficient literature and research about the impact of a participating leader (compared to a non-participating leader) on cooperation was not found and, as such, there will be no hypothesis put forward in relation to this variable. However, there are expectations on what the results will reveal. As such, it is expected that groups with a participating empathic leader will display higher levels of contributions than groups with an empathic non-participating leader. Furthermore, it would also be predictable that groups with a participating non-empathic leader will display lower levels of contributions than groups with a non-empathic non-participating leader. Given this intent to explore a subject that is not highly discussed in cooperation research, the study will still conduct the two protocols (participating and non-participating leader) in the three conditions (empathic, neutral and non-empathic leader) since the participation of the leader in a team is found relevant, both for research purposes and for organizational decisions.

Chapter 3

Method

1. Sample

The conducted experiment used several channels to reach potential participants (e.g. e-mail and social media). These recruitment methods provided a total of 256 participants, which was the final sample size. The sample included 123 male participants (48%), 131 female participants (51%), and 2 participants that did not disclose their gender (1%). The subjects' average age was 20,75 years old ($SD=4,02$) displaying a range of ages from 17 to 49 years. When it comes to formal education, the participants have attended school for an average of 13,28 years ($SD=1,79$) and, most of the subjects received formation in Socioeconomic sciences (58%), followed by life and technology sciences (30%), social and human sciences (9%) and, lastly, Arts and Sports (2%). Furthermore, the most common monthly house income of the participants is higher than 5030€ which corresponds to the highest income scale. Finally, all the participants signed an informed consent letter before participating in the experiment and were informed about how the collected data would be used.

2. Instruments and measures

2.1 “Public Goods Game”

The main tool used to measure cooperation was the “Public Goods Game”. The experiment consisted in the subjects participating in a single-round Public Goods Game using the online Qualtrics platform. Before the game started, the participants were given instructions to play the game. Each participant was given a total of 200 cents and they had to decide which portion of their endowment (200 cents), if any, they wanted to keep and which portion of their endowment they wished to contribute to the group. As such, the participants could select any contribution: 0 cents, 200 cents or anything in between (as long as it was a multiple of two, since contributions moved in 2 cents additions). Participants were randomly assigned to groups of 4 and were told that, when all participants made a decision on their contribution, all the individual donations to that group would be added, multiplied by two, and finally, divided by all four elements of the group. Given this, the final payout of each player was the addition of their kept amount with the amount earned from the group. The maximum payout that an individual player could obtain would take place if that player donated 0 cents to the common project, and, on the other hand, all other three members of their group donated their full endowment (200 cents). This scenario would provide a final payment of 500 cents to the player that chose to keep their full endowment. In contrast, for a player to end up with the minimal payout, they would have to donate their full endowment, while the other team members chose to contribute 0 cents to the group. In this scenario, the player that donated the full amount would have a final payout of 100 cents.

The Public Goods game was used to measure cooperation since contributions function as a scale of cooperation. In the same line of thought, a person who chooses to contribute a higher amount to the group is displaying higher cooperation.

2.2 Interpersonal Reactivity Index (IRI)

The Interpersonal Reactivity Index (IRI) was a test introduced by Davis in 1980 to measure empathy. The IRI is a self-reported test that contains four subscales: (1) perspective taking, (2) empathic concern, (3) personal distress, and (4) fantasy. It presents a total of 28 statements (distributed in the four subscales) related to thoughts and feelings and subjects must report if they have experienced them. A scale from zero to four is used. Zero means “It does not describe me well” and four means “It describes me well”. Limpo et al. (2010) adapted the IRI to the Portuguese language and culture. The adaptation eliminated four statements due to poor psychometric properties of those items. Given this, the Portuguese adaptation of the IRI contains 24 statements (as opposed to the original 28), six in each of the four subscales. In the current study, the phrasing of the items was adapted to reflect the assessment of empathic manifestations by the leader in two empathic dimensions: (1) empathic concern (5 items) and (2) perspective taking (5 items). These were the dimensions of empathy considered more pertinent for this research since the former is especially focused on affective empathy (e.g. “The main investigator appears to don’t feel sorry for other people when they are having problems”) and the latter is especially focused on cognitive empathy (e.g. “The main investigator appears to try to understand others, by imagining how things look from their perspective”). As so, the IRI adaptation was used to measure the perception of the leader’s empathy, using a Likert scale ranging from 0 (“Completely disagree”) to 4 (“Completely agree”).

2.3 Individualism/collectivism scale

In order to measure the participant’s tendencies for individualistic or collectivistic attitudes, an individualism/collectivism scale was used. The chosen scale was adapted from the Portuguese version of the one created by Dias-

Olivera and Pasion (unpublished). The test used various statements and the subjects reported in which level they agreed (or disagreed) with the statements. The original scale predicted five subscales of individualism/collectivism, however, in the present study, four subscales were used. This happened because only the following four chosen subscales were found especially relevant for this research: (1) competitiveness (4 items, "Winning is everything"), (2) preference for individual work (2 items, "Working with a group is better than working alone"), (3) supremacy of individual goals (2 items, "People in a group should be willing to make sacrifices for the group's wellbeing"), and (4) supremacy of individual interests (3 items, "A group is more productive when members follow their own interests and concerns"). The participants used a Likert scale from 0 ("Completely disagree") to 4 ("Completely agree") to fill the questionnaire so that they could be placed on the individualism/collectivism scale. As such, according to the individualism/collectivism scale, a person that displays higher scores on it is seen as having a bigger tendency towards individualism.

2.4 Group commitment

In order to measure the levels of group commitment of each subject, an organizational commitment scale was used. Group commitment will be used as a related concept to organizational commitment. This happens since the participants of the study are not part of the same organization, but rather part of the same group. The chosen scale was adapted from the Portuguese version of the organizational commitments scale by Nascimento et al. (2008). The test used various statements and the subjects reported in which level they agreed with the statements. The original scale created by Nascimento, Lopes and Salgueiro contains three subscales of commitment. However, the scale used for the current study measured only two subscales (since one of them was not found relevant in

this scenario). As such, two dimensions of group commitment were measured: (1) affective commitment (3 items, “This group has gained a great deal of personal meaning for me”), and (2) normative commitment (6 items, “I would feel guilty if I left my group”). Participants used a Likert scale from 0 (“Completely disagree”) to 4 (“Completely agree”) to fill the questionnaire so that they could be assigned an organizational commitment score.

3. Experimental manipulation

The main experimental manipulation consisted in the control of the empathy shown by the leader in reaction to a late arrival by a supposed participant. In all the conducted sessions, there was one assigned leader and one participant. The latter arrived 5 minutes late to the experimental session. Both the leader and the late participant were part of a team of collaborators meant to assist the experiment and knew that they were part of the experimental manipulation. There were several different people taking the role of leader and late participant, but, in all sessions, one of them was a female and the other was a male. For example, if the leader was played by a female, the late participant was necessarily played by a male. This happened with the intention to eliminate the possible variable introduced by gender. The manipulation of the empathy displayed by the leader followed the late arrival of the late participant. In the beginning of the experiment, after all subjects were in the room, the leader announced that they were going to wait for a participant that was late. After 5 minutes of waiting, a participant (the actor) entered the room while displaying physical cues showing that they were in a state of need. These cues included using a crutch and limping. The actor apologized for the delay and claimed that they were at the hospital and it took longer than expected. Here is where the reaction of the leader differed

depending on the condition (empathic, non-empathic and neutral leader) that was being tested in that session (see annex 3):

(EL) The leader used kind words and claimed that the delay of the participant was not problematic. They offered help since the participant was apparently hurt before thanking them for still showing up.

(NEL) The leader used a harsh tone towards the late participant and claimed that they should have planned better since they made a commitment to arrive on time. The leader did not offer any help to the participant and, overall, reacted poorly to the participant's state of need.

(N) The leader did not react or show any emotion to the delay of the participant. The leader simply told the participant to proceed to their seat and continued the experiment without acknowledging the delay.

In all the conducted sessions, the actor who arrived late always sat down with the other participants and engaged in the "Public Goods Game" as well as filled out the questionnaires (even though their answers were later excluded as they were part of the manipulation). Additionally, the role of the leader was also manipulated. In the participating leader protocol, the leader of each session announced that they were going to be part of the experiment (see annex 3.1) and sat down with the other subjects to play the game (even though their answers were later excluded). In contrast, in the non-participating leader protocol, the leader did not play the game with the other subjects (see annex 3.2).

4. Procedure

The first concrete step towards the planning of the experiment was the recruitment of the participants. There were several different channels used to reach potential subjects, but two sources of participants can be highlighted: students who already frequented specific classes in the college where the experiment took place and participants outside of those classes (regardless of where they studied). A large part of the people that participated in the study were already enrolled in Católica Porto Business School and, as such, were reached through direct communication in a couple of classes (Organizational Behavior and Multidisciplinary Project II). In order to enrichen the sample with participants of different backgrounds, there was also communication via social media and email directed at people outside the two mentioned classes, and even outside Católica Porto Business School. After this first communication to detect interest and overall availability, people were told to fill out a survey (see annex 1.1) about some personal information that was important for the allocation of participants (e.g. name) and their specific availability for the days and time slots when the experiment would be held. Moreover, the survey also provided some basic information about the goals and duration of the experiment.

After the potential participants filled out their availability in the survey, they were randomly allocated to a specific session (and, by default, to one of the three conditions) by the team in charge of the experiment. However, this allocation was still flexible since it was used as a managing tool to keep track of the general number of participants for each session and condition. As more surveys were received, the provisory allocations were adapted as to try to manage schedules to fit as many participants as possible. When the number of filled surveys was enough to have a rigid idea of the final allocation, a confirmation email (see annex 1.2) was sent out to all the participants. This e-mail contained information about the final allocation of each participants (day and hour), the location of the experiment (Católica Porto Business School), the classroom where their session

would take place as well as direction to find the room more easily. It also requested to follow the security rules imposed by the COVID-19 pandemic. Lastly, the email asked participants to confirm if they would attend the experiment and, more importantly, urged all participants to be on time (and, if possible, earlier) since this was vital to the study.

On the day of the experiment, the team of collaborators took many roles. Firstly, there were always two actors assigned to every session: the leader and the late participant. The late participant was hidden in the beginning of the experiment, so no subjects saw them and suspected they were part of the manipulation. The rest of the team of collaborators prepared the rooms (disinfected and set up the computers on the chosen website and correct condition that was being tested) and took charge of the “check-in” of all participants (collect their name, ask them to disinfect their hands, check if they were in the right session and direct them to their room). After the experiment started, there was always at least one member of the collaborators team making sure that no one entered the room after the experiment started. If any participants arrived after the leader started the experiment, they would be redirected to a later session.

When all the participants were in the computer room, the leader entered and stated that they were going to wait for possible late participants. At this moment, the leader signaled the team of collaborators and they counted 5 minutes. After that time passed, the late participant arrived, using a crutch, and the experimental manipulation took place (empathic, non-empathic or neutral leader). After the interaction between the actor and the leader, the participant who was late went to sit on their computer. In the participating leader session, the leader also announced that they would be participating in the game and sat

down with the other participants (see annex 3.1). This was not the case in the non-participating leader sessions (see annex 3.2).

Before the game started, all participants were presented a consent form (see annex 2.1) (and signed it) followed by the instructions for the “Public Goods Game” (see annex 2.2). After this, the subjects played the game by choosing their contribution (see annex 2.3) and filled out the questionnaires. The first questionnaires were composed by “Game understanding questions” (see annex 2.4) and “Perceived leadership questions” (see annex 2.5) to assure that participants understood what their contributive choices meant and that they viewed the selected person as the leader. Soon after, the subjects were presented with the self-report questionnaires regarding the Interpersonal Reactivity Index, individualism/collectivism, group commitment, and some other questions used as fillers in a random order (see annex 2.6). The final questionnaire (see annex 2.7) was meant to collect socio-demographic information about the participants (e.g. age and formal education). All the process (game and questionnaires) was carried on computers using the Qualtrics platform.

When all subjects finished filling out the surveys, the computer showed a final message thanking them (see annex 2.8) and the leader signaled the team of collaborators so that one of the members of the team entered the room to provide a debriefing. This debriefing contained information about the experimental manipulation, namely that the late participant using a crutch was an actor and the reaction of the leader was planned. Furthermore, participants were informed about the condition that they were assigned to (empathic, non-empathic or neutral leader) and were explained the main goals of the experiment. Finally, when no one had any further questions about the study, the payment started. Each participant received the amount they gained while playing the “Public Goods Game”.

5. Statistical analysis

All variables were tested for normality (skewness and kurtosis). Concerning the normality assumption, Hair et al. (1998) argues that the classical Kolmogorov-Smirnov and Shapiro-Wilk approaches to normality testing are inadequate whenever the mean and standard deviation of the population are unknown. As so, it is suggested that whenever skewness ranges between [-0.8 and 0.8] and kurtosis ranges between [-3 and 3], the normal distribution of the variables can be assumed. No violations of the normality assumption were observed for the main variables (contribution, perceived empathy, group commitment, and individualism/collectivism). The homogeneity of variances in all groups (empathic, non-empathic, and neutral by participating and non-participating leader) was tested using the Levene's test for the homogeneity of variances and the degrees of freedom and significance of the F statistics were adjusted whenever the homogeneity of variances assumption was violated.

In order to check the effectiveness of the experimental manipulation, two one-way ANOVAs with condition (empathic, non-empathic, and neutral leader) as between-subjects factor for perceived leadership and perceived empathy as dependent variables were used. The impact of the empathy shown by the leader on contributions was tested using a one-way ANOVA with condition (empathic, non-empathic, and neutral leader) as between-subjects factor and contribution as dependent variable (H1 and H2). Post-hoc pairwise group comparisons were conducted using the Bonferroni multiple comparisons test.

Pearson moment-product correlation was used to test the associations between the variables: "Group commitment" (and all subscales of group commitment: affective and normative commitment), "Individualism/collectivism" (and all measures of Individualism/collectivism:

competitiveness, preference for individual work, supremacy of individual goals and supremacy of individual interests) and “Contributions” (which are the monetary donations to the group). Additionally, Multiple Linear regression models were applied to test the predictive power of group commitment (model I with affective and normative commitment as predictors) and individualism/collectivism (model II with competitiveness, preference for individual work, supremacy of individual goals and supremacy of individual interests as predictors) on the contributions (dependent variable in both models - H3 and H4).

Exploratory analyses on the effects of the leaders’ participation on cooperation were tested using a two-way ANOVA with participation (non-participating and participating leader) and condition (empathic, non-empathic, and neutral leader) as between-subjects factors and contribution as dependent variable.

All analyses were conducted using the IBM SPSS Statistics 26 software (IBM Corporation, Armonk, NY, USA)

Chapter 4

Results

1. Manipulation Check

The subjects were randomly assigned to an empathy manipulation group. Eighty participants were assigned to the non-empathic leader condition (31%), 90 participants to the neutral leader condition (35%) and 86 participants to the empathic leader condition (34%). Table 1 displays the mean, standard deviations and group comparisons on the perceived leadership and empathy of the leader. As expected, there are no significant group differences on perceived leadership. Importantly, a one sample t test with a test value of 2.5 (half of the maximum value for the perceived leadership) shows that on average, perceived leadership was significantly higher than 2.5 ($t_{(255)} = 3.56$; $p < .001$; $M = 2.81$; $SD = 1.39$). There was a significant effect of leader's perceived empathy. Bonferroni multiple comparisons test show that perceived empathy was lower on the non-empathic condition ($M = 19.3$; $SD = 7.76$) when compared with the neutral ($M = 23.8$; $SD = 4.36$; $p < .001$) and empathic conditions ($M = 25.3$; $SD = 4.84$; $p < .001$). No significant differences were found on perceived empathy when comparing the groups exposed to the neutral and empathic leaders ($p = .230$).

Table 1.

Means, standard deviation and one-way ANOVA statistics for group comparisons on perceived leadership and perceived total empathy.

	Group	Mean (SD)	<i>F</i> (One-way ANOVA)	<i>p</i> -value
Perceived Leadership	EL	2.69 (1.40)	$F_{(2, 253)} = 0.55$.579
	NEL	2.84 (1.39)		
	N	2.90 (1.37)		
Perceived Empathy	EL	25.3 (4.84)	$F_{(2, 182.8)} = 24.3$	<.001
	NEL	19.3 (7.76)		
	N	23.8 (4.36)		

Note. SD: Standard Deviation; E: empathic leader; NEL: Non-empathic leader; N: neutral leader.

2. Hypotheses testing

Regarding the effects of empathy condition on mean contributions (H1 and H2), Table 2 displays the mean, standard deviations, and group comparisons on the Public Goods Game contributions. The One-way ANOVA shows that there are no significant group differences on contributions.

Table 2.

Means, standard deviation and one-way ANOVA statistics for group comparisons on contributions.

	Group	Mean (SD)	One-way ANOVA	<i>p</i> -value
Contribution	EL	129.4 (62.1)	$F_{(2, 253)}=0.11$.896
	NEL	127.6 (60.2)		
	N	124.9 (69.7)		

Note. SD: Standard Deviation; E: empathic leader; NEL: Non-empathic leader; N: neutral leader.

Correlations (Pearson coefficients) for the associations between perceived empathy (total, cognitive, and affective), individuals/collectivism (competitiveness, supremacy of individual interests, supremacy of individual goals, and preference for individual work), group commitment (total, normative, and affective) and contributions (H3 and H4) are displayed on Table 3. Pearson's moment product correlations coefficients show that group commitment (total, normative, and affective) is positively associated with the contributions in the Public Goods Game. The total individualism/collectivism, competitiveness, and supremacy of individual interests are negatively associated with the contributions, and supremacy of individual goals is positively associated with contributions. No significant associations were found between perceived empathy (total, cognitive, and affective) and contributions.

Table 3.

Pearson coefficients for associations between perceived empathy, individualism/collectivism, group commitment and respective subscales (df = 254).

	Con	E_T	E_C	E_A	I_T	I_C	I_I	I_G	I_W	G_T	G_N	G_A
Con	-											
E_T	.09	-										
E_C	.09	.94***	-									
E_A	.07	.91***	.71***	-								
I_T	-.18**	-.14*	-.15*	-.12	-							
I_C	-.17**	-.19**	-.17**	-.18**	.76***	-						
I_I	-.19**	-.11	-.11	-.09	.51***	.13*	-					
I_G	.15*	.20**	.22***	.14*	.07	-.12	-.26***	-				
I_W	.02	.01	-.04	.07	.36***	-.09	-.06	.12*	-			
G_T	.21**	.30***	.34***	-.21**	-.12	-.22***	-.19**	.34***	.15*	-		
G_N	.23***	.28***	.31***	-.19**	-.13*	-.24***	-.22***	.35***	.18**	.93***	-	
G_A	.13*	.27***	.31***	-.18**	-.07	-.14*	-.11	.25***	.07	.85***	.61***	-

Note. Con: Contributions; E_T: total perceived empathy; E_C: perceived cognitive empathy; E_A: perceived affective empathy; I_T: total individualism/collectivism; I_C: “competitiveness” subscale of individualism/collectivism; I_I: “supremacy of individual interests” subscale of individualism/collectivism; I_G: “supremacy of individual goals” subscale of individualism/collectivism; I_W: “preference for individual work” subscale of individualism/collectivism; G_T: total group commitment; G_N: normative group commitment; G_A: affective group commitment; df: degrees of freedom; * p<.05; ** p<.01; *** p<.001

The regression analysis model with the two dimensions of perceived empathy (cognitive and affective) as predictors of contributions did not reach statistical significance: $F_{(2,253)}=1.06$, $p=.350$, $\Delta_{adj}R^2 < .001$. A significant model with normative

and affective commitment as predictors of contributions was found: $F_{(2,253)}=6.97$, $p=.001$, $AdjR^2=.045$. Beta coefficients show that only normative group commitment was a significant predictor of contributions ($\beta = .233$; $p = .003$) with increased normative commitment being associated with higher contributions. Finally, the model with all dimensions of individualism/collectivism (competitiveness, supremacy of individual interests, supremacy of individual goals, and preference for individual work) as predictors of contributions was also significant: $F_{(4,251)}=4.42$, $p=.002$; $AdjR^2=.051$. Beta coefficients show that only competitiveness ($\beta = -.141$; $p = .023$) and supremacy of individual interests ($\beta = -.150$; $p = .019$) were significant predictors of contributions as increased competitiveness and supremacy of individual interests are associated with lower contributions. In all regression models there is no multicollinearity between the predictors (Variance Inflation Factor < 3 and Tolerance > .49; Hair et al., 1995). The summary of the statistics of the linear regression models are displayed in Table 4.

Table 4.

Model statistics and standardized Beta coefficients for the multiple linear regression models.

	β	p -value	F	p -value	$AdjR^2$
Affective Empathy	.000	.997	$F_{(2,253)}=1.06$.350	<.001
Cognitive Empathy	.091	.312			
Normative Commitment	.233	.003	$F_{(2,253)}=6.97$.001	.045
Affective Commitment	-.008	.921			
Competitiveness	-.141	.023	$F_{(4,251)}=4.42$.002	.051
Supremacy of Individual Interests	-.150	.019			
Supremacy of individual Goals	.091	.157			
Preference for Individual Work	-.011	.861			

3. Exploratory analyses on the effects of leaders' participation and non-participating protocol.

The subjects were randomly assigned to a protocol (participating or non-participating leader). 133 participants were assigned to the non-participating leader protocol (52%) and 123 participants to the participating leader protocol (48%). The two-way ANOVA with both participation and empathy of the leader as between-subjects factors revealed that there was no significant impact of leaders participation on contribution, $F_{(1,250)} = 1.58$, $p = .211$, $\eta^2_p = .006$, nor leaders empathy, $F_{(2,250)} = 0.12$, $p = .884$, $\eta^2_p = .001$. Moreover, the interaction between the participation and empathy of the leader on contributions was also not significant, $F_{(2,250)} = 1.70$, $p = .186$, $\eta^2_p = .013$.

Chapter 5

Discussion, conclusion, and future directions

The current study had two main goals. The first one was to test the associations between group commitment, individual's tendencies for individualism/collectivism, the empathy of the leader and cooperation. The search for that connection was considered vital since many organizations thrive when they can create cooperative environments. For instance, Johnson et al. (1980) found that cooperation environments can create higher performance and better strategies. The second goal of the study was to build on Nuncio's (2020, unpublished) research on the same topic and bring increased strength to the findings, while making adjustments suggested by the author. To accomplish both of those goals, an experiment with manipulation of the empathy displayed by the leader (when facing the delay of a participant) was chosen. Additionally, information regarding group commitment and individualism/collectivism of the participants was collected to examine its possible relationship with cooperation.

When it came to the experimental manipulations, it is possible to conclude that the main investigator was indeed perceived as the leader of the group among the three conditions (non-empathic, empathic, and neutral leader). Besides the perceptions of leadership, the manipulation also intended to impact the perceptions of empathy of the leader. As expected, the participants of the non-empathic group perceived the leader as less empathetic than the participants of the neutral and empathic group. However, the manipulation was not entirely

successful since participants of the neutral and empathic leader group felt no difference in the empathy of the leader. Nuncio (2020, unpublished) had a similar problem in perception of empathy and the research concluded that, among other reasons, this could be due to the participant's expectations. Nuncio believes that a neutral reaction towards a delay is expected in an environment where people do not know each other. This is found extremely relevant since the subjects only experienced one type of leadership and had no chance to compare leadership among the different conditions. This means that, if participants found the reaction of the leader towards the actor using a crutch to be adequate in the circumstances, their perception of empathy could be the same in the neutral and empathic condition. Both a leader that reacts with few words and a leader that is kinder could be considered an adequate response to the late participant using a crutch and, as such, triggering the same levels of perceived empathy. Addressing the reasoning proposed by Nuncio, in organizational settings where there is a long-term employee-leader relationship, it should be expected that, when an employee is in a state of need, the leader addresses it in a helpful way given that they know each other. In an organizational environment, a neutral response to the manipulated scene could be considered inadequate and, as such, people would more easily perceive the empathy of the leader.

Another possible reason for the lack of difference in empathy perception lies with the interpretation of what is a neutral reaction. The actors who played the neutral leader were given very direct, straight-forward lines and were asked to avoid showing emotion towards the late participant. However, it is extremely hard for someone to deliver a completely neutral reaction. For instance, factors like body language and tone of voice have an impact on communication and message analysis (Duncan Jr., 1969) and are hard for people to control. The leader could have delivered a neutral line while, unintentionally, smiling or displaying a relaxed posture. It is possible that, in a setting where people don't know the

leader, these nonverbal cues took an important role in creating opinions about the interaction between the leader and the person in need. If the participants already knew the leader beforehand, it would be easier to assess a neutral reaction as they would have a reference to compare the specific interaction to. This is what happens in organizations. Most employees are used to interact with their leader so they know, to some extent, what their norm behaviors are and, by default, can identify outlier reactions (especially empathic or non-empathic).

Given that both reasonings for the lack of perception of empathy seem to be connected to the duration of the interaction, in future experiments, it is advisable to extend the period of time in which the leader interacts with the participants. For instance, if there was a more continued conversation between the leader and the participants while they were waiting, when the actor with the crutch arrived, the group would already have more information about the standard behaviors of the leader and thus, could better classify their interaction as neutral or empathetic.

The first hypothesis (H1) predicted that subjects exposed to the empathic leader condition would display higher contributions to the group compared to the non-empathic and neutral leader condition. This was not confirmed since the analysis did not reveal a noteworthy difference between the empathy of the leader and contributions. This same information disproved H2 which stated that subjects exposed to the non-empathic leader condition would display lower contributions to the group compared to the neutral leader condition. These results differ from previous findings since Cremer (2002) found that charismatic leaders (which are characterized by empathy (Choi, 2006) could influence decision-makers to increase cooperation.

When analyzing the rejection of H1, it's important to note that, in the current study, it is possible that the neutral leader was perceived as empathic enough,

since there were no meaningful differences in perceived empathy between the neutral and empathic condition. This means that the difference between perceived levels of empathy was not strong enough to create an impact on cooperation. This factor led to the rejection of H1 since perception of empathy was needed in order to test its impact on cooperation.

Regarding hypothesis two (H2), it is important to highlight that the leader was indeed perceived as less empathetic than the neutral condition. However, this difference in empathy didn't reflect on cooperation. Nuncio (2020, unpublished) had similar findings. Nonetheless, their study revealed an association between empathy and contributions. This was not the case in the current study. There are several possible explanations for this but, in this context, it is believed that fear might have played a role. During the experimental manipulation, some of the participants could have felt discomfort towards the interaction between the leader and the participant and it is plausible that that discomfort was strong enough to create fear. Moreover, the leaders were instructed to embody an intimidating posture in order to make their non-empathetic performance believable. Those aspects could have driven some participants to fear the leader.

The second hypothesis was formulated based on the fact that past research indicated that empathy could positively influence cooperation. As such, by deduction, the lack of empathy could also have the opposite impact. However, if participants felt fear or felt intimidation inflicted by the leader, it is possible that those negative feelings overshadowed the effect of empathy and lead participants to cooperate more in fear of the consequences. In fact, Fairholm (2015) believes that strong emotions as fear influence behaviors of work communities and could have a real impact. Moreover, fear-based tactics could positively affect performance and even work as a motivator (Fairholm, 2015). Given all of this, it is plausible that fear was one of the explanations for the lack

of difference in cooperation in the neutral and non-empathic leader conditions. Fairholm (2015) believed that one of the roles of a leader is to provide inspiration and that, in the short-term, this can be achieved through fear. This is what could justify the lack of analytical support for H2 since participants only interacted with the leader for a very limited amount of time. However, when the relationships are long-term, which is what happens in an organization, fear loses some of its power and cannot sustain cooperation since effective cooperation requires people to branch-out and feel safe enough to communicate with people with different expertise (Fairholm, 2015). Given this, in the long haul, fear becomes counterproductive to cooperation.

Regarding individualism/collectivism, H3 predicted that participants with higher levels of individualism would be associated with lower contributions (cooperation). According to the analysis, this hypothesis was confirmed since a negative association between the total scores of individualism/collectivism was found. This means that, when a participant's scores on the scale of individualism/collectivism was higher, that participant had a tendency for individualism, and subjects with that tendency were associated with lower contributions towards the common project. These findings are in line with previous research on the subject, namely, the study developed by Wagner (1995) that found that individualist who are more independent are less likely to be cooperative and, in opposition, collectivists who are more interdependent are more likely to engage in more cooperative decisions. In an organization, however, the scenario could lead to different outcomes of individualistic tendencies and the organizational culture could even mitigate them.

Nguyen et al. (2010) studied how people's personal levels of individualism/collectivism would react to an organization's levels of the same scale. In other words, their study researched if subjects who are, for instance,

higher in individualism scores would display different behaviors when part of an organization that had values more focused on collectivist. It was found that, people who are more individualists, tend to adapt to the culture of their organization. This means that a person tending towards individualism will follow their own interests when inserted in an organization with processes and culture more focused on individualism. However, if the organization promotes collectivist values, the individualistic person will adapt and display more cooperative behaviors. When it comes to people higher on collectivism scores, they showed less adaptive behaviors, were less responsive to the organizational culture and maintained their cooperative behaviors. The findings by Nguyen et al. (2010) are extremely relevant since, even though the current experiment found that people higher on individualism scores tend to be less cooperative, in an organizational context, this could be mitigated by the culture of the organization and thus, moderate the impact of personal characteristics on overall cooperation.

Even though there was a correlation between the overall scores of individualism/collectivism and contribution, not all the subscales used to measure individualism/collectivism display a connection with cooperation. For instance, there was no correlation between “preference for individual work” and contributions. Moreover, only competitiveness and supremacy of individual interests proved to be predictors of contributions, with both factors explaining 51% of the variance in contributions. Similarly, Nuncio (2020, unpublished) found that competitiveness was a predictor. However, their study found competitiveness to be the sole predictor of contributions. The emergence of supremacy of individual interests as a forecaster might be due to the increased number of participants in the current study. Nuncio’s research studied 83 subjects, whereas, the current study, has a total of 256 participants. This difference in sample size could have resulted in the arise of other dimensions of individualism/collectivism (in this case, supremacy of individual interests) as

predictors which would not be observable in a more limited sample. Taking into consideration both studies, competitiveness is found especially relevant in assessing people's levels of individualism/collectivism with higher competitiveness associated with higher levels of individualism).

In organizations, the majority of employees works in some form of a team and, normally, it is beneficial for organization to foster and maximize cooperation. Many organizations state directly, on their website, that they look for employees who are team-workers (e.g. Ernst & Young). However, competitive processes are a major part of many organizations: candidates compete for a job, employees compete to gain a promotion, departments compete to achieve a specific goal and many other situations. Competition is a part of companies. In fact, Scheiber (2015) proposed that competition continues to be the defining characteristic of upper echelon in today's workplaces. Even though it is sometimes labeled as a negative factor, competition can have a positive impact on motivation and performance (Kilduff et al., 2010), however, according to the findings of the current study, individuals who are more individualistic and competitive, tend to cooperate less. This organizational climate that seeks cooperation, but rewards competitiveness begs several questions and future studies for instance: "How can cooperation and competitiveness exist in the same environment?", "How can employees navigate the need to be both competitive and cooperative?" and "What kind of climate should organizations be creating and valuing?". As such, it would be interesting for future research to further explore the interactions between cooperation and competitiveness in organizational settings.

The fourth hypothesis (H4) predicted that participants with higher scores of group commitment would be associated with higher contributions. This was supported by the data since a correlation between the variables was found. This is in accordance with the reviewed literature, as some studies had similar

findings. For instance, Guo (2018) found that organizational commitment was connected to cooperative climates in organizations and, as previously mentioned, Hwang-Bo (2013) suggests a positive impact of commitment on cooperative behaviors. These findings, which show that commitment is one of the bases for cooperation, can have implications in organization's day-to-day life since Guo (2018) also found that human resources practices based on commitment positively impact the cooperative climate of an organization. Human resources practices are particularly relevant since they have the power to align the goals of employees and employers, make their relationship a priority and, through commitment of both parties, create a collaborative environment (Guo, 2018).

Both affective (an emotional attachment to the group) and normative commitment (feelings of obligation to continue in the group and fulfill a role in it) were connected to contributions. Nevertheless, only normative commitment was a predictor of contributions, explaining 45% of the variance in contributions. This could have happened due to a number of reasons, so, to understand the results, firstly it is vital to know what creates affective commitment. Vandenberghe et al. (2004) concluded that perceived work group cohesiveness is the only predictor of affective group commitment. During the experiment, participants were only together for 30 minutes and did not have moments for conversation and interaction amongst them. Given this, it seems natural that participants did not have enough time or evidence to perceive their group cohesiveness and, as such, did not create affective group commitment. The fact that normative commitment was more strongly related to cooperation may have happened because it is easier to create a need to fulfill an assigned role in a group of people. In this particular case, the only role that participants had towards the group was to choose an appropriate contribution to the common project. Subjects were aware of their job in playing the Public Goods Game and it was a relatively

simple role to fulfill so, in those conditions, it makes sense that normative commitment was more easily created and observed than affective commitment.

In organizations, the picture might differ significantly. As mentioned, in an experimental scenario where subjects interact for a limited time, affective commitment might be hard to develop. However, in organizations, it is common to witness long-term employee-organization relationships. This would enable the creation of stronger affective commitment which plays a vital role in cooperation. In fact, Meyer et al. (2002), see affective commitment as the strongest kind of commitment and the one that better correlates with cooperation. Nonetheless, affective commitment in organization originates differently. Vandenberghe et al. (2004) found that perceived organizational support is the only predictor of affective organizational commitment. Perceived organizational support is the global belief held by employees regarding the degree to which their organization values them and cares about their well-being (Eisenberger et al., 1986). This means that, the more secure, safe, and valued an employee feels, the stronger their affective commitment is. These factors indicate that, in order to incentivize cooperative behaviors, employees should be committed towards their organization, with an emphasis on affective commitment, which can only be achieved by organizations valuing their employees and prioritizing their needs.

Besides the analysis regarding the hypotheses, an exploratory analysis on the participation of the leader was also carried out. This analysis was found relevant since Nuncio's (2020, unpublished) work proposed that, if the leader participated in the group and played the Public Goods Game with the other participants, this would more accurately simulate the conditions of an organization, since several leaders work directly with their subordinates. Additionally, Nuncio expected that, when the leader was not part of the group, participants would not change their cooperative decisions based on the behavior of the leader, since there was a

clear separation between the group and the leader. In the same line of thought, if the leader was not part of the group, participants would not feel like the leader was either being punished -in the case of inadequate conduct (non-empathic leader)- or rewarded- in the case of appropriate conduct (empathic leader)- by their level of cooperation. Given all these factors, the expectation of the analysis on participating and non-participating leader was that (1) groups with a participating empathic leader would display higher levels of contributions than groups with an empathic non-participating leader and that (2) groups with a participating non-empathic leader would display lower levels of contributions than groups with a non-empathic non-participating leader.

The statistical analysis revealed that there wasn't a significant impact of the participation (or lack thereof) the leader. Additionally, and contrary to what was expected, there was not a noteworthy interaction between participation and empathy of the leader on contributions. This poses a conundrum since there was indeed a difference in perceived empathy between the empathic and non-empathic leader condition, however, even with that difference in perception, the presence of the leader inside the group did not impact cooperation. This is contrary to the theory presented by Núncio.

Another possible explanation for the empathy and participating /non-participating leader findings is found relevant. During the course of this study, there was a clear focus on the empathy displayed by the leader. This happened due to a number of reasons, some of them being that the leader is the "central point" of the group and the person who is most responsible for choosing and enforcing the environment in which the group is inserted (e.g. an environment focused on empathy). However, during the experiment questionnaires, people were never inquired about their own personal levels of empathy. What is being

proposed it that people's personal inclinations towards feelings of empathy could have impacted what was observed during the study.

Buchko et al. (2017) believed it is important to distinguish an abusive organization from an abusive supervisor (or leader). An abusive organization can be characterized as having a strong disregard for its employees (Powell, 1998). An abusive supervisor is characterized by traits as perceived injustice and supervisor's perception of mistreatment (e.g. Buchko et al., 2017). This description of an abusive supervisor is comparable to what was manipulated in the non-empathic leader condition (mistreatment of the late participant) and, for discussion purposes, the concept of abusive organization is going to be compared to an abusive group (strong disregard for other group members). More importantly, in their work, Buchko et al. (2017) argue that there are abusive supervisors in non-abusive organizations. This information is relevant for the current study since it seems possible that, even though the group had a non-empathic leader, the group itself might not share the same values as the leader (and vice versa). This lack of alignment of beliefs between the group and the leader might have diminished the impact of the presence of the leader inside the group. For instance, in the non-empathic group leader condition, the group perceived the leader as non-empathic. However, if the group itself was more empathic, this could have led to the lack of reaction to the presence of a non-empathic entity in the group (leader).

The same reasoning could have impacted the lack of reaction in contributions caused by the empathy of the leader (H2), since it is possible that participants perceived lack of empathy, but, if they were empathetic enough towards their group and the late participant, that perception did not change their cooperative behaviors. Given the presented evidence, it is recommended that future studies on this topic also inquire participants about their own levels of empathy and

study the impact of the alignment between the empathy of the participants who form the group and the leader's empathy.

Finally, there is another noteworthy suggestion for future studies. This regards a well-known phenomenon that has the potential to affect cooperation and the results of the present research: trust. Often, trust can also lead to cooperation (Mayer et al., 1995), and, during this experiment, trust could have had a role in influencing cooperative behaviors. According to Mayer et al. (1995), trust is the willingness of someone to be susceptible (without control of the situation or individual) to the actions of someone else because of the expectation that the other person will act in a certain way. There are many types of trust, but, in this context, swift trust is highlighted. Swift trust is fast arising trust that happens when individuals must wade in on trust before having sufficient information to know if the person is trustworthy (Meyerson et al., 1996). This description seems to be applicable to what was simulated during the "Public Goods Game" in the present study, since there was not a lot of time to build trust.

Often, in temporary groups, in order to initiate group work, people must make judgments about the trustworthiness of other group members. In fact, Meyerson et al. (1996) see fast cooperation as a result of swift trust. This idea – that people cooperate because of trust – can be seen in other theories that, even though do not mention trust directly, have similar base ideas. This is the case of Fehr and Fischbacher (2004) who proposed that human cooperation is highly built on a social norm called "conditional cooperation". This norm dictates that people only cooperate if the other people in their group also do so. If the actions of the other member of the group are not cooperative, it serves as a fair excuse for individuals not to engage in cooperative behaviors (Fehr & Fischbacher, 2004). There are several experiments (e.g. Fischbacher et al., 2001; Keser & Winden, 2000) that test and prove the existence of conditional cooperation behaviors.

After understanding the concept of swift trust and conditional cooperation, it could be argued that, in one-trial interactions, people cooperate if they trust that others will cooperate back. This could happen because, when people must make cooperative decisions and there is no time to build trust, they engage in swift trust based on their belief that other will (or not) cooperate. During the experiment of the present research, there was no collected data regarding trust. Therefore, it would be interesting if future studies focused on the role that trust can have in influencing the belief that other members of the group will engage in cooperative behaviors. However, group members are not the only ones who can inspire trustworthiness, since there is another vital part of the group that can do so: the leader. In fact, Hyllengren et al. (2011) found that leadership is one of the strongest predictors of swift trust. After analyzing all of this evidence regarding the role of conditional cooperation, trust and swift trust, it would be advisable that future studies on this topic also inquire participants about their levels of trust in each other and the leader.

In sum, the current study had similar findings to Nuncio's research and was able to increase the reliability of some of the results. Moreover, this research found both a clear positive relationship between group commitment and cooperation, and a strong negative relationship between individualism/collectivism and cooperation. The outcomes of the analysis on empathy did not correspond to what was predicted and, as such, require further exploring. Nonetheless, it is considered that the main goals of the study were fulfilled and are very significant in today's organizational scenario.

References

- Antonakis, J. (2017). On doing better science: From thrill of discovery to policy implications. *The Leadership Quarterly*, 28(1), 5–21. <https://doi.org/10.1016/j.leaqua.2017.01.006>
- Aronson, E., Brewer, M., & Carlsmith, J. M. (1985). Experimentation in social psychology. In G. Lindzey & E. Aronson (Eds.), *Handbook of social psychology* (3rd ed., Vol. 1, pp. 441–486). New York: Random House.
- Avolio, B. J., Waldman, D. A., & Yammarino, F. J. (1991). Leading in the 1990s: The four I's of transformational leadership. *Journal of European Industrial Training*, 15(4), 9–16. <https://doi.org/10.1108/03090599110143366>
- Barbuto, J. E., & Burbach, M. E. (2006). The emotional intelligence of transformational leaders: A field study of elected officials. *The Journal of Social Psychology*, 146(1), 51–64. <https://doi.org/10.3200/SOCP.146.1.51-64>
- Bass, B. M., & Avolio, B. J. (1993). Transformational leadership and organizational culture. *Public Administration Quarterly*, 17(1), 112–121.
- Batson, C. D., Early, S., & Salvarani, G. (1997). Perspective taking: Imagining how another feels versus imaging how you would feel. *Personality and Social Psychology Bulletin*, 23(7), 751–758. <https://doi.org/10.1177/0146167297237008>
- Batson, C. D., & Moran, T. (1999). Empathy-induced altruism in a prisoner's dilemma. *European Journal of Social Psychology*, 29(7), 909–924. [https://doi.org/10.1002/\(SICI\)1099-0992\(199911\)29:7<909::AID-EJSP965>3.0.CO;2-L](https://doi.org/10.1002/(SICI)1099-0992(199911)29:7<909::AID-EJSP965>3.0.CO;2-L)
- Buchko, A. A., Buscher, C., & Buchko, K. J. (2017). Why do good employees stay in bad organizations? *Business Horizons*, 60(5), 729–739. <https://doi.org/10.1016/j.bushor.2017.06.001>

- Burns, J. M. (1978). *Leadership*. New York: Harper & Row.
- Choi, J. (2006). A motivational theory of charismatic leadership: Envisioning, empathy, and empowerment. *Journal of Leadership & Organizational Studies*, 13(1), 24–43. <https://doi.org/10.1177/10717919070130010501>
- Coleman, J. S. (1994). *Foundations of social theory*. The Belknap Press of Harvard University Press.
- Cremer, D. D. (2002). Charismatic leadership and cooperation in social dilemmas: A matter of transforming motives? *Journal of Applied Social Psychology*, 32(5), 997–1016. <https://doi.org/10.1111/j.1559-1816.2002.tb00252.x>
- Cuff, B. M. P., Brown, S. J., Taylor, L., & Howat, D. J. (2016). Empathy: A review of the concept. *Emotion Review*, 8(2), 144–153. <https://doi.org/10.1177/1754073914558466>
- Davis, M. H. (1980). A multidimensional approach to individual differences in empathy. *JSAS Catalog Selected Documents in Psychology*, 10, 85–103.
- Davis, M. H. (1983). Measuring individual differences in empathy: Evidence for a multidimensional approach. *Journal of Personality and Social Psychology*, 44(1), 113–126. <https://doi.org/10.1037/0022-3514.44.1.113>
- Davis, M. H. (1996). *Empathy: A social psychological approach*. Boulder, CO: Westview Press.
- Davis, M. H. (2006). Empathy. In J. E. Stets & J. H. Turner (Eds.), *Handbook of the sociology of emotions* (pp. 443–466). Springer US. https://doi.org/10.1007/978-0-387-30715-2_20
- Decety, J., & Jackson, P. L. (2004). The functional architecture of human empathy. *Behavioral and Cognitive Neuroscience Reviews*, 3(2), 71–100. <https://doi.org/10.1177/1534582304267187>
- Dóci, E., & Hofmans, J. (2015). Task complexity and transformational leadership: The mediating role of leaders' state core self-evaluations. *The Leadership Quarterly*, 26(3), 436–447. <https://doi.org/10.1016/j.leaqua.2015.02.008>

- Duncan Jr., S. (1969). Nonverbal communication. *Psychological Bulletin*, 72(2), 118–137. <https://doi.org/10.1037/h0027795>
- Eisenberger, R., Huntington, R., Hutchison, S., & Sowa, D. (1986). Perceived organizational support. *Journal of Applied Psychology*, 71(3), 500–507. <https://doi.org/10.1037/0021-9010.71.3.500>
- Elster, J. (1989). *The cement of society: A study of social order*. Cambridge University Press.
- Fairholm, G. W. (2015). Fear. In *Overcoming workplace pathologies: Principles of spirit-based leadership* (pp. 135–149). Springer International Publishing. https://doi.org/10.1007/978-3-319-17154-8_10
- Falk, A., & Heckman, J. J. (2009). Lab experiments are a major source of knowledge in the social sciences. *Science*, 326(5952), 535–538. <https://doi.org/10.1126/science.1168244>
- Fehr, E., & Fischbacher, U. (2003). The nature of human altruism. *Nature*, 425(6960), 785–791. <https://doi.org/10.1038/nature02043>
- Fehr, E., & Fischbacher, U. (2004). Social norms and human cooperation. *Trends in Cognitive Sciences*, 8(4), 185–190. <https://doi.org/10.1016/j.tics.2004.02.007>
- Fischbacher, U., Gächter, S., & Fehr, E. (2001). Are people conditionally cooperative? Evidence from a public goods experiment. *Economics Letters*, 71(3), 397–404. [https://doi.org/10.1016/S0165-1765\(01\)00394-9](https://doi.org/10.1016/S0165-1765(01)00394-9)
- Goleman, D. (2004, January). *What makes a leader?* Harvard Business Review. <https://hbr.org/2004/01/what-makes-a-leader>
- Guo, H. (2018, October 20). *The formation of highly-cooperative organizational climate considering impacts of organizational commitment and team cohesion*. [Conference session]. 3rd International Symposium on Asian B&R Conference on International Business Cooperation (ISBCD 2018), Kunming. <https://doi.org/10.2991/isbcd-18.2018.86>

- Güth, W., Levati, M., Sutter, M., & van der Heijden, E. (2004). *Leadership and cooperation in public goods experiments* [Working paper]. Max Planck Institute of Economics, Strategic Interaction Group. <https://econpapers.repec.org/paper/esidiscus/2004-29.htm>
- Hair, J. F. Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1995). *Multivariate data analysis* (3rd ed.). New York: Macmillan.
- Hair, J. F. Jr., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). *Multivariate Data Analysis* (5th ed.). New Jersey: Prentice-Hall.
- Henrich, J., Bowles, S., Boyd, R. T., Hopfensitz, A., Richerson, P. J., Sigmund, K., Smith, E. A., Weissing, F. J., & Young, H. P. (2003). Group report: The cultural and genetic evolution of human cooperation. In P. Hammerstein (Ed.), *Generic and cultural evolution of cooperation* (pp. 445–468). The MIT Press.
- Hwang-Bo, J. (2013). The effects of emotional burnout and empowerment, and organizational commitment on cooperation behavior and safety behavior: Focus on railway controllers and railway engineers. *Journal of the Korean Society for Railway*, 16(5), 430–438. <https://doi.org/10.7782/JKSR.2013.16.5.430>
- Hyllengren, P., Larsson, G., Fors, M., Sjöberg, M., Eid, J., & Kjellevold Olsen, O. (2011). Swift trust in leaders in temporary military groups. *Team Performance Management: An International Journal*, 17(7/8), 354–368. <https://doi.org/10.1108/13527591111182625>
- Johnson, D. W., Skon, L., & Johnson, R. (1980). Effects of cooperative, competitive, and individualistic conditions on children's problem-solving performance. *American Educational Research Journal*, 17(1), 83–93. <https://doi.org/10.3102/00028312017001083>
- Jones, E. E., & Gerard, H. (1967). *Foundations of social psychology*. New York: Wiley. <http://archive.org/details/foundationsofsoc0000jone>

- Kellett, J. B., Humphrey, R. H., & Sleeth, R. G. (2002). Empathy and complex task performance: Two routes to leadership. *The Leadership Quarterly*, 13(5), 523–544. [https://doi.org/10.1016/S1048-9843\(02\)00142-X](https://doi.org/10.1016/S1048-9843(02)00142-X)
- Keser, C., & Winden, F. V. (2000). Conditional cooperation and voluntary contributions to public goods. *The Scandinavian Journal of Economics*, 102(1), 23–39. <https://doi.org/10.1111/1467-9442.00182>
- Kilduff, G. J., Elfenbein, H. A., & Staw, B. M. (2010). The psychology of rivalry: A relationally dependent analysis of competition. *Academy of Management Journal*, 53(5), 943–969. <https://doi.org/10.5465/AMJ.2010.54533171>
- Limpo, T., Alves, R. A., & Castro, S. L. (2010). Medir a empatia: Adaptação portuguesa do Índice de Reactividade Interpessoal. *Laboratório de Psicologia*, 8(2), 171–184.
- Lowe, K. B., Kroeck, K. G., & Sivasubramaniam, N. (1996). Effectiveness correlates of transformational and transactional leadership: A meta-analytic review of the MLQ literature. *The Leadership Quarterly*, 7(3), 385–425. [https://doi.org/10.1016/S1048-9843\(96\)90027-2](https://doi.org/10.1016/S1048-9843(96)90027-2)
- Marcus, J., & Le, H. (2013). Interactive effects of levels of individualism–collectivism on cooperation: A meta-analysis. *Journal of Organizational Behavior*, 34(6), 813–834. <https://doi.org/10.1002/job.1875>
- Markus, H. R., & Kitayama, S. (1991). Culture and the self: Implications for cognition, emotion, and motivation. *Psychological Review*, 98(2), 224–253. <https://doi.org/10.1037/0033-295X.98.2.224>
- Mayer, R. C., Davis, J. H., & Schoorman, F. D. (1995). An integrative model of organizational trust. *Academy of Management Review*, 20(3), 709–734. <https://doi.org/10.5465/amr.1995.9508080335>
- Messick, D. M., Wilke, H., Brewer, M. B., Kramer, R. M., Zemke, P. E., & Lui, L. (1983). Individual adaptations and structural change as solutions to social dilemmas. *Journal of Personality and Social Psychology*, 44(2), 294–309.

<https://doi.org/10.1037/0022-3514.44.2.294>

- Meyer, J. P., & Allen, N. J. (1991). A three-component conceptualization of organizational commitment. *Human Resource Management Review, 1*(1), 61–89. [https://doi.org/10.1016/1053-4822\(91\)90011-Z](https://doi.org/10.1016/1053-4822(91)90011-Z)
- Meyer, J. P., Stanley, D. J., Herscovitch, L., & Topolnytsky, L. (2002). Affective, continuance, and normative commitment to the organization: A meta-analysis of antecedents, correlates, and consequences. *Journal of Vocational Behavior, 61*(1), 20–52. <https://doi.org/10.1006/jvbe.2001.1842>
- Meyerson, D., Weick, K. E., & Kramer, R. M. (1996). Swift trust and temporary groups. In R. M. Kramer & T. R. Tyler (Eds.), *Trust in organizations: Frontiers of theory and research* (pp. 166–195). Sage Publications, Inc. <https://doi.org/10.4135/9781452243610.n9>
- Morris, C. G., & Hackman, J. R. (1969). Behavioral correlates of perceived leadership. *Journal of Personality and Social Psychology, 13*(4), 350–361. <https://doi.org/10.1037/h0028432>
- Mowday, R. T., Porter, L. W., & Dubin, R. (1974). Unit performance, situational factors, and employee attitudes in spatially separated work units. *Organizational Behavior and Human Performance, 12*(2), 231–248. [https://doi.org/10.1016/0030-5073\(74\)90048-8](https://doi.org/10.1016/0030-5073(74)90048-8)
- Nascimento, J. L., Lopes, A., & Salgueiro, M. de F. (2008). Estudo sobre a validação do “Modelo de Comportamento Organizacional” de Meyer e Allen para o contexto português. *Comportamento Organizacional e Gestão, 14*(1), 115–133.
- Nguyen, H.-H. D., Le, H., & Boles, T. (2010). Individualism-collectivism and cooperation: A cross-society and cross-level examination. *Negotiation and Conflict Management Research, 3*(3), 179–204. <https://doi.org/10.1111/j.1750-4716.2010.00057.x>
- Núncio, A. T. S. (2020). *The effects of leader’s perceived empathy, group commitment*

and individualism on team cooperation, under “public goods game”
[Unpublished master’s thesis]. Universidade Católica do Portuguesa,
Católica Porto Business School.

- Podsakoff, P. M., & Podsakoff, N. P. (2019). Experimental designs in management and leadership research: Strengths, limitations, and recommendations for improving publishability. *The Leadership Quarterly*, 30(1), 11–33. <https://doi.org/10.1016/j.leaqua.2018.11.002>
- Porter, L. W., Steers, R. M., Mowday, R. T., & Boulian, P. V. (1974). Organizational commitment, job satisfaction, and turnover among psychiatric technicians. *Journal of Applied Psychology*, 59(5), 603–609. <https://doi.org/10.1037/h0037335>
- Powell, G. N. (1998). The abusive organization. *Academy of Management Perspectives*, 12(2), 95–96. <https://doi.org/10.5465/ame.1998.650520>
- Rand, D. G., Dreber, A., Ellingsen, T., Fudenberg, D., & Nowak, M. A. (2009). Positive interactions promote public cooperation. *Science*, 325(5945), 1272–1275. <https://doi.org/10.1126/science.1177418>
- Rand, D. G., & Nowak, M. A. (2013). Human cooperation. *Trends in Cognitive Sciences*, 17(8), 413–425. <https://doi.org/10.1016/j.tics.2013.06.003>
- Reichers, A. E. (1985). A review and reconceptualization of organizational commitment. *Academy of Management Review*, 10(3), 465–476. <https://doi.org/10.5465/amr.1985.4278960>
- Rumble, A. C., Lange, P. A. M. V., & Parks, C. D. (2010). The benefits of empathy: When empathy may sustain cooperation in social dilemmas. *European Journal of Social Psychology*, 40(5), 856–866. <https://doi.org/10.1002/ejsp.659>
- Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, Cognition and Personality*, 9(3), 185–211. <https://doi.org/10.2190/DUGG-P24E-52WK-6CDG>
- Scheiber, N. (2015, August 18). *Work policies may be kinder, but brutal competition*

- isn't*. The New York Times.
<https://www.nytimes.com/2015/08/18/business/work-policies-may-be-kinder-but-brutal-competition-isnt.html>
- Schwartz, S. H. (1990). Individualism-collectivism: Critique and proposed refinements. *Journal of Cross-Cultural Psychology*, 21(2), 139–157.
<https://doi.org/10.1177/0022022190212001>
- Smith, A. (1759). *Theory of moral sentiments*. London: A. Miller.
- Steers, R. M. (1975). Problems in the measurement of organizational effectiveness. *Administrative Science Quarterly*, 20(4), 546–558.
<https://doi.org/10.2307/2392022>
- Stotland, E. (1969). Exploratory investigations of empathy. In L. Berkowitz (Ed.), *Advances in experimental social psychology* (Vol. 4, pp. 271–314). Academic Press. [https://doi.org/10.1016/S0065-2601\(08\)60080-5](https://doi.org/10.1016/S0065-2601(08)60080-5)
- Triandis, H. C., Leung, K., Villareal, M. J., & Clack, F. I. (1985). Allocentric versus idiocentric tendencies: Convergent and discriminant validation. *Journal of Research in Personality*, 19(4), 395–415. [https://doi.org/10.1016/0092-6566\(85\)90008-X](https://doi.org/10.1016/0092-6566(85)90008-X)
- Tripp, C. (2013). *No empathy – No service* (pp. 58–64) [Working paper]. <https://onlinelibrary.wiley.com/doi/abs/10.1111/drev.10253>
- Tyler, T. R. (2002). Leadership and cooperation in groups. *American Behavioral Scientist*, 45(5), 769–782. <https://doi.org/10.1177/0002764202045005003>
- Van Lange, P. A. M. (2008). Does empathy trigger only altruistic motivation? How about selflessness or justice? *Emotion*, 8(6), 766–774.
<https://doi.org/10.1037/a0013967>
- Vandenberghe, C., Bentein, K., & Stinglhamber, F. (2004). Affective commitment to the organization, supervisor, and work group: Antecedents and outcomes. *Journal of Vocational Behavior*, 64(1), 47–71.
[https://doi.org/10.1016/S0001-8791\(03\)00029-0](https://doi.org/10.1016/S0001-8791(03)00029-0)

- Voss, T. (2001). Game-theoretical perspectives on the emergence of social norms. In M. Hechter & K.-D. Opp (Eds.), *Social norms* (pp. 105–136). The Russell Sage Foundation.
- Wagner, J. A. (1995). Studies of individualism-collectivism: Effects on cooperation in groups. *Academy of Management Journal*, 38(1), 152–173. <https://doi.org/10.5465/256731>
- Woodall, W. G., & Hill, S. E. K. (1982). Predictive and perceived empathy as predictors of leadership style. *Perceptual and Motor Skills*, 54(3), 800–802. <https://doi.org/10.2466/pms.1982.54.3.800>
- Zaccaro, S. J., & Dobbins, G. H. (1989). Contrasting group and organizational commitment: Evidence for differences among multilevel attachments. *Journal of Organizational Behavior*, 10(3), 267–273.
- Zhang, X., Cao, Q., & Tjosvold, D. (2011). Linking transformational leadership and team performance: A conflict management approach. *Journal of Management Studies*, 48(7), 1586–1611. <https://doi.org/10.1111/j.1467-6486.2010.00974.x>

Annex

Annex 1: Enrolment in the experiment

1.1 Initial survey

1.1.1 Initial survey- Portuguese version

A experiência será levada a cabo no âmbito de uma tese de Mestrado em Gestão, que tem como objetivo testar a tomada de decisão dos participantes e será realizada na Católica Porto Business School.

Obrigada pela participação!

1. Nome:
2. Contacto de email:
3. Contacto telefónico (opcional):
4. Horários em que se pretende inscrever (Selecionar todas as opções em que se encontra disponível, embora apenas vá participar numa única sessão):
 - 24 de setembro, quinta-feira, das 8h30 às 9h00
 - 24 de setembro, quinta-feira, das 9h00 às 9h30
 - 24 de setembro, quinta-feira, das 9h30 às 10h00
 - 30 de setembro, quarta-feira, das 9h00 às 9h30
 - 30 de setembro, quarta-feira, das 10h00 às 10h30
 - 30 de setembro, quarta-feira, das 11h00 às 11h30
 - 30 de setembro, quarta-feira, das 12h00 às 12h30
 - 30 de setembro, quarta-feira, das 14h30 às 15h00

- 30 de setembro, quarta-feira, das 15h30 às 16h00
- 30 de setembro, quarta-feira, das 16h00 às 16h30
- 30 de setembro, quarta-feira, das 16h30 às 17h00
- 30 de setembro, quarta-feira, das 17h30 às 18h00

1.1.2 Initial survey- English version

The experiment will be taking place in regard to a Master's thesis in Management. Its main goal is to test the participant's decision making and will take place in Católica Porto Business School.

Thank you for participating!

1. Name:
2. Email address:
3. Phone number (optional):
4. Time slots in which you wish to enroll (choose all the options in which you are available however, you will only participate in one session):
 - September 24th, Thursday, from 8h30 to 9h00
 - September 24th, Thursday, from 9h00 to 9h30
 - September 24th, Thursday, from 9h30 to 10h00
 - September 30th, Wednesday, from 9h00 to 9h30
 - September 30th, Wednesday, from 10h00 to 10h30
 - September 30th, Wednesday, from 11h00 to 11h30
 - September 30th, Wednesday, from 12h00 to 12h30
 - September 30th, Wednesday, from 14h30 to 15h00
 - September 30th, Wednesday, from 15h30 to 16h00
 - September 30th, Wednesday, from 16h00 to 16h30
 - September 30th, Wednesday, from 16h30 to 17h00
 - September 30th, Wednesday, from 17h30 to 18h00

1.2 Email sent to the participants

1.2.1 Email sent to the participants- Portuguese version

Boa tarde,

Antes de mais, gostaria de agradecer a disponibilidade para participar na experiência comportamental sobre a tomada de decisão.

Tendo em consideração a sua disponibilidade, informo que ficou alocado(a) ao dia 24 (30) de setembro das HH:MM às HH:MM no laboratório EC 007 (008/-101/-104) da Universidade Católica do Porto (Rua de Diogo Botelho, 1327, 4169-005 Porto).

Para facilitar a localização do laboratório, por favor consulte a imagem que se encontra em anexo com as indicações.

A experiência é realizada em grupos, portanto só poderá ser iniciada quando todos estiverem presentes. Assim, se for possível, peço que chegue 5 minutos antes da hora combinada, pois é bastante importante respeitarmos os horários previstos.

Por último, e com o objetivo de garantir a segurança de todos os participantes, peço que leve máscara e cumpra as regras de distanciamento social no decorrer da experiência.

Obrigada pela atenção,

Catarina Martins





1.2.2 Email sent to the participants- English version

Good afternoon,

First and foremost, I would like to thank you for your interest in this behavioral experiment about decision making.

Taking into consideration your availability, you have been allocated to the 24th (30th) of September from HH:MM to HH:MM in room EC 007 (008/-101/-104) in Universidade Católica do Porto (Rua de Diogo Botelho, 1327, 4169-005 Porto).

In order to easily locate your room, please consult the image available in this email with directions towards the room.

During the experiment, you will be inserted in a group and the experiment can only start when everyone has arrived. As such, if possible, try to arrive 5 minutes before the scheduled time since it is very important to follow the planned time frames

Lastly and to assure the safety of all participants, please use a mask and follow the social distancing rules during the experiment.

Thank you for your time,

Catarina Martins

Annex 2: Game instructions and questionnaires presented participants

2.1 Information consent letter

2.1.1 Information consent letter- Portuguese version

Este trabalho de investigação tem como objetivo estudar a tomada de decisão económica.

Nesta experiência os sujeitos irão jogar o “Jogo do Bem Público” onde irão executar uma tarefa de tomada de decisão económica.

A experiência terá a duração de 30 minutos e envolve um jogo de computador e a resposta a breves questões sobre o mesmo. O “Jogo do Bem Público” será jogado em conjuntos de 4 pessoas que nunca terão acesso à identidade uma das outras. Essas 4 pessoas serão atribuídas ao grupo de forma aleatória e, do desempenho do grupo, resultará uma compensação monetária proporcional. Esse valor será calculado no final da sessão. Depois da realização do jogo, serão apresentadas algumas questões relativas à compreensão do jogo, aos dados pessoais de cada participante, bem como algumas questões relacionadas com a experiência de participação.

Os dados recolhidos serão tratados de forma anónima e confidencial e em momento algum será pedido o nome ou dados pessoais sensíveis. Os dados serão utilizados apenas para fins de investigação e serão sempre analisados em grupo para efeitos de publicação. A participação na experiência não envolve nenhum prejuízo para a pessoa e é voluntária, pelo que pode desistir a qualquer momento.

Para mais informações contacte – Eva Oliveira (eoliveira@porto.ucp.pt).

- Li as informações e aceito participar neste estudo

- Li as informações e não aceito participar neste estudo

2.1.2 Information consent letter- English version

This investigation work intends to study the economic decision-making process.

During this experience, the participants will play the “Public Good Games” where they will execute a task of economic decision making.

The experiment will last for 30 minutes, it requires a computer game and answering brief questions about the game. The “Public Good Games” will be played in groups of 4 people who will never get access to each other 's identity. Those 4 people will be randomly assigned to a group and the group's performance will result in a proportional monetary compensation. That value is calculated at the end of the experiment. After playing the game, some questions related with the comprehension of the game, personal information and the participation experience will be presented. The data collected will be anonymously and confidentially examined and there will be no questions regarding your name or other sensible personal data.

The data will only be used for investigation purposes and will always be analyzed in groups for publication effects. Your participation in this experiment does not involve any loss and, once it is voluntary, you can stop at any moment. For more information, please contact - Eva Oliveira (eoliveira@porto.ucp.pt).

- I have read the information and accept to participate in this study.
- I have read the information and do not accept to participate in this study.

2.2 Game Instructions

2.2.1 Game Instructions- Portuguese version

Foi selecionado aleatoriamente para fazer parte de um grupo com mais 3 pessoas. Cada pessoa do seu grupo, incluindo você, recebe as mesmas instruções e 2 euros para esta experiência. A sua tarefa consiste em decidir quanto deste montante guarda para si mesmo e quanto (se algum) contribui para o projeto comum do grupo. As contribuições são realizadas em cêntimos, sendo que pode decidir qualquer valor entre 0 e 200 cêntimos (2 Euros) em incrementos de 2 cêntimos por exemplo, contribui 0, 2, 4, 6, ..., 82, ..., 122, ..., 200 cêntimos. As contribuições monetárias de cada membro do grupo para o projeto comum irão ser duplicadas e depois divididas por todos os 4 membros do grupo de forma igualitária. Ou seja, ao contribuir com 2 cêntimos para o projeto comum, nós iremos duplicar esse valor (total 4 cêntimos) que será dividido por todos os 4 membros do grupo (1 cêntimo para cada elemento). Se todos os membros do grupo optarem pela contribuição coletiva máxima (2 euros), o dinheiro de toda a gente irá duplicar, cada um recebendo 4 euros. No entanto, se todos os outros elementos do seu grupo fizerem a contribuição máxima (2 euros cada) para o projeto comum, ao contrário de si, que decide manter os seus 2 euros (ou seja, contribuindo com 0), você irá ganhar 5 euros enquanto os outros elementos do grupo apenas ganharão 3 euros cada. Não existe decepção neste estudo, ou seja, será realmente agrupado com outros participantes que também terão de tomar uma decisão. Após todos os elementos do grupo tomarem a decisão relativa à contribuição monetária, o jogo termina e o montante real, resultante da decisão de todos, será dividido.

2.2.2 Game Instructions- English version

You have been randomly selected to be part of a group along with three other people. Each person of your group, including you, will receive the same instructions and 2 euros for this experience. Your task consists in deciding how much from those two euros you want to save and how much (if any) you want

to contribute for the common project of the group. All the contributions are made in cents, which means that you can contribute any value from 0 to 200 cents (2 euros) in additions of 2 cents for example, 0, 2, 4, 6, ..., 82, ..., 122, ..., 200 cents. The monetary contributions of each member of the group for the common project will be duplicated and then equally divided between all the 4 members of the group. In other words, if you contribute 2 cents to the common project, that value will be duplicated (total of 4 cents) and then divided between all the 4 members of the group (1 cent per element). If all the members of the group choose the maximum collective contribution (2 euros), everybody's money will be duplicated, which means that everyone will receive 4 euros. However, if all the elements of your group decide to make the maximum donation (2 euros each) for the common project and, in contrary, you decide to keep your 2 euros (this means you contribute with 0), you will receive 5 euros while the other elements of the group will only receive 3 euros each. This study does not involve deception. This means that you will really be grouped with other participants who will also need to make a decision. After all the elements of the group decide about the monetary contribution, the game finishes and the real amount (resulting from the decision of every member of your group) will be divided.

2.3 Decision of contributed amount

2.3.1 Decision of contributed amount- Portuguese version

Use o slider para escolher o seu nível de contribuição.

A sua contribuição: 0 cêntimos -----slider-----200 cêntimos
(2 euros).

2.3.2 Decision of contributed amount- English version

Use the slider to choose your level of contribution.

Your contribution: 0 cents -----slider-----200 cents (2 euros).

2.4 Game understanding questions

2.4.1 Game understanding questions- Portuguese version

As próximas duas questões pretendem avaliar a compreensão da tarefa de tomada de decisão em que acaba de participar.

1. Que nível de contribuição tem um maior pagamento para o grupo como um todo?

0 cents; 25 cents; 50 cents; 75 cents; 100cents; 125cents; 150cents; 175cents; 200cents

2. Que nível de contribuição tem um maior pagamento para si pessoalmente?

0 cents; 25 cents; 50 cents; 75 cents; 100cents; 125cents; 150cents; 175cents; 200cents

2.4.2 Game understanding questions- English version

The following two questions intend to evaluate your comprehension of the decision-making task you have participated in.

1. Which level of contribution has the higher return for the group as a whole?

0 cents; 25 cents; 50 cents; 75 cents; 100cents; 125cents; 150cents; 175cents; 200cents

2. Which level of contribution has the highest payment for you personally?

0 cents; 25 cents; 50 cents; 75 cents; 100cents; 125cents; 150cents; 175cents;
200cents

2.5 Perceived leadership questions

2.5.1 Perceived leadership questions- Portuguese version

Responda às 2 próximas perguntas relativas à experiência.

1. Em que medida se sentiu na obrigação de contribuir?

Responda numa escala de 1 (Nada) a 5 (Muito).

2. Encarou o investigador principal como a pessoa que liderava esta experiência?

Responda numa escala de 1 (Nada) a 5 (Muito).

2.5.2 Perceived leadership questions- English version

Answer the next 2 questions related to the experiment.

1. To what extent did you feel compelled to contribute?

Answer in a scale from 1 (Nothing) to 5 (Very much).

2. Did you look at the main investigator as the leader of this experience?

Answer in a scale from 1 (Nothing) to 5 (Very much).

2.6 Empathy perception, Individualism/Collectivism and Group Commitment questions

2.6.1 Empathy perception, Individualism/Collectivism and Group Commitment questions- Portuguese version

As próximas afirmações têm como objetivo fazer o levantamento de experiências relacionadas com a participação. Classifique as próximas afirmações de 0 a 4 de acordo com a sua opinião. É de primordial importância que responda de forma espontânea e sincera. Não há respostas erradas ou certas, ou perguntas com truques.

Deve responder a cada afirmação, considerando que:

0 - Corresponde a “Discordo totalmente”.

1 - Corresponde a “Discordo”.

2 - Corresponde a “Não concordo nem discordo”.

3 - Corresponde a “Concordo”.

4 - Corresponde a “Concordo totalmente”.

SHAM. Acredito que os meus colegas tenham sentimentos de compaixão por coisas menos positivas.

IC-OI2. Pessoas que pertencem a um grupo devem compreender que, por vezes, têm de fazer sacrifícios em prol do grupo, como um todo.

CO-N3. Sentir-me-ia culpado se deixasse o meu grupo.

CE5. O investigador principal aparenta ser alguém que, antes de criticar outra pessoa, tenta imaginar como se sentiria se estivesse no seu lugar.

CO-N2 (r). Senti que não tinha qualquer dever moral em colaborar com o grupo.

SHAM. Acredito que os meus colegas têm dificuldade em ver as coisas do ponto de vista dos outros.

CE1 (r). O investigador principal aparenta ter dificuldade em ver as coisas do ponto de vista dos outros.

SHAM. Acredito que os colegas do meu grupo tentem pôr-se no lugar da outra pessoa.

CE2. O investigador principal aparenta tentar compreender melhor os outros, imaginando a sua perspectiva de ver as coisas.

IC-TI1. Prefiro trabalhar com outras pessoas do que trabalhar sozinho.

CO-N4. Este grupo merece a minha lealdade.

CO-A3. Este grupo acabou por ganhar significado para mim.

IC-II1. Um grupo é mais produtivo quando os seus membros seguem os seus próprios interesses e preocupações.

CO-A1 (r). Não me senti “emocionalmente ligado” a este grupo.

IC-C2. Fazer o meu melhor não é suficiente; é importante vencer.

IC-C4. O sucesso é a coisa mais importante na vida.

AE1. O investigador principal aparenta ter sentimentos de preocupação pelos outros.

AE2 (r). O investigador principal aparenta não sentir muita preocupação quando os outros estão a ter problemas.

CO-N5. Mesmo que fosse uma vantagem para mim, sinto que seria incorreto não cooperar com este grupo.

IC-II3. Um grupo é mais eficiente quando os seus membros fazem o que querem fazer, em vez daquilo que o grupo quer que o façam.

AE5. O investigador principal aparenta ser uma pessoa de coração mole.

CO-N6. Sinto que tenho um dever para com este grupo.

SHAM. Acredito que os meus colegas tenham sentimentos de preocupação pelos outros.

IC-C3. Sinto que ganhar é importante, quer no trabalho, quer no jogo.

IC-II2. Um grupo é mais eficiente quando os seus membros fazem o que pensam ser melhor, em vez daquilo que o grupo quer que façam.

IC-C1. Vencer é tudo.

AE3 (r). O investigado principal aparenta não se deixar perturbar muito com as desgraças dos outros.

CO-N1. Senti que tinha uma obrigação para com as pessoas deste grupo.

AE4. O investigador principal aparenta ter sentimentos de compaixão por coisas menos positivas.

CE3. O investigador principal aparenta acreditar que uma questão tem sempre dois lados e tenta olhar para ambos.

IC-OI1. As pessoas que integram um grupo devem estar dispostas a fazer sacrifícios pelo bem-estar do mesmo.

CO-A2 (r). Não me senti como parte deste grupo.

IC-TI2. Trabalhar em grupo é melhor do que trabalhar sozinho.

SHAM. Acredito que os meus colegas de grupo tentem imaginar-se no lugar da outra pessoa.

CE4. Quando está aborrecido com alguma situação, o investigador principal aparenta tentar pôr-se no lugar da outra pessoa por um momento.

2.6.2 Empathy perception, Individualism/Collectivism and Group Commitment questions- English version

The following statements intend to analyze experiences related with your participation in this experiment. Classify the following statements using a scale from 0 to 4, in line with your opinion. It is fundamental that you provide honest and spontaneous answers. There are no right or wrong answers or trick questions.

You must answer, considering that:

0 - Corresponds to "Totally disagree".

1 - Corresponds to "Disagree".

2 - Corresponds to "Neither agree nor disagree".

3 - Corresponds to "Agree".

4 - Corresponds to "Totally agree".

SHAM. I believe that my colleagues have compassionate feelings about less positive things.

IC-OI2. People who belong to a group should realize that they sometimes are going to have to make sacrifices for the sake of the group as a whole.

CO-N3 (r). I would feel guilty if I left my group.

CE5. The main investigator appears to be someone who, before criticizing somebody, tries to imagine how it would feel to be in their place.

CO-N2 (r). I did not feel that I had any moral duty to cooperate with this group.

SHAM. I believe that it is difficult for my colleagues to see things from other people's point of view.

CE1 (r). It seems to be difficult for the main investigator to see things from other people's point of view.

SHAM. I believe that my colleagues try to "put themselves in other people's shoes".

CE2. The main investigator appears to try to understand others, by imagining how things look from their perspective.

IC-TI1. I prefer to work with other people rather than working alone.

CO-N4. This group deserves my loyalty.

CO-A3. This group has gained a great deal of personal meaning for me.

IC.II1. A group is more productive when members follow their own interests and concerns.

CO-A1 (r). I did not feel "emotionally attached" to this group.

IC-C2. Doing your best isn't enough; it is important to win.

IC-C4. Success is the most important thing in life.

AE1. The main investigator appears to have concerned feelings for others.

AE2 (r). The main investigator appears to not feel sorry for other people when they are having problems.

CO-N5. Even if it was advantageous for me, I feel that it would be incorrect to not cooperate with my group.

IC-II3. A group is more productive when members do what they want rather than what the group wants them to do.

AE5. The main investigator appears to be a soft-hearted person.

CO-N6. I feel that I have a duty towards my group.

SHAM. I believe that my colleagues have feelings of concern about others.

IC-C3. I feel that winning is important in both work and game.

IC-II2. A group is more efficient when members do what they think is best rather than what the group wants them to do.

IC-C1. Winning is everything.

AE3 (r). The main investigator doesn't appear to be disturbed by other people's misfortunes.

CO-N1. I felt that I had a personal obligation to the people in this group.

AE4. The main investigator appears to have compassionate feelings about less positive things.

CE3. The main investigator appears to believe that there are two sides to every question and tries to look at them both.

IC-OI1. People in a group should be willing to make sacrifices for the group's wellbeing.

CO-A2 (r). I did not feel a 'strong' sense of belonging towards my group.

IC-TI2. Working with a group is better than working alone.

SHAM. I believe that my colleagues try to imagine themselves in the situation of others.

CE4. When the main investigator is upset about something, they appear to try to "put themselves on other people's shoes" for a while.

2.7 Demographic questions

2.7.1 Demographic questions- Portuguese version

1. Qual a sua idade?
2. Qual é o seu género?
 - a. Masculino
 - b. Feminino
 - c. Prefiro não responder
3. Número de anos que concluiu com sucesso na escola, sem contabilizar com as reprovações:
4. Qual a sua principal área de formação?
 - a. Ciências Socioeconómicas
 - b. Ciências da vida e Tecnologias
 - c. Ciências Sociais e Humanas
 - d. Artes e Desporto
5. Selecione, aproximadamente, o rendimento mensal médio do seu agregado familiar (ou seja, o somatório dos ganhos individuais dos moradores de um mesmo domicílio por mês contando com o seu, caso trabalhe). Caso não tenha a certeza, aponte a sua melhor estimativa.
 - a. Inferior a 419€
 - b. Entre 420€ - 629€
 - c. Entre 630€ - 839€
 - d. Entre 840€ - 1049€
 - e. Entre 1050€ - 1259€
 - f. Entre 1260€ - 1679€
 - g. Entre 1680€ - 2095€
 - h. Entre 2096€ - 2514€
 - i. Entre 2515€ - 3354€
 - j. Entre 3355€ - 4189€
 - k. Entre 4190€ - 5029€

1. Superior a 5030€

2.7.2 Demographic questions- English version

1. How old are you?
2. What is your gender?
 - a. Male
 - b. Female
 - c. I prefer not to answer
3. Number of years have you successfully concluded in school, without counting years when you were retained:
4. Which is your main study area?
 - a. Socioeconomic Sciences
 - b. Life and Technology Sciences
 - c. Social and human Sciences
 - d. Arts and Sports
5. Select, approximately, the average monthly income of your household (ie. the sum of all individual earnings of the residents of the same household, per month, including yours, if you work). If you are unsure, provide your best estimate.
 - a. Lower than 419€
 - b. Between 420€ - 629€
 - c. Between 630€ - 839€
 - d. Between 840€ - 1049€
 - e. Between 1050€ - 1259€
 - f. Between 1260€ - 1679€
 - g. Between 1680€ - 2095€
 - h. Between 2096€ - 2514€
 - i. Between 2515€ - 3354€

- j. Between 3355€ - 4189€
- k. Between 4190€ - 5029€
- l. Higher than 5030€

2.8 Final information

2.8.1 Final information- Portuguese version

Obrigado pela sua participação até aqui.

Permaneça no seu lugar para que se possa proceder ao pagamento da sua compensação.

2.8.2 Final information- English version

Thank you for your participation.

Please remain in your place so that the payment can proceed.

Annex 3: Guidelines provided to the actors (leader and late participant) to apply during the experimental manipulation

3.1 Participating leader protocol

3.1.1 Guidelines- Participating leader protocol - Portuguese version

Duração	Instruções (em negrito) e falas (em itálico)
1 Minuto	<p>Quando já estiver na sala com os participantes, o líder irá receber uma folha com as presenças por parte dos investigadores. Isto será o sinal que pode iniciar a fala abaixo.</p> <p>Líder- <i>Boa tarde a todos, esta experiência está inserida numa investigação acerca de tomada de decisão, pelo que agradeço desde já a participação de todos. À vossa frente têm um computador. Devem seguir as indicações que vão surgindo no ecrã. Mas antes de começarmos, é necessário que todos estejam presentes para que comecem (simular que confirma as presenças, numa lista que lhe foi entregue pelos assistentes) todos ao mesmo tempo e falta uma pessoa.</i></p>
1 Minuto	<p>Líder escolhe uma das 3 falas dependendo da condição que está a ser testada:</p> <p>Líder-</p> <p><u>N:</u> <i>Uma vez que é mesmo importante que todos estejam presentes para que possamos começar a experiência, vamos esperar 5 minutos e ver se aparece este último participante.</i></p> <p><u>EL:</u> <i>Peço desculpa por ter de vos fazer esperar, mas uma vez que é mesmo importante que todos estejam presentes para que possamos começar a experiência, vamos esperar os 5 minutos normais de tolerância e ver se aparece o último participante, porque pequenos atrasos são compreensíveis.</i></p>

	<p><u>NEL:</u> <i>Uma vez que todos têm de começar a experiência ao mesmo tempo, vamos esperar mais 5 minutos para ver se chega a pessoa que está em falta, apesar de ser uma falta de respeito por todos nós que estamos cá a tempo e horas.</i></p>
4 Minutos	<p>Líder aguarda e vai à porta espreitar pelo corredor. É o sinal para o comparsa poder entrar passado 4 minutos.</p>
1 Minuto	<p>Comparsa: chega apressadamente e aparece com uma muleta e a coxear</p> <p>Comparsa: <i>Boa tarde, peço desculpa pelo meu atraso, mas magoei-me e tive de ir ao hospital antes de vir para aqui.</i></p>

<p>1 Minuto</p>	<p>Líder pergunta o nome da pessoa e confirma na lista dos participantes e depois escolhe uma das 3 falas dependendo da condição que está a ser testada:</p> <p><u>N</u>: <i>Okay, entre e sente-se. Agora estamos preparados para começar.</i></p> <p><u>EL</u>: <i>Mas sente-se bem? (comparsa responde que sim) Obrigada por ter vindo mesmo assim. Não se preocupe com o atraso; não tinha como chegar mais cedo. Agradeço o esforço. Por favor, sente-se num dos lugares vagos. Precisa de ajuda para se sentar? (comparsa responde que não). Se precisar de alguma coisa durante a experiência é só dizer. Agora estamos preparados para começar.</i></p> <p><u>NEL</u>: <i>Já estamos aqui todos há 5 minutos à sua espera. Apesar das suas justificações, as suas razões para o atraso não me dizem respeito. Podia-se ter cuidado para chegar mais cedo, uma vez que foi explicado a toda a gente a importância de chegar a horas. Sente-se rápido para que possamos começar.</i></p>
	<p>Líder dá a instrução inicial</p> <p>Líder: <i>Podem clicar no fundo da página para dar continuidade à experiência. Na primeira página vão encontrar a declaração de consentimento informado. Leiam e avancem assim que o tiverem feito.</i></p> <p>Líder espera uma quantidade de tempo razoável para que todos leiam</p>

	<p>Líder dá a instrução inicial pós- consentimento</p> <p><i>Líder: Já todos leram a declaração de consentimento informado? (se não, esperar, se sim dar a indicação de que podem dar início à experiência). Eu também faço parte dos grupos, deixem-me só sentar e podemos começar.</i></p> <p>Líder dá início à experiência assim que se senta</p> <p><i>Líder: Podem começar.</i></p>
	<p>Comparsa e líder preenchem o questionário (aleatoriamente) o mais rápido possível e com uma contribuição de 2 €. Na última questão “quantas pessoas conhece na sala”, escrevem “Comparsa” ou “Líder” dependendo do seu papel.</p>

3.1.2 Guidelines- Participating leader protocol - English version

<p>Duratio n</p>	<p>Instructions (in bold) and lines (in italic)</p>
-----------------------------	--

<p>1 Minute</p>	<p>When they're already in the room with all the participants, the leader of each session will receive an attendance sheet from the investigators. This will be the signal that lets them know that they can start saying the line below.</p> <p>Leader- <i>Good afternoon everyone. This experiment is part of an investigation regarding decision making. Before everything else, I want to thank all of you for participating. In front of you there's a computer. You should follow the instructions that show up on the screen. However, before we start, we need everyone to be present (leader pretends to check the attendance sheet) and there's still one person missing.</i></p>
<p>1 Minute</p>	<p>Leader picks one of the 3 lines depending on the condition being tested:</p> <p>Leader-</p> <p><u>N</u>: <i>Given that it is very important that everyone is here to start the experiment, we're going to wait 5 minutes to make sure that the last participant shows up.</i></p> <p><u>EL</u>: <i>I apologize for making you wait but, since it is very important that everyone is here before starting the experiment, we are going to wait 5 minutes to check if the last participant shows up. Small delays are normal and easy to understand.</i></p> <p><u>NEL</u>: <i>Given that we can only start the experiment when everyone is here, we are going to wait 5 minutes to check if the last participant shows</i></p>

	<p><i>up. However, their delay is very disrespectful for all of us who were here on time.</i></p>
<p>4 Minutes</p>	<p>The leader waits and goes to the door to check if the participant arrived. This constitutes the signal towards the last participant (the actor) communicating that they could enter the room in exactly 4 minutes.</p>
<p>1 Minute</p>	<p>Late participant (actor): arrives in a rush and shows up using a crutch and limping</p> <p>Late participant: <i>Good afternoon, I'm sorry for being late but I got hurt and needed to go to the hospital before coming here.</i></p>

<p>1 Minute</p>	<p>The leader asks the late participant their name and checks it on the participant sheet. After this, the leader picks one of the 3 lines depending on the condition being tested:</p> <p><u>N</u>: <i>Okay, come in and sit down. Now we are ready to start.</i></p> <p><u>EL</u>: <i>Do you feel okay (late participant answers yes). Thank you for still coming to the experiment. The delay is not a problem, you didn't have a way of arriving any sooner. Thank you for the effort. Please sit down in one of the available sits. Do you need help sitting down? (late participant answers no). If you need anything throughout the experiment, please let me know. Now we are ready to start.</i></p> <p><u>NEL</u>:. <i>We've all been waiting for you for 5 minutes. Even though you presented a reason for being late, those justifications do not concern me. You could've prepared in advance and get here earlier since everyone was told it was important to be on time. Sit down quickly so we can start.</i></p>
	<p>The leader provides the initial instructions</p> <p>Leader: <i>You can click on the bottom of your page to start the experiment. On the first page, you'll find a form declaring informed consent. Read it and advance as soon as you have read it.</i></p> <p>The leader waits a reasonable amount of time for everyone to read the form</p>

	<p>The leader provides the post-consent instructions</p> <p>Leader: <i>Did everyone read the form declaring informed consent? (if not, wait a few more minutes, if yes, give out the instructions to start the experiment). I will be part of the groups so let me sit down so we can start.</i></p> <p>The leader starts the experiment as soon as they sit down</p> <p>Leader: <i>You can now start</i></p>
	<p>The late participant (actor) and the leader fill out the questionnaires (randomly) as fast as they can and choose a contribution of 2€. In the last question “How many people do you know in the room”, they write “Late participant” or “Leader” depending on their role.</p>

3.2 Non-Participating leader protocol

3.2.1 Guidelines- Non-Participating leader protocol - Portuguese version

Duração	Instruções (em negrito) e falas (em itálico)
----------------	---

<p>1 Minuto</p>	<p>Quando já estiver na sala com os participantes, o líder irá receber uma folha com as presenças por parte dos investigadores. Isto será o sinal que pode iniciar a fala abaixo.</p> <p>Líder- <i>Boa tarde a todos, esta experiência está inserida numa investigação acerca de tomada de decisão, pelo que agradeço desde já a participação de todos. À vossa frente têm um computador. Devem seguir as indicações que vão surgindo no ecrã. Mas antes de começarmos, é necessário que todos estejam presentes para que comecem (simular que confirma as presenças, numa lista que lhe foi entregue pelos assistentes) todos ao mesmo tempo e falta uma pessoa.</i></p>
<p>1 Minuto</p>	<p>Líder escolhe uma das 3 falas dependendo da condição que está a ser testada:</p> <p>Líder-</p> <p><u>N:</u> <i>Uma vez que é mesmo importante que todos estejam presentes para que possamos começar a experiência, vamos esperar 5 minutos e ver se aparece este último participante.</i></p> <p><u>EL:</u> <i>Peço desculpa por ter de vos fazer esperar, mas uma vez que é mesmo importante que todos estejam presentes para que possamos começar a experiência, vamos esperar os 5 minutos normais de tolerância e ver se aparece o último participante, porque pequenos atrasos são compreensíveis.</i></p> <p><u>NEL:</u> <i>Uma vez que todos têm de começar a experiência ao mesmo tempo, vamos esperar mais 5 minutos para ver se chega a pessoa que está</i></p>

	<p><i>em falta, apesar de ser uma falta de respeito por todos nós que estamos cá a tempo e horas.</i></p>
<p>4 Minutos</p>	<p>Líder aguarda e vai à porta espreitar pelo corredor. É o sinal para o comparsa poder entrar passado 4 minutos.</p>
<p>1 Minuto</p>	<p>Comparsa: chega apressadamente e aparece com uma muleta e a coxear</p> <p>Comparsa: <i>Boa tarde, peço desculpa pelo meu atraso, mas magoei-me e tive de ir ao hospital antes de vir para aqui.</i></p>

<p>2 Minuto</p>	<p>Líder pergunta o nome da pessoa e confirma na lista dos participantes e depois escolhe uma das 3 falas dependendo da condição que está a ser testada:</p> <p><u>N:</u> <i>Okay, entre e sente-se. Agora estamos preparados para começar.</i></p> <p><u>EL:</u> <i>Mas sente-se bem? (comparsa responde que sim) Obrigada por ter vindo mesmo assim. Não se preocupe com o atraso; não tinha como chegar mais cedo. Agradeço o esforço. Por favor, sente-se num dos lugares vagos. Precisa de ajuda para se sentar? (comparsa responde que não). Se precisar de alguma coisa durante a experiência é só dizer. Agora estamos preparados para começar.</i></p> <p><u>NEL:</u> <i>Já estamos aqui todos há 5 minutos à sua espera. Apesar das suas justificações, as suas razões para o atraso não me dizem respeito. Podia-se ter cuidado para chegar mais cedo, uma vez que foi explicado a toda a gente a importância de chegar a horas. Sente-se rápido para que possamos começar.</i></p>
	<p>Líder dá a instrução inicial</p> <p>Líder: <i>Podem clicar no fundo da página para dar continuidade à experiência. Na primeira página vão encontrar a declaração de consentimento informado. Leiam e avancem assim que o tiverem feito.</i></p> <p>Líder espera uma quantidade de tempo razoável para que todos leiam</p>

	<p>Líder dá a instrução inicial pós- consentimento</p> <p>Líder: <i>Já todos leram a declaração de consentimento informado? (se não, esperar, se sim dar a indicação de que podem dar início à experiência).</i></p> <p>Líder dá início à experiência assim que se senta</p> <p>Líder: <i>Podem começar.</i></p>
	<p>Comparsa preenche o questionário (aleatoriamente) o mais rápido possível e com uma contribuição de 2 €. Na última questão “quantas pessoas conhece na sala”, escreve “Comparsa”.</p>

3.2.1 Guidelines- Non-Participating leader protocol – English version

<p>Dur at ion</p>	<p>Instructions (in bold) and lines (in italic)</p>
----------------------------------	--

<p>1 Minute</p>	<p>When they're already in the room with all the participants, the leader of each session will receive an attendance sheet from the investigators. This will be the signal that lets them know that they can start saying the line below.</p> <p>Leader- <i>Good afternoon everyone. This experiment is part of an investigation regarding decision making. Before everything else, I want to thank all of you for participating. In front of you there's a computer. You should follow the instructions that show up on the screen. However, before we start, we need everyone to be present (leader pretends to check the attendance sheet) and there's still one person missing.</i></p>
<p>1 Minute</p>	<p>Leader picks one of the 3 lines depending on the condition being tested:</p> <p>Leader-</p> <p><u>N</u>: <i>Given that it is very important that everyone is here to start the experiment, we're going to wait 5 minutes to make sure that the last participant shows up.</i></p> <p><u>EL</u>: <i>I apologize for making you wait but, since it is very important that everyone is here before starting the experiment, we are going to wait 5 minutes to check if the last participant shows up. Small delays are normal and easy to understand.</i></p> <p><u>NEL</u>: <i>Given that we can only start the experiment when everyone is here, we are going to wait 5 minutes to check if the last participant shows</i></p>

	<p><i>up. However, their delay is very disrespectful for all of us who were here on time.</i></p>
<p>4 Minutes</p>	<p>The leader waits and goes to the door to check if the participant arrived. This constitutes the signal towards the last participant (the actor) communicating that they could enter the room in exactly 4 minutes.</p>
<p>1 Minute</p>	<p>Late participant (actor): arrives in a rush and shows up using a crutch and limping</p> <p>Late participant: <i>Good afternoon, I'm sorry for being late but I got hurt and needed to go to the hospital before coming here.</i></p>

<p>2 Minute</p>	<p>The leader asks the late participant their name and checks it on the participant sheet. After this, the leader picks one of the 3 lines depending on the condition being tested:</p> <p><u>N</u>: <i>Okay, come in and sit down. Now we are ready to start.</i></p> <p><u>EL</u>: <i>Do you feel okay (late participant answers yes). Thank you for still coming to the experiment. The delay is not a problem, you didn't have a way of arriving any sooner. Thank you for the effort. Please sit down in one of the available sits. Do you need help sitting down? (late participant answers no). If you need anything throughout the experiment, please let me know. Now we are ready to start.</i></p> <p><u>NEL</u>:. <i>We've all been waiting for you for 5 minutes. Even though you presented a reason for being late, those justifications do not concern me. You could've prepared in advance and get here earlier since everyone was told it was important to be on time. Sit down quickly so we can start.</i></p>
	<p>The leader provides the initial instructions</p> <p>Leader: <i>You can click on the bottom of your page to start the experiment. On the first page, you'll find a form declaring informed consent. Read it and advance as soon as you have read it.</i></p> <p>The leader waits a reasonable amount of time for everyone to read the form</p>

The leader provides the post-consent instructions

Leader: *Did everyone read the form declaring informed consent? (if not, wait a few more minutes, if yes, give out the instructions to start the experiment).*

The leader starts the experiment as soon as they sit down

Leader: *You can now start*

The late participant (actor) fills out the questionnaires (randomly) as fast as they can and chooses a contribution of 2€. In the last question “How many people do you know in the room”, they write “Late participant”.