



UNIVERSITY OF PADOVA

**Department of General Psychology
Department of Developmental Psychology and Socialisation**

Bachelor's Degree Course in Psychological Science

Final dissertation

Parochial Altruism and the Foreign Language Effect: An Experimental Investigation

Supervisor:

Professor Francesca Peressotti

Candidate: Alessandro Aprile

Student ID number: 2012634

Academic Year 2022/2023

CONTENTS

CHAPTER 1: INTRODUCTION	1
1.1 Introduction	1
1.2 Etiology of the Foreign Language Effect	2
1.3 The Foreign Language Effect and Moral Dilemmas	4
1.4 Mapping Morality: The Moral Foundation Theory	6
1.5 Moral Foundations and the Foreign Language Effect.....	8
1.6 Parochial Altruism.....	9
CHAPTER 2: METHODS	12
2.1 Participants.....	12
2.2 Materials and Procedure	12
2.3 Measures	15
CHAPTER 3: CONCLUSIONS	16
3.1 Expected results	16
3.2 Conclusions.....	17
REFERENCES	18
APPENDICES	22
Appendix A – Survey Introductory Text	22
Appendix B – Social Identity Scales	24

CHAPTER 1: INTRODUCTION

1.1 Introduction

As globalization progresses, an increasing number of people find themselves in need of using a language other than their first to navigate the world. As a result, understanding the complex ways in which language might impact cognitive functioning has become particularly valuable. Over the last decade, psycholinguistic research has investigated how foreign languages may influence the cognitive processes underlying moral decision-making. Several studies have shown that, when faced with moral dilemmas, people are more willing to accept sacrificial harm if the problem is presented in a foreign language (for reviews see Circi et al., 2021; Del Maschio et al., 2022; Stankovic et al., 2022). This phenomenon is the result of the so-called *foreign language effect* (hereafter FLE; Keysar et al., 2012; Costa et al., 2014). Recent data collected at the University of Padova have shown that the FLE is present in four of the five moral foundations as measured by the Moral Foundation Questionnaire (Graham et al., 2011) developed within the Moral Foundation Theory (Haidt & Joseph, 2007). Of particular interest to the present study is the finding that individuals tend to score higher on the in-group foundation when using their foreign language (Peressotti et al., submitted). According to this finding, people tend to value loyalty to the group more in their foreign language in comparison to their native language. Importantly, a separate line of research has shown that identification with the in-group correlates with higher levels of parochial altruism (Brewer et al., 2023), which refers to the propensity to direct prosocial behaviour towards members of one's own in-group.

The aim of the present study is to test whether the FLE found in measures of the in-group foundation extends to a tendency to direct altruism parochially. In other words, we set out to explore how altruistic attitudes and behaviours in a bilingual population vary as a function of language. We did so by employing an experimental design in which Italian-English

bilingual participants (N= 400) were given the chance to donate money to either one of two charities. To manipulate the inclusiveness of their scope, one operated on a provincial level, whereas the other worked throughout Italy. Participants were randomly assigned to one of two language conditions, English and Italian. After providing some demographic information, they were informed that, in addition to the participation fee, they would receive an additional sum; the subjects could then decide whether to (1) donate all or part of the given money to a charity of their choice or (2) keep the entire sum. Subjects were informed that their donations would be doubled by the experimenters and allocated to the charity they opted for. According to the aforementioned theoretical framework, we expect to find a difference in the propensity to donate and in the amount of the donation, according to the language used, in particular when the donation is in favour of the local community.

1.2 Etiology of the Foreign Language Effect

The *foreign language effect* (FLE) was first identified by Keysar et al. (2012). Their research revealed that individuals tend to conform more to normative rules when they make decisions in a foreign language compared to when they do so in their native language. In decision-making theory, normative rules refer to the standards or principles that are commonly accepted as correct or desirable for making rational and unbiased decisions (Kahneman, 2003). Thus, there is empirical evidence that using a foreign language reduces decision-making biases (Keysar et al., 2012).

The Investigation of the FLE has been informed by dual-system models, such as Kahneman's (2003), which posit the involvement of two systems in decision-making. According to these models, System 1 is characterized as fast, automatic, and largely emotion-driven, while System 2 is slower, systematic, and cognitive-controlled. Initially, two contrasting hypotheses emerged regarding the possible effects of foreign language use on decision biases (Keysar et al., 2012). The *reduced-systematicity account* suggested that using a foreign language would increase decision biases because of the additional cognitive load required in processing a foreign language. Given that high cognitive load had been linked to

greater use of heuristic biases (Benjamin et al., 2006, as cited in Keysar et al., 2012), it was believed that using a foreign language could possibly result in greater dependence on the intuitive and affective processes of System 1. Alternatively, according to the *increased-systematicity account*, using a foreign language would induce more analytical and deliberate processing. The argument was that processing information in a foreign language might result in an increased reliance on System 2 processes because foreign languages are typically processed with less automaticity than native languages (Favreau & Segalowitz, 1983), and thus require more critical and logical analyses. Empirical evidence supports the latter hypothesis; in decision-making contexts involving risks, foreign language use was associated with a reduction in both the framing effect and loss aversion bias (Keysar et al., 2012). These findings suggest that the FLE might be attributed to reduced cognitive fluency when using a foreign language, which might prompt more systematic processing.

However, subsequent studies have challenged this prediction. Current research indicates that a foreign language context may not necessarily result in reduced cognitive biases when participants are presented with emotionally neutral tasks (Costa et al., 2014). These findings have reinforced the *reduced emotionality hypothesis*, according to which the FLE may be dependent on decreased emotional impact of decision-making situations that are presented in a foreign language (Keysar et al., 2012). This hypothesis rests on the premise that emotional reactions may be attenuated during foreign language processing (Pavlenko, 2017) and draws from the *construal level theory of psychological distance*, which posits that a scenario can be construed at multiple degrees of abstraction. As the level of abstraction rises, the peripheral aspects of the situation become less salient (Trope & Liberman, 2010). Consequently, the dampening of emotional responses elicited by foreign language usage could potentially promote psychological distance and thereby reduce the impact of incidental details related to the presentation of a problem, such as framing effects or other heuristic biases (Costa et al., 2014). This hypothesis is supported by research indicating that emotions can lead to biased reasoning and promote intuitive, gut-feeling decisions (Haidt, 2007).

1.3 The Foreign Language Effect and Moral Dilemmas

Moral dilemmas have been used extensively to study the Foreign Language Effect. Such dilemmas involve scenarios in which participants must choose between two courses of action, one adhering to deontological rules, one following utilitarian logic. In the field of moral psychology, deontological ethics abide by fundamental moral norms such as “do no harm”. On the other hand, utilitarianism suggests that optimal choices should prioritize maximizing positive outcomes over following moral absolutes (Foot 1978; Thomson, 1976). What makes these dilemmas challenging is that each of the choices participants are faced with violates one of these two principles.

A well-known example that has been widely used in the literature is the so-called *trolley problem*, which involves a train carriage that threatens to kill five people that have been tied to the train tracks. The trolley problem was described by Foot (1967) and Thomson (1976) in its two most popular variants. In the Footbridge Scenario (Thomson, 1976), participants must decide whether to push a person onto the tracks, thus stopping the trolley and saving the five people, or to not intervene and let the train fatally hit them. On the other hand, in the Switch Scenario (Foot, 1967) there is a second alternative track to which only one person is tied. Here participants are faced with a different decision: to pull a lever and divert the trolley onto the second track, hence saving the five people but killing one otherwise uninvolved person, or leave things as is and let the trolley kill them.

These two variations of the trolley problem exemplify the distinction between personal and impersonal moral dilemmas, which differ according to how closely individuals become psychologically involved in them. It could be argued that pushing someone under a train represents a greater personal involvement than simply pulling a lever, despite both actions resulting in someone’s death; as Thomson (1976) suggests, there is a morally significant difference between killing and letting die. Empirical evidence shows that the level of personal involvement in moral dilemmas is directly proportional to the level of emotional aversion to harm, with emotionally distressing dilemmas prompting more deontological responses (Greene

et al., 2001). Given that using a foreign language seems to decrease emotional responses (Pavlenko, 2017), one would expect bilingual individuals to demonstrate increased utilitarian responses when speaking their foreign language instead of their native one. Empirical evidence supports this prediction (Greene et al., 2001).

Emotion-based accounts of the FLE in moral dilemmas have employed dual-system models, such as Kahneman's (2003), to investigate the cognitive processes involved in this phenomenon. These frameworks suggest that moral decision-making is influenced by two factors: emotional responses to harm, which motivate deontological responding, and cognitive assessments of the consequences of the potential decision, which prompt utilitarian responding. According to these theories, System 1 processing, which is intuitive and emotion-based, is associated with deontological responding, while System 2 processing, which involves reflective reasoning, is linked to utilitarian responding (Greene et al., 2001). It has been argued that the increase in utilitarian responding associated with foreign languages may be due to a dampened sensitivity to emotional arousal while using them, which might reduce engagement of System 1 processing (Costa et al., 2014; Keysar et al., 2012).

However, recent developments suggest that the mechanisms underlying the FLE may be more complex than originally thought. Empirical evidence indicates that emotional distance may not be a necessary factor for the FLE; in a recent study, native bilinguals' choices on moral dilemmas varied as a function of language, despite both languages eliciting comparable emotional responses (Miozzo et al., 2020). Specifically, the researchers recruited native Italian (L1) users who were also proficient in a native regional language (L2). Their findings showed that the effects of regional languages on participants' moral choices were comparable to those reported for foreign languages: when using their regional language, individuals displayed reduced susceptibility to decision-making biases and, in the context of the trolley dilemma, a greater inclination towards utilitarian decisions. Considering these findings, it has been argued that the term "foreign language effect" may be too narrow in scope, given that language effects seem to extend beyond foreign languages (Peressotti et al., submitted). Critically, Miozzo et.

al (2020) found that participants' emotional ratings of target phrases did not vary as a function of the language in which they were presented, thus suggesting that national and regional languages elicited affective responses of similar intensity. Given the inconsistency of emotion-based accounts of the FLE with these and similar findings (e.g., Geipel et al., 2015), psycholinguists have increasingly turned their attention to exploring alternative explanations; one notable candidate under investigation has been the role of relevant sociolinguistic features. As Miozzo et al. (2020) point out, the two regional languages investigated in their study, Venetian and Bergamasque, are typically used in informal and familial settings. Similarly, the English language is largely absent in public and institutional contexts (ISTAT, 2015). On the other hand, Italian, the national language, holds a different status: not only is it the primary language taught in schools, but it also is the standard for written and oral formal communication, so its usage extends beyond intimate circles. Consequently, the researchers suggested that common sociolinguistic features shared by regional and foreign languages might explain their similar effects on decision-making; one hypothesis is that foreign and regional languages similarly influence moral judgment by reducing access to normative knowledge. The *reduced access to social norms hypothesis* assumes that social and moral rules are typically learned through first, native languages (Geipel et al., 2015; Miozzo et al., 2020). The idea is that values, principles, and norms, which are commonly encountered within the school system, media, and institutions, might be more easily retrieved when people use the language through which they have learnt them – usually the “official” one. In line with this hypothesis is evidence that shows that memories retain a trace of the language in which they were encoded (Schrauf & Rubin, 2000). Given that decision-making seems to be influenced by the information available at the time of the decision (Johnson et al., 2007), languages that provide access to moral normative knowledge to different degrees might lead to different moral decisions.

1.4 Mapping Morality: The Moral Foundation Theory

To understand the complex relationship between language and moral processes, it is imperative to identify a framework which provides a systematic understanding of how morality

is structured and operates. Moral theories aim to do so by pinpointing the fundamental principles that underlie the values and norms endorsed by different societies. Scholars have long debated whether the moral mind can be reduced to a single core ideal, which *monist* theorists argue in favour of, or whether it is built on multiple foundational elements, as *pluralists* suggest (Graham et al., 2013). Recent advancements in psychological research (e.g. Haidt & Joseph, 2007) have exposed the limitations of theories that propose a single, core, moral dimension. Rather, current views support the notion that there are multiple fundamental elements underlying moral systems. One notable example of a pluralist framework is the Moral Foundations Theory (hereafter MFT), which has obtained a significant amount of empirical evidence (e.g., Graham et al., 2013).

The MFT is grounded in the work of Haidt and Joseph (2007), who initially identified five psychological foundations of human morality. These five dimensions, namely Harm, Fairness, Ingroup, Authority, and Purity, are considered as the basic building blocks upon which moral systems are built across cultures. According to this theory, the moral mind is pre-structured into these five domains, which means that certain social concerns are more likely than others to become moralized throughout development. Although some scholars view evolutionary and cultural explanations of human behaviour as competing, the MFT integrates both perspectives. Its authors suggest that moral foundations are innate, and they conceive nativism as being “*organized in advance of experience*” (Haidt & Joseph, 2007, p. 61). This definition implies that moral foundations are not only innate, but also influenced by environmental factors. The evolutionary hypothesis of the MFT is that moral foundations were shaped by adaptive challenges that our ancestors have faced since the dawn of human history. Those who were more effective at solving these challenges were more likely to have reproductive success. To illustrate the point, Haidt and Joseph (2007) examine how the Harm foundation in humans includes a heightened sensitivity toward harm or suffering, particularly when it is experienced by those who are weak or vulnerable. They suggest that this innate predisposition to detect harm can evoke the emotion of compassion, which motivates the

individual to relieve suffering or to protect the victim of such harm. An exemplary demonstration of the Harm foundation in action is the natural tendency of a parent to protect their child, which is indeed an adaptive response. If humans possess a strong emotional sensitivity to harm, and if they have a language to communicate, it is highly probable that they will eventually develop a way to articulate their emotional responses. This moral vocabulary may include words for virtue and vice, allowing them to praise or criticize others. As a result, language can ultimately shape the boundaries and functions of harm-detection systems, allowing cultures to uniquely define harmful behaviour and appropriate responses (Haidt & Joseph, 2007).

1.5 Moral Foundations and the Foreign Language Effect

As a direct result of the MFT, the Moral Foundations Questionnaire (hereafter MFQ; Graham et al., 2011) was designed to map individual variations in moral beliefs and concerns. This 30-item self-report scale has been used to measure the extent to which individuals prioritize the different five foundational domains when making moral decisions. The MFQ involves participants giving judgments about statements and scenarios that relate to each of the five moral foundations. The questionnaire has shown good internal and external validity and has proved to be consistent across cultures (Graham et al., 2011). The MFQ has been employed extensively to explore a range of topics related to moral psychology, including political ideology, religious faith, and cultural differences. (Graham et al., 2013). Notably, the MFQ has also been used to expand our understanding of the foreign language effect.

Recently, Peressotti et al. (submitted) conducted a study to investigate how the language used by bilingual individuals affects the moral foundations proposed under the MFT. They investigated moral judgments in three types of language: a native national language, a native regional language, and a foreign language. Crone and Laham (2015) had previously reported that individuals' responses to sacrificial dilemmas are predicted by their MFQ scores in three of the five proposed foundations: Harm, Purity, and Ingroup. Considering these findings, the

authors hypothesized that if presenting the dilemmas in a foreign language affects the same foundations that underlie responses to sacrificial dilemmas, foreign languages would also affect their respective MFQ scores. Notably, the authors found significant differences in the scores of several moral foundations (Harm, Fairness, Ingroup, and Purity) when the questionnaire was presented in participants' native national language compared to their foreign language. According to the Peressotti et al. (submitted), mounting evidence supports the idea that the use of foreign languages can bring about noticeable modifications in decision-making by modulating the relative relevance of different moral foundations. Remarkably, data concerning the native regional language yielded an interesting finding: regional and foreign languages had similar effects on all the affected moral foundations scores, except for the Ingroup foundation. That is, loyalty to the group and the nation was valued more in the foreign than in the native regional language. The explanation advanced by the authors, consistent with the hypothesis put forth by Miozzo et al. (2020), suggests that similar activation of moral foundations across languages might be explained in terms of similar levels of accessibility of societal norms when using said languages. Nevertheless, the fact that scores for the Ingroup foundation were comparable in the two native languages but differed in the foreign one offers novel directions to further investigate and define the boundaries of the FLE. Further research is needed to understand which differences between these languages, whether sociolinguistic or not, might account for this incongruency.

1.6 Parochial Altruism

Research in the field of moral psychology has been exploring the ways in which human morality influences and directs behaviour, and understanding the foundations of parochialism in prosocial behaviour has long been an area of investigation. Parochial altruism refers to the human tendency to show greater prosocial behavior towards members of one's own group than towards those outside of it. This phenomenon has been observed across cultures and historical eras (Romano et al., 2017), and research suggests that it might have developed as an adaptive

behaviour by promoting group cohesion, but also that it is highly shaped by cultural influences (Bowles & Gintis, 2004).

One theoretical framework that has long been used to explain parochialism is the Social Identity Theory (Tajfel et al., 1971, as cited in Balliet et al., 2014). According to this theory, an individual's sense of belongingness to certain social groups plays a central role in defining, protecting, and reinforcing self-identity. Group identities are conceived to entail two elements: a clear demarcation between one's in-group and out-groups, as well as a positive bias toward the former and a negative one toward the latter. This so-called *in-group bias* results in greater cooperation with members of one's in-group than those belonging to one's out-groups (Masuda & Fu, 2015). There is abundant empirical evidence in support of this theory. For instance, Tajfel et al.'s (1971) minimal group paradigm showed that people display in-group bias even when groups are formed based on trivial criteria. In these experiments, participants were divided into groups based on similar score on insignificant tasks such as subjective ratings of paintings or brightness ratings of different lights. Once assigned to a group, participants were instructed to allocate money among members from both their own group as well as from opposing groups. Although they did not show any personal attachment to their group, participants consistently gave more money to their groupmates than to people from other groups. These findings indicate that people tend to favour individuals they perceive to be similar to themselves even when criteria for similarity are completely arbitrary (Tajfel et al., 1971).

Most of the research on parochial behaviour has operated under the assumption that in-group and out-groups are mutually exclusive. A different conceptualization has recently been proposed by Brewer et al. (2023), who suggest that parochialism can be defined in terms of the *inclusiveness* of multiple, interconnected in-group identities. The argument is that in contemporary societies, people often belong to different social groups which are nested within one another. As a result, an individual might simultaneously identify as a member of their soccer club, city, region, and nation, as well as a citizen of the world. It is crucial to note how in such systems benefits to the superordinate group (i.e., the nation) not only result in benefits

to one's subordinate group (i.e., the region), but also to other out-groups (i.e., other regions). Thus, even in such hierarchal systems of in-groups, there remains the essential mark of group identities: a separate, contrasting "other". The authors suggest that within this framework, parochialism can be defined as restricting one's prosocial behaviour to groups with lower degrees of inclusivity. In their study, Brewer et al. (2023) gave US participants the opportunity to donate money to one of three different charities. These charities were identical in all aspects except for their geographic reach and target population; one operated at the state level, one at the national level, and another at the international level. Crucially, it was found that the level of social identity strength among participants at each of these levels predicted inclusiveness of donations; people with strong in-group identities were more likely to donate to state charities compared to national or international ones.

Overall, two relevant conclusions can be drawn from research at hand. First, that using a foreign language is associated with a stronger endorsement of in-group attitudes. Second, that sense of belonging is associated to more prosocial behaviour towards fellow in-group members. However, it is still an open question whether using a foreign language can directly influence the scope of altruistic behavior. The present study sets out to address this question. Building on Brewer et al.'s paradigm (2023), we introduce a language manipulation, and we expect subjects' (1) propensity to donate and (2) average donations to vary as a function of the language used, especially when in favour of a local community.

CHAPTER 2: METHODS

2.1 Participants

The data collection process began on May 25, 2023, and the survey was distributed online. Participants were recruited from the Prolific worker pool and were screened to include only Italian citizens who reported Italian as their first language and a sufficient level of English proficiency. All subjects were subsequently tested on a 10-item English questionnaire to ensure that only fluent bilinguals would be included in the study. Sample size was calculated on extant research that suggests including 100 participants per experimental group (Brysbaert, 2019), thus, in the context of our design, 200 participants for two language groups. To prevent an insufficient amount of data on donation behavior due to possible low donation rate - warned by data collected by Brewer et al. (2023) - we decided to double the number of participants. The final population for the study comprised 400 subjects, a sample size that we deemed reasonable while still being mindful of our financial resources. At the time of writing data collection is still in progress, and thus it is not possible to provide accurate demographic information regarding the sample.

2.2 Materials and Procedure

The questionnaire was first written in Italian drawing inspiration from that employed by Brewer et al. (2023). Subsequently, it was translated into English by proficient English-Italian bilinguals, and finally back-translated into Italian and compared to the original version by a third party; minor adjustments were made to ensure that the two surveys were similar in all aspects. Participants were randomly assigned to one of two language conditions, i.e., Italian or English. Drawing from Brewer et al.'s (2023) paper, we adopted the context of the post-COVID-19 pandemic world to introduce our donation paradigm. After providing basic demographic information (including their region of residence), the subjects read a text describing the dramatic consequences of the pandemic crisis of the last few years on the Italian

education system and the development of school-aged children. Data were retrieved from two reports conducted by Save The Children Italia (STCI, 2020; STCI 2022), and highlighted the socioeconomic differences that played a crucial role in determining the impact of the COVID-19 pandemic on the youth across Italy (see Appendix A for full text). Then, subjects received the following instructions:

The institutions sponsoring this study decided to donate part of the research funds to initiatives supporting the children and adolescents most affected by the pandemic. By participating in this study, you'll receive a further compensation of 2.5 euros, to be added to your initial compensation of 1.5 euros. You can choose to keep the entire amount or to donate it, fully or partially, to one of two non-profit organizations. [...]

Non-profit organization (A) operates in the province of [participant's province of residence]. Its highly prepared and motivated teachers provide after-school programs to children and teenagers living in this province.

Non-profit organization (B) operates throughout Italy. Its highly prepared and motivated teachers provide after-school programs to children and teenagers who live in different parts of Italy.

Please note that the amount you donate will be doubled with our funds before being assigned to the organization of your choice. For example, if you donate 1 euro of your compensation, the association you chose will receive 2 euros; if you donate 1.5 euros, this association will receive 3 euros, and so on.

The order in which the two charities were presented was counterbalanced across participants. In addition, the region in which the smaller-scope charity operated varied depending on participants' input and matched their region of residence. This approach ensured that the regional charity had the potential to elicit a regional in-group identity in all participants, while also allowing for geographic variation. A comprehension check was used to verify full

comprehension of the instructions; if a respondent failed to pass the test three times, they were immediately rejected from the study and no further data was collected. Subsequently, participants were given the chance to donate to either of the two charities. If they expressed a willingness to do so, they were then asked to indicate their preferred charity and specify any amount up to 4 euros. Participants in the English condition were then asked to self-rate their comprehension of the whole questionnaire.

The second section of the questionnaire was presented in Italian to all participants; after a series of filler questions related to the COVID-19 pandemic, data regarding participants' social identities were collected. Specifically, participants were asked to provide ratings of their attachment to their province and nation, as well as report the strength of their identification with these communities and their perceived similarity to fellow members within them. These questions served two purposes: first, to gain insight into the interconnected nature of individuals' multiple, coexisting, and nested social identities, and second, to explore their interplay with donation preferences. Individual differences in social identities have been shown to shape prosocial behaviour, including donation preferences (Aaker & Akutsu, 2009). Some individuals may strongly identify with their immediate community, emphasizing a sense of local belonging and prioritizing support for local causes, while others may exhibit a greater identification with their nation, endorsing a broader national unity and expressing support towards national initiatives. Moreover, individuals who possess multiple strong social identities may have to balance their local and national identities, with each identity contributing differently to shaping prosocial behaviour. Consequently, these questions were designed to explore the potential contribution of these individual differences to our findings. Lastly, we gathered information about participants' English proficiency, age of acquisition, and daily use.

It should be noted that the charities presented were purely fictional as, unfortunately, legal constraints prevented the University of Padova from carrying out the intended donations. Crucially, this information was not disclosed to the participants until the end of the study. After all data had been collected, respondents received a disclosure message in which they learnt

detailed information about the aims of the study, as well as that they would receive the entire sum they were allocated (4€) regardless of their choice. Nevertheless, they were strongly encouraged to make an independent donation to a charity of their choice. Participation in the research was voluntary and subjects gave their written informed consent to the use of their data both before the survey and after they received the disclosure form. The experimental procedure was approved by the Psychological Research Ethics Committee of the University of Padova.

2.3 Measures

a. Donations. The dependent variables in this study were the percentage of donations, the average amount selected by donors, and the proportion between donations to each charity. To mitigate the potential issue of insufficient behavioural data due to a low donation rate, we implemented an additional measure of donation intention; prior to the donation task, participants were asked to report the strength of their willingness to contribute to each of the two charities. This assessment was conducted using a 5-point scale for each of the two items, and the average ratings were then used to create indexes of donation intention at each level of charity inclusivity.

b. Language. Language condition acted as our independent variable. Due to our screening criteria, only participants with an adequate knowledge of English were recruited for experiment. Additionally, the survey included a 10-item English test to assess their proficiency level. Lastly, participants' age of English acquisition was recorded, and they were asked to estimate the degree to which they used the foreign language in a range of different daily life contexts.

c. Social Identity. To measure social identification, we employed two three-item scales which assessed participants' attachment, closeness, and perception of being member of either their regional or national community. Items were adapted from previous research conducted by Buchan et al. (2011). Respondents rated each item on a 4-point scale, and the average rating was computed to create an index of the strength of social identity at each level of charity inclusivity (see Appendix B for an overview of the items).

CHAPTER 3: CONCLUSIONS

3.1 Expected results

Since the data collection process has not been completed at the time of writing, it is not possible to carry out data analyses or draw reliable conclusions. Consequently, our understanding of the relationship between language, morality, and altruism within our design remains speculative, and it is only possible to hypothesize about expected outcomes basing our predictions on the above-cited research and theory.

The first result we might expect is that participants exhibit an increased propensity to donate when presented with the survey in a foreign language rather than their native one. This prediction is supported by research suggesting that individualizing moral foundations - fairness and harm - align with the intention to assist an aid people in need, irrespective of their affiliations or group membership. In fact, these foundations have shown positive correlations with both self-reported and actual donations to charities in experimental settings (Nilsson et al., 2016). Therefore, given empirical evidence that individuals tend to score higher on harm foundation measures when using a foreign language (Peressotti et al., submitted), we predict a foreign language effect on the propensity to donate, irrespective of the type of charity.

Additionally, we expect to find a generalized preference for donating to provincial charities over national ones, regardless of language condition. This hypothesis aligns with empirical evidence indicating that when two in-group identities are activated, individuals tend to display greater altruistic behaviour towards the in-group with a narrower inclusiveness scope (Brewer et al., 2023). Such a result is to be expected considering the well-established phenomenon of parochial altruism, which denotes the human tendency to prioritize and show greater prosocial behaviour towards members of one's own group over of individuals outside of it (Bowles & Gintis, 2004).

Lastly, we anticipate a stronger inclination for individuals to donate to the provincial charity in the foreign language condition compared to the native language condition. This prediction is supported by two key findings; not only is there evidence to suggest that activation of the ingroup foundation, as measured by the MFQ, tends to be higher when individuals use a foreign language instead of their native language (Peressotti et al., submitted), but also an association between ingroup attitudes and parochialism has been found in research employing experimental donation paradigms (Nilsson et al., 2016). Thus, our hypothesis is that when participants use a foreign language, a heightened activation of ingroup attitudes may influence their donation preferences, leading to a stronger inclination towards parochialism.

3.2 Conclusions

In conclusion, since data analysis and reliable conclusions remain pending, we can only hypothesize about the expected outcomes of the present study. Firstly, we anticipate a foreign language effect on donation behavior, with higher donation levels when participants complete the survey in a foreign language. Additionally, we expect individuals to display a preference for donating to provincial charities over national ones, regardless of language condition. Finally, we predict a stronger inclination to donate to the provincial charity when the questionnaire is administered in the foreign language compared to the native language. These predictions are based on the aforementioned theoretical framework and existing research, and their examination will contribute to a deeper understanding of the complex interplay between language, moral foundations, and parochialism.

REFERENCES

- Aaker, J. L., & Akutsu, S. (2009). Why do people give? The role of identity in giving. *Journal of Consumer Psychology, 19*(3), 267–270.
<https://doi.org/10.1016/j.jcps.2009.05.010>
- Balliet, D., Wu, J., & De Dreu, C. K. W. (2014). Ingroup favoritism in cooperation: A meta-analysis. *Psychological Bulletin, 140*(6), 1556–1581.
<https://doi.org/10.1037/a0037737>
- Benjamin, D. J., Brown, S. A., & Shapiro, J. M. (2006). Who is “Behavioral”? Cognitive Ability and Anomalous Preferences. *SSRN Electronic Journal*.
<https://doi.org/10.2139/ssrn.675264>
- Bowles, S., & Gintis, H. (2004). The evolution of strong reciprocity: Cooperation in heterogeneous populations. *Theoretical Population Biology, 65*(1), 17–28.
<https://doi.org/10.1016/j.tpb.2003.07.001>
- Brewer, M. B., Buchan, N. R., Ozturk, O. D., & Grimalda, G. (2023). Parochial Altruism and Political Ideology. *Political Psychology, 44*(2), 383–396.
<https://doi.org/10.1111/pops.12852>
- Brysbaert, M. (2019). How Many Participants Do We Have to Include in Properly Powered Experiments? A Tutorial of Power Analysis with Reference Tables. *Journal of Cognition, 2*(1), 16. <https://doi.org/10.5334/joc.72>
- Buchan, N. R., Brewer, M. B., Grimalda, G., Wilson, R. K., Fatas, E., & Foddy, M. (2011). Global Social Identity and Global Cooperation. *Psychological Science, 22*(6), 821–828. <https://doi.org/10.1177/0956797611409590>
- Circi, R., Gatti, D., Russo, V., & Vecchi, T. (2021). The foreign language effect on decision-making: A meta-analysis. *Psychonomic Bulletin & Review, 28*(4), 1131–1141.
<https://doi.org/10.3758/s13423-020-01871-z>

- Costa, A., Foucart, A., Arnon, I., Aparici, M., & Apesteguia, J. (2014). “Piensa” twice: On the foreign language effect in decision making. *Cognition*, *130*(2), 236–254.
<https://doi.org/10.1016/j.cognition.2013.11.010>
- Crone, D. L., & Laham, S. M. (2015). Multiple moral foundations predict responses to sacrificial dilemmas. *Personality and Individual Differences*, *85*, 60–65.
<https://doi.org/10.1016/j.paid.2015.04.041>
- Del Maschio, N., Crespi, F., Peressotti, F., Abutalebi, J., & Sulpizio, S. (2022). Decision-making depends on language: A meta-analysis of the Foreign Language Effect. *Bilingualism: Language and Cognition*, *25*(4), 617–630.
<https://doi.org/10.1017/S1366728921001012>
- Favreau, M., & Segalowitz, N. S. (1983). Automatic and controlled processes in the first- and second-language reading of fluent bilinguals. *Memory & Cognition*, *11*(6), 565–574.
<https://doi.org/10.3758/BF03198281>
- Foot, P. (1967) The Problem of Abortion and the Doctrine of the Double Effect, in *Virtues and Vices and Other Essays in Moral Philosophy*.
- Geipel, J., Hadjichristidis, C., & Surian, L. (2015). The Foreign Language Effect on Moral Judgment: The Role of Emotions and Norms. *PLOS ONE*, *10*(7), e0131529.
<https://doi.org/10.1371/journal.pone.0131529>
- Graham, J., Haidt, J., Koleva, S., Motyl, M., Iyer, R., Wojcik, S. P., & Ditto, P. H. (2013). Moral Foundations Theory. In *Advances in Experimental Social Psychology* (Vol. 47, pp. 55–130). Elsevier. <https://doi.org/10.1016/B978-0-12-407236-7.00002-4>
- Graham, J., Nosek, B. A., Haidt, J., Iyer, R., Spassena, K., & Ditto, P. H. (2011). *Moral Foundations Questionnaire* [Data set]. <https://doi.org/10.1037/t05651-000>
- Greene, J. D., Sommerville, R. B., Nystrom, L. E., Darley, J. M., & Cohen, J. D. (2001). An fMRI Investigation of Emotional Engagement in Moral Judgment. *Science*, *293*(5537), 2105–2108. <https://doi.org/10.1126/science.1062872>

- Haidt, J. (2007). The New Synthesis in Moral Psychology. *Science*, 316(5827), 998–1002.
<https://doi.org/10.1126/science.1137651>
- Haidt, J., & Joseph, C. (2007). 19 The Moral Mind: *How Five Sets of Innate Intuitions Guide the Development of Many Culture-Specific Virtues, and Perhaps Even Modules*. In P. Carruthers & S. Laurence (Eds.), *The Innate Mind, Volume 3* (1st ed., pp. 367–392). Oxford University Press New York.
<https://doi.org/10.1093/acprof:oso/9780195332834.003.0019>
- ISTAT (2015). L' uso della lingua italiana, dei dialetti e delle lingue straniere. Retrieved from
https://www.istat.it/it/files/2017/12/Report_Uso-italiano_dialetti_altrelingue_2015.pdf
- Johnson, E. J., Häubl, G., & Keinan, A. (2007). Aspects of endowment: A query theory of value construction. *Journal of Experimental Psychology: Learning, Memory, and Cognition*, 33(3), 461–474. <https://doi.org/10.1037/0278-7393.33.3.461>
- Kahneman, D. (2003). A perspective on judgment and choice: Mapping bounded rationality. *American Psychologist*, 58(9), 697–720. <https://doi.org/10.1037/0003-066X.58.9.697>
- Keysar, B., Hayakawa, S. L., & An, S. G. (2012). The Foreign-Language Effect: Thinking in a Foreign Tongue Reduces Decision Biases. *Psychological Science*, 23(6), 661–668.
<https://doi.org/10.1177/0956797611432178>
- Masuda, N., & Fu, F. (2015). Evolutionary models of in-group favoritism. *F1000Prime Reports*, 7. <https://doi.org/10.12703/P7-27>
- Miozzo, M., Navarrete, E., Ongis, M., Mello, E., Giroto, V., & Peressotti, F. (2020). Foreign language effect in decision-making: How foreign is it? *Cognition*, 199, 104245.
<https://doi.org/10.1016/j.cognition.2020.104245>
- Nilsson, A., Erlandsson, A., & Västfjäll, D. (2016). The congruency between moral foundations and intentions to donate, self-reported donations, and actual donations to charity. *Journal of Research in Personality*, 65, 22–29.
<https://doi.org/10.1016/j.jrp.2016.07.001>

- Pavlenko, A. (2017). Do you wish to waive your rights? Affect and decision-making in multilingual speakers. *Current Opinion in Psychology*, *17*, 74–78.
<https://doi.org/10.1016/j.copsyc.2017.06.005>
- Peressotti, F., Lorenzoni, A., Miozzo M. (submitted). Moral judgments in native, regional and foreign languages. *Bilingualism: Language and Cognition*, under review.
- Romano, A., Balliet, D., Yamagishi, T., & Liu, J. H. (2017). Parochial trust and cooperation across 17 societies. *Proceedings of the National Academy of Sciences*, *114*(48), 12702–12707. <https://doi.org/10.1073/pnas.1712921114>
- Save The Children Italia (2020). L''impatto del coronavirus sulla povertà educativa. Retrieved from <https://www.savethechildren.it/cosa-facciamo/pubblicazioni/impatto-del-coronavirus-sulla-poverta-educativa>
- Save The Children Italia (2022). Alla ricerca del tempo perduto. Retrieved from <https://www.savethechildren.it/cosa-facciamo/pubblicazioni/alla-ricerca-del-tempo-perduto>
- Schrauf, R. W., & Rubin, D. C. (2000). Internal languages of retrieval: The bilingual encoding of memories for the personal past. *Memory & Cognition*, *28*(4), 616–623.
<https://doi.org/10.3758/BF03201251>
- Stankovic, M., Biedermann, B., & Hamamura, T. (2022). Not all bilinguals are the same: A meta-analysis of the moral foreign language effect. *Brain and Language*, *227*, 105082. <https://doi.org/10.1016/j.bandl.2022.105082>
- Tajfel, H., Billig, M. G., Bundy, R. P., & Flament, C. (1971). Social categorization and intergroup behaviour. *European Journal of Social Psychology*, *1*(2), 149–178.
<https://doi.org/10.1002/ejsp.2420010202>
- Thomson, J. J. (1976). Killing, Letting Die, and the Trolley Problem: *Monist*, *59*(2), 204–217.
<https://doi.org/10.5840/monist197659224>
- Trope, Y., & Liberman, N. (2010). Construal-level theory of psychological distance. *Psychological Review*, *117*(2), 440–463. <https://doi.org/10.1037/a0018963>

APPENDIX A

Survey Introductory Text

This appendix consists of the English version of the text describing the long-term consequences of the COVID-19 pandemic on the Italian educational system and youth that participants read before completing the critical donation task.

Introductory Text

Thank you for participating in this study. Its objective is to understand how people perceive the consequences of the restrictions imposed during the COVID-19 pandemic, particularly the restrictions that have affected children and teenagers. We would like you to answer a few questions. You will be compensated 1.5 euros (1.3 £) for answering these questions.

The COVID-19 pandemic profoundly changed the school experience of children and adolescents. They had to learn remotely and could not participate in important social activities, such as school trips or playtime. Remote learning turned out to be in many respects problematic. In 2019, more than one in ten Italian children and adolescents did not have access to electronic devices required to attend classes online. The results of the INVALSI tests conducted in 2021 and 2022 showed a dramatic decline in Italian students' learning. Almost 25% of fifteen-year-old students did not acquire basic skills in mathematics, sciences, and literature.

The pandemic prevented or strongly limited the participation in extracurricular activities – such as sports and music – impacting the acquisition of critical skills. The mental health of young people was significantly affected by the pandemic. Cases of anxiety and depression have increased dramatically among them. Children and adolescents have not been

equally affected. Those from low-income families or with disabilities were the most affected. The long-term consequences on psychological development and mental health are presently unknown.

The institutions sponsoring this study decided to donate part of the research funds to initiatives supporting the children and adolescents most affected by the pandemic. By participating in this study, you'll receive a further compensation of 2.5 euros, to be added to your initial compensation of 1.5 euros. You can choose to keep the entire amount or to donate it, fully or partially, to one of two non-profit organizations.

These non-profit organizations want to close the learning gap experienced by the young people and offer them new opportunities of socialization and cultural enrichment. They fund after-school programs designed to alleviate the effects of the pandemic. These programs are specifically directed to young people who suffered the most from the pandemic. Children and adolescents from the most socio-economically disadvantaged communities meet in a safe environment where they can learn together and spend time with their peers. The programs sponsored by the non-profit organizations have several objectives: to improve mathematical and linguistic skills, to promote interest in science and technology, to provide opportunities for artistic and cultural enrichment, and to create an inclusive and welcoming learning environment for all.

APPENDIX B

Social Identity Scales

This appendix consists of the English translation of the scales used to assess participants' social identities both at the provincial and national level. Each scale comprises three items adapted from Brewer et al. (2023) and originally created by Buchan et al. (2011). Within the provincial identity scale, the reported province varied depending on participants' input and matched their region of residence. Participants could select one of the four possible answers.

Provincial Identity Scale

1. How strong is your attachment to the province of [*province*]?
 - Not strong at all
 - Somewhat strong
 - Moderately strong
 - Very strong

2. To what extent do you consider yourself a member of the province of [*province*]?
 - Not at all
 - Slightly
 - Moderately
 - Very much

3. How close do you feel to other members of the community of the province of [*province*]?
 - Not at all
 - Slightly
 - Moderately
 - Very close

National Identity Scale

4. How strong is your attachment to Italy?
 - Not strong at all
 - Somewhat strong
 - Moderately strong
 - Very strong

5. To what extent do you consider yourself a member of the Italian community?
 - Not at all
 - Slightly
 - Moderately
 - Very much

6. How close do you feel to other members of the Italian community?
 - Not at all
 - Slightly
 - Moderately
 - Very close