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**Essays on the Application of Heuristics
in Charitable Giving**

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Declaration

To my late grandmother, who implanted in me first the importance of education.

Abstract of the thesis

As in different life scenarios, it is not uncommon for donors when their judgment to donate is invoked by heuristics. Although diverse types of heuristics exist, in this dissertation, we showed how two heuristics are the basis for the unpacking principle of support theory and the identifiable victim effect. Employing these heuristics was supposed to bring more charitability. Our general objective in this dissertation aims to challenge the accustomed outcomes of the two theories in charitable giving in our setting.

Chapter 1 revises the application of the unpacking principle and the identifiable victim effect in different fields of study.

Chapter 2, jointly written with Umberto Galmarini and Giuseppe Porro, tests two donation appeals whether it comply with the subadditivity principle. Using the lab experiment that applies online software(classEx), our between-subjects design produced statistically insignificant mean contributions across participants of donors for packed and unpacked appeal in both studies. Overall, our result suggests that the unpacking principle cannot be subadditive but rather additive for the experiment platform we followed. This is consistent with the originator of the support theories (Tversky and Koehler, 1994) claim. As they mentioned, the unpacking principle holds in weak inequality.

Chapter 3, co-authored with Umberto Galmarini and Giuseppe Porro, sets up a laboratory experiment to explore whether and how donations decisions to a charity are influenced by (i) the social distance between the donors and the beneficiaries assisted by the charity, and (ii) the identifiability of the beneficiary in the charity's appeal. We find that donors give more, on average, to an unidentified than to an identified beneficiary. Donations are the same, on average, to in-group and to out-group beneficiaries; however, an in-group beneficiary is more likely to receive the entire endowment (€10) than an out-group beneficiary, whereas the latter are more likely than the former to receive a high donation, between €6 and €9. As we discuss, not all results were in line with previous empirical findings and with the hypothesis we made before conducting the experiment.

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Chapter 1

Mapping Practice of Heuristics: Review of Literatures

1.1 Introduction

Daily, an individual makes as many as 35,000 *trivial* (e.g., "what should I drink with lunch?" "What should I watch on TV?"), and *consequential* decisions (e.g., "how should I invest my retirement funds?" "Should I marry this person?"), based on various choice situations (Decision Science, n.d; Leboeuf and Shafir,2005).

In addition to the distinction between trivial and consequential, everyday decisions can be categorized based on the decision-maker's¹ knowledge about and anticipation of consequences. These are: a) under certainty, the decision-maker makes choices among results certain to occur in the future. For instance, take selecting items from a menu. b) under risk, akin to bookmaking or insurance, probabilities of events are known for different actions that result in different outcomes. c) under subjective uncertainty, except the likelihood of the events is not objectively known, this scenario looks like a risk. d) under ambiguity, the probabilities of events are unknown; thus, a decision-maker must estimate them. e) under true uncertainty, in this case, the outcomes and probabilities are undetermined; that is why the objective/subjective estimates of these events and likelihoods are non-existence (Dhami et al., 2019; LeBoeuf and Shafir, 2005).

We could process the above different situations of choices using two distinctive economic thoughts, namely, classical or behavioural economics. In the view of classical economics, human decision-making is essentially rational and calculated in terms of all available information. Main assumptions include that decision-maker: decides us-

¹Throughout the chapter, we used an individual decision-maker and a judge interchangeably.

ing infinite attention, computation power, and recall; for identical information, the influence of frames of problems is null; do not affect by any roles of emotion when she decides; uses every law of statistics and mathematics; “engage in instantaneous mathematical optimization to static and dynamic problems and update their prior beliefs using Bayes’ law.” Thus, Bayesian rationality (or “full rationality” Griffin et al., 2012; Gilovich and Griffin, 2002) approaches the mentioned assumptions (Dhimi et al., 2019).

Nonetheless, in their meta-analysis, Dhimi et al. (2019) declared the empirical validity of Bayesian rationality in economics as “*little or no.*” As a result, the inclusion of psychological thoughts in economics would enhance our understanding of human decision-making in real-life situations, and such an approach is called behavioural economics. Moreover, unlike classical economics, the pillar assumption of behavioural economics is *bounded rationality*.

1.1.1 The concept of bounded rationality

In the following paragraphs, we will review: *what* bounded rationality is; *why* rationality is bounded; *when* bounded rationality comes into academia; and *how* a judge processes decisions in the case of bounded rationality, respectively.

What is bounded rationality?

Everyday reality involves situations when a judge does not have time to think about a question or lacks “cognitive resources” to process an issue or consciously hold her mind. In such situations, subconscious shortcuts and biases are the sole drivers for making judgments. This real-life scenario assumes a decision-maker as a bounded creature (Bradley, 2017). What is more, different fields of studies comply with the nature boundedness of human rationality, as does Economics.

Why is rationality bounded?

Conlisk (1996) justified the integration of bounded rationality into various economic theories by giving four reasonings. One, empirically, there is evidence of the necessity of bounded rationality. Two, numerous studies using bounded rationality resulted in remarkable outputs. Three, the reasonings on the assumptions of full rationality were unbelievable. Four, using unbounded rationality, the cost of deliberating economic decisions is expensive.

When did bounded rationality become a key academic concept?

The 1978 Nobel laureate in economics—Herbert Simon, was the first to argue the rational choice model as an unrealistic assumption for processing systems, including all available computers at the time, let alone humans. That is why Simon proposed ration-

ality that accepted the limited computational capacity of human brains and search. In the meantime, he coined the rationality people will reason and act to accomplish their goals as the “bounded rationality” (Griffin et al., 2012; Gilovich and Griffin, 2002).

Furthermore, unlike classical economics, which put optimality as an objective of a judge, Herbert Simon introduced the concept of "satisficing"—a decision-maker should achieve limited goals. Simon forwarded three elements of satisficing: it is a strategy that prioritizes local or simple options over distant ones; it has a stopping rule that determines what level of aspiration to reach and how far to continue the search; and it is a simplified assessment of future value that gives a fairly vague indication of the actual value of choice (Griffin and Kahneman, 2002; Griffin et al., 2012). In addition, Simon (2000) set the goal of decision-maker by interpreting Voltaire’s well-known saying, "the best is the enemy of the good." By implication, "if you are too preoccupied with attaining the optimum, you will not even get an acceptable result (Simon, 2000). In other words, a decision-maker should obey the boundedness of human rationality and not strive for optimization akin to neoclassical economics.

How do judges make decision in bounded rationality?

The human mind lacks cognitive capacity; due to interruptions, not remembering things and decision-maker overwhelming feelings (Bradley, 2017; Wendel, 2020). In such a situation, a judge can map her decision-making process via a mechanism known as heuristics (Wendel, 2020). Meanwhile, Tversky and Kahneman (1996) explained heuristics as an intermediary unique mental operation that helps make intuitive estimates and judgements.

In general, the revolutionary work of Kahneman and Tversky—heuristics and bias—helped to depart analysing decisions science from Bayesian rationality to bounded rationality. In which, for the latter, decision-makers employ heuristics for their judgments. To achieve so, the complementary (sometimes controversial) works of Kahneman and Tversky on one side and Gigerenzer and others on the other were paramount (Dhami et al., 2019).

1.1.2 Chapter outline

In this review, we are interested in various applications of decision sciences that conform to the bounded nature of human rationality. Moreover, we are indulged in showing when the decision maker’s judgement will be based using heuristics. Regarding approaches, we follow the KT&O heuristics (representing the work of Kahneman, Tversky, and other researchers). Thus, we started by reviewing diverse applications of heurist-

ics that employ two theories. One, sub-section (2.1), reviews the unpacking principle (of support theory) in various applications. Two, sub-section (2.2), gives a brief description of the application of identifiable victim effect in(out) side charitable giving. Then, subsection (2.3) revises the application of heuristics in charitable giving. Finally, section (3) concludes the two mentioned theories as our recipe to test the hypothesis we envisioned in the second and third chapters of the thesis.

1.2 Application of heuristics to decision-making scenarios

The cost of deliberating economic decisions is expensive using unbounded rationality. However, as “good economics” requires reductions of all costs, in bounded rationality, decisions are made less costly (Conlisk, 1996). Meanwhile, the sources of cost reduction come from our long-term stored memory of events. Hence, we use a cognitive toolbox of mental heuristics to economize and make quick decisions (Hastie and Dawes, 2009; Wendel, 2020).

Here, we used two definitions for the word heuristics: the *noun* in heuristic indicates the “cognitive process”; the *adjective* in heuristic attribute stipulates the character that is substituted in a particular judgment. Furthermore, there were six general attributes of heuristics identified: “affect,” “availability,” “causality,” “fluency,” “representative,” and “surprise” (Kahneman, 2003; Gilovich and Griffin, 2002). Nonetheless, Mahmoud and Ross (2018) forwarded the claim of different researchers that argue that there may be as many as 150 heuristics available. For heuristics uses, diverse decision-making applied both a noun and adjective nature of heuristics. Fischhoff (2002) stipulated that the primary focus on the use of mental shortcuts was on “health,” “safety,” and “environmental decisions.” Although Fischhoff (2002) emphasised these decisions, the practicability of heuristics on charitable giving has not been adequately assessed.

In the following subsections, first, we review some research that used the adjective nature of heuristics. One of them is the unpacking effect of support theory, which was salient in different applications of decision makings. Support theory was rooted in the failure of extensionality principles — “events with the same extension are assigned the same probability” (Tversky and Koehler, 1994). In addition, this theory uses *availability* and *representative* heuristics (Tversky and Koehler, 1994). Our revision stretches to diverse outcome variables (probability, frequency, etc.) that use the unpacking principle.

Second, we reviewed some research that used a noun nature of heuristics (the cognitive process of a mind) to decide. One of the leading theories to pursue this nature of heuristics is the identifiable victim effect, where diverse decisions were made from it.

In the meantime, the heuristics type under identifiable victim effect stressed the duality of human judgments. That is to say, system one—uncontrolled and fast, and system two—controlled and slower—of a human mind.

1.2.1 Unpacking principle

The late Amos Tversky, and his then-student, Derek Koehler, discovered support theory in 1994. This theory is the “nonextensional” theory that allows the subjective probability (or frequency, evaluative, likelihood) of judgments to depend on the description of events (Koehler, 2000; Brenner et al., 2002).

Koehler (2000) presented the two cornerstones of support theory. First, a judged subjective probability (or relative frequency) of a description of events—hypothesis—depends on the relative support of the focal and alternative hypotheses. Moreover, Rottenstreich et al. (1999) said, for $s(A)$ and $s(B)$ —support value—of the focal and alternative hypothesis, respectively, as a rule of probability, their subjective probability sum should equal one. Evidently, the two hypotheses are *binary complementary* (Tversky and Koehler, 1994; Rottenstreich and Tversky, 1997; Fox, 1999; Brenner and Rottenstreich, 1999; Brenner et al., 2002).

Second, unpacking implicit disjunction (of focal hypothesis A) into its components A_1, A_2, \dots , increases its support and judged probability (Koehler, 2000). For instance, the subjective probability or frequency judgment of someone from death due to “natural causes”—implicit disjunction—is lower than its components: “heart disease, cancer and some other natural causes” —unpacked implicit disjunction (Tversky and Koehler, 1994). Hence, Koehler (2000) described the relationship between the support of A, “natural causes,” and its components, “heart disease,” “cancer,” and “some other natural causes”, as *subadditive* (that is, the sum of the parts is higher than the whole) or “unpacking principle” (Tversky and Koehler, 1994).

Sticking to the second assumption of support theory, we can have its offspring, i.e., the unpacking principle. As Tversky and Koehler (1994) posited, unpacking an event means when a judge assesses the probability judgment of a composite hypothesis by unpacking its components and adding its support (support is “the strength of evidence of the given description that is available to the judge” Tversky and Koehler, 1994). Nonetheless, the authors continued to say that the support based on the cues of summary representation is lower than the sum of sub-events of the hypothesis because of subadditivity. Tversky and Koehler called such a phenomenon the “basic principle of human judgment”. Moreover, Rottenstreich and Tversky (1997) reasoned that this scenario hap-

pens because unpacking an implicit hypothesis may remind people of possibilities they might have overlooked. The explicit mention of possibility tends to increase its salience and hence, its perceived support. In short, this idea will introduce the unpacking principle that compares unpacked and packed categories of events.

Where is the use of heuristics in the unpacking principle?

As we mentioned earlier, support is needed to judge a given hypothesis in packed or unpacked descriptions; heuristics, specifically representativeness, availability, or anchoring and adjustment heuristics, are sources of this support (Tversky and Koehler, 1994; Tversky and Kahneman, 1982). These mental shortcuts could mediate between the probability (frequency) judgment and the question asked by giving different support scales to packed and unpacked categories. Concerning the support scale of a hypothesis, the literature on support theory shows various determinants that could affect it and, in turn, the subadditivity. First, the size of the components, the more the size of the elements (in an unpacked hypothesis), the higher subadditivity and judged probability than the less unpacked hypothesis (Tversky and Koehler, 1994; Brenner and Rottenstreich, 1999; Brenner et al., 2002). Second, subadditivity is lower for frequency than probability judgments (Tversky and Koehler, 1994; Brenner et al., 2002). For instance (see the detail in sections 2.1.1 A and B), the subjective probability for the unpacked category for the cause of natural death was 73%. However, its parallel in the case of frequency judgment was 67%. Meanwhile, Brenner et al. (2002) interpreted the concept of probability as a propensity of judgment in the case of an individual. However, frequency is a propensity of judgment towards a "collection of cases." Third, the higher the match between the components of a hypothesis and its evidence (i.e. when heuristics estimate the source of evidence), the more subadditivity of support and probability of judgment (Rottenstreich et al., 1999; Brenner et al., 2002). As a result, these factors of subadditivity of support would produce a different (more) scale of support to an unpacked description.

Although Tversky and Koehler (1994) suggested subadditive judgment as a "basic principle of human judgment" in which the judged probability for the summation of parts of events is more than one, indeed, numerous empirical findings have proven so (see the following pages). Nonetheless, Macchi et al. (1999) demonstrated an individual's probability judgment as a *superadditive* —'the component judgments for a partition sum to less than one.' This scenario calls: sometimes unpacking principle will be unsuccessful (See Macchi et al., 1999; Sloman et al., 2004).

Unpacking versus Decomposition

Before laying on the empirical evidence on the unpacking principle, let us disen-

tangle the difference between unpacking and decomposition. It is customary by laypeople and even some experts to use unpacking and decomposition interchangeably (for example, take Menon 1997, which used the intuition of unpacking effect as decomposition). However, Kruger and Evans (2004) settled the confusion by giving peculiar differentiation on the subject matter. According to Kruger and Evans (2004), the difference between unpacking vs decomposition is clustered based on "operationalization," "theory," and "predictions."

Each cluster gives a vivid distinction between unpacking and decomposition. For example, take the "operationalization". Here, decomposition involves a "*literal*" breakdown of events in a category, separate estimates for components of a group, and then making multiple judgments. However, unpacking uses only a "*figurative*" description of a category to arrive at a single thought. Henceforward, we do not use unpacking and decomposition synonymously because of the mentioned and other variations.

Empirical Application of Unpacking Principle

The unpacking principle, from its inception, used a judge's probability (or frequency, numeric and evaluative) judgments as an outcome variable in different practical studies. In the following section, we will cover some examples of how unpacking affects human judgment.

A. Unpacking Principle in Probability Judgment

The earliest use of unpacking principles was applied in probability judgment and replicated in hosts of studies. For instance, the research by Redelmeier et al. (1995) elicited the unpacking effect for medical judgment and found that physicians (not laypeople) at Stanford University were presented with explicit clinical scenario describing a 22-year-old woman who reported to the emergency room with abdominal pain. Then, half of the physicians that were selected were randomly assigned to estimate the probability judgment for "gastroenteritis" and "ectopic pregnancy" and a residual category ("none of the above") as the cause of the pain. The rest half of the participants read two diagnostics: "gastroenteritis," "ectopic pregnancy," three more diagnostics ("appendicitis," "pyelonephritis," and "pelvic inflammatory disease"), and residual category ("none of the above"). The only difference between the two conditions was the residual category ("none of the above") in the first task that was partly detailed using three more new diagnostics in the second condition. Thus, it is logical to assume that the probability of residual "none of the above" in the first hypothesis should equal the sum

of the probabilities of the corresponding possibilities (i.e., "appendicitis," "pyelonephritis," and "pelvic inflammatory disease") of the second hypothesis. However, in alignment with the unpacking principle, the researchers found that the average probability assigned to the residual in the first condition was smaller than the sum of the three more diagnostics of the second condition (50% vs 69%, respectively).

Besides, the application by Ayton (1997) showed how British bookmakers utilized unpacking implicit disjunction for odds on predicting football results: victory, draw, or loss of a team. For example (betting on matches between English and Swiss teams), according to those bookmakers, the probability of England winning was the sum of the odds (in the unpacked hypothesis). England team lead the first half, and England wins the game, or Switzerland team lead the first half, but England wins the game, or first-half draw, but England wins the game, is higher (i.e., 66.5%) than a residual (implicit) hypothesis—England wins the game (i.e., 60%).

On the other hand, in a collaborative duty, the unpacking effect could reduce a participant's "egocentric behaviour". As an illustration, students from the fourth grade in central Indiana participated in the topic of organ donation as one of the projects run by the "Future Problem Solving Program." The project (i.e., preparation of a written document about organ donation) was a group work that comprised different teams and a team consisting of four members. After the final preparation of the document, participants were asked to apportion their responsibility for the overall work of the document. Those assigned randomly under the control condition with no mention of their teammates indicated their proportion between 0% ("did no of it") and 100% ("did all of it"). However, those participants in the unpacked condition were reminded to indicate the contribution of their teammates and themselves in the final output of the document. They were told all four allocations for a team were summed up as 100%. Nonetheless, the self-allocation of responsibility in both conditions were above 100% (i.e., for the control condition, $M = 154.6\%$ and $M = 106.8\%$ for the unpacked condition). Thus, those teams assigned under unpacked conditions would attenuate their egoistic behaviour more than otherwise (Savitsky et al., 2005, Study 1).

Last but not least, Tversky and Koehler (1994, Study 1) assessed various possible causes of death in America, which was responsible for the death of nearly 2 million people each year. To understand the causes, they used Stanford's students. Then, two groups of participants were asked to estimate the probability that a single patient would survive. As the first group, they presented the packed category of cause of death as: "natural causes". And the second group presented the unpacked category as "heart disease," "cancer," or "other natural causes." Thus, the probability estimate for the former group

was 58% and 73% for the latter.

B. Unpacking Effect in Frequency Judgment

A judge can also assess the description of events using frequency judgment. For example, in Tversky and Koehler's (1994, Study 1) study, the yearly death of Americans was reported as nearly 2 million. Due to various causes. Stanford's students were asked to estimate the cause of this death using frequency judgment. Accordingly, participants were asked to evaluate the percentage of patients sharing common symptoms with the deceased and who will survive. Then, a random participant that was grouped in the packed category — "natural causes", estimated 56%. However, those participants that read unpacked categories — "heart disease," "cancer," or "other natural causes", evaluated 67% as their frequency judgment. Meanwhile, we witnessed a difference (i.e., probability judgments are higher than frequency judgment) in estimation using probability and frequency judgment for the identical description—of a cause of natural death (in both packed and unpacked categories). Brenner et al. (2002, pp.495) justified why subadditivity for judgment with frequency was less than probability judgment by saying: "evaluating collections of instances is more likely to invoke considerations of inclusion and exclusion relations among hypotheses."

C. Unpacking Effect in Numeric Judgment

Succeeding the pioneering work of Tversky and Koehler (1994), the use of the unpacking principle (subadditivity) was employed to assess the numeric judgment (counting or enumeration) of hypotheses. With this notion, Kruger and Evans (2004, Experiment 1) postulated that the unpacking principle likely reduces the planning fallacy, in which judges underestimate the amount of time required to complete complex tasks. For instance, to counter a judge's proclivity of underestimating the length of time (hours) it takes to complete a given task, take a multifaceted assignment like "holiday shopping" or "getting ready for a date." When these tasks were detailed, they took a long time (mean=25.92 hours) than a packed task (mean =13.22 hours)(Kruger and Evans, 2004).

In addition, numeric judgment can be applied to evaluate past (retrospective) judgment. To demonstrate this case, take Vilches-Montero (2016, Study 1) work, which suggested a fictitious tourist who experienced different evaluative enjoyment from their past consumption events. If the judge's goal is to predict their future decision to visit the place again or not, Vilches-Montero (2016) found that when recollects of the past events are unpacked, a judge enumerates higher remembered enjoyment than packed recall.

D. Unpacking Principle in Evaluative Judgment

In addition to the early application of support theory that assesses the description of events using probability and frequency judgement, according to Van Boven and Epley (2003, Experiment 1), the unpacking effect worked in the evaluative judgment. First, Van Boven and Epley presented a fictitious story about an oil refinery found guilty of environmental pollution. Thereupon, the resulted pollution increased the "asthma," "lung cancer," "throat cancer," and "all other respiratory diseases" over a community—unpacked description and "all respiratory disease"—packed description. Then, participants were grouped into two and evaluated both scenarios; those who read the unpacked description assessed more on the "suffering" of the victims than the packed ones by the pollution. In terms of "compensation," those who read the explicit description presumed victims should compensate more than the packed description. Finally, participants given the unpacked story description evaluated the "severity of violation" to be more extreme and recommended that the plant close sooner than did those who read the packed description.

1.2.2 Identifiable victim effect

What is the Identifiable victim effect?

Usually, decision-makers' reactions to an identifiable victim are higher than those of a statistical victim whose identity is not identified (Small and Loewenstein, 2003). To elucidate the idea, imagine victims of an accident; for an identified victim, the *attention* and *resource* this victim acquire' outweigh the statistical(unnamed) victims. This process is known as the identifiable victim effect (IVE).

According to Jenni and Loewenstein (1997), there are four "potential causes" for why IVE happens:

a) An identifiable victim is more "vivid" than a statistical victim. b) An identifiable victim could match within a reference group (geographic region, race, or gender) of a judge; however, statistical victims are perceived as more distant. c) When a judge values an identifiable victim, she evaluates a victim's life in "ex-post," i.e., after the happening of a risk. Still, for statistical victims, her evaluation will be in "ex-ante," i.e., before the risk occurs. Nonetheless, as the author mentioned, a judge will make a responsible decision by evaluating more of an identifiable victim to avoid self-blame. d) The "certainty effect" for an identifiable victim outweighs that for a statistical victim.

To illustrate the fourth cause, a judge might give a higher value to a needy and identifiable victim because death(risk) is certain if she does not act. However, for statistical

victims, deaths are "probabilistic" or uncertain. Thus, under these choice situations (certainty vs uncertainty), a judge's subjective importance of identifiable death is affected by the "certainty effect" (Jenni and Loewenstein, 1997).

Where is the use of heuristics in the Identifiable victim effect?

The "two-system account of judgement heuristics" can process the whole decision-making of IVE (Griffin et al., 2012). For example, to process the information about the identifiable victim, a judge could use system-one of his minds (i.e., fast, effortless, unconscious) and system-two (that is, slow, effortful, conscious) for statistical or unidentified lives.

In the following sections, we explore the application of IVE in different settings.

Empirical Application of IVE Outside Charitable Giving

Applications of identifiable victim effects stretch in different circumstances. For instance, in lawsuits, take the US federal courts, litigations were highly biased to identified lives than statistical ones. The primary source of this bias is the doctrines of "justiciability", which is a claim fit for adjudication. This claim becomes relevant using standing and ripeness doctrines. That is, judgment is biased in favour of identified (whether she is a defendant or complainant) than statistical (as defendant or complainant) victims because the former can "stand" in front of the court and show some of her threatening injuries. Ripeness is another important doctrine that produced biased judgment favouring identified over statistical victims because the latter victims might bring undeveloped facts and claims of the harm envisioned, which have a nature of probability and speculation. However, an identified victim can bring a concrete claim about the harm, which is rooted based on the motivation of judicial restraint (Cohen, 2015).

However, in environmental laws, statistical lives resonate more than identifiable ones; because statistical life could show detailed descriptions in case of the harms of pollution. As an illustration, consider the US federal environmental laws like the "Clean Air Act", protecting air pollution and implemented by the Environmental Protection Agency (EPA), the primary federal environmental agency. When the law is written on the matter, it should not identify a single victim of the harm of air pollution; instead, to protect human health—it is based on the idea of statistical lives (Heinzerling, 2015).

In contrast to human and animal victims, like the ones mentioned above, the effect of identifiability in plant science has the opposite effect. The study using French farmers by Pellegrin et al. (2018) elucidated the point. As the name of plants was identified, the willingness of farmers to participate in the implementation of ecological compensation

schemes decreased. Further, for both “organic” and “conventional” farmers, IVE for a plant was absent (Pellegrin et al., 2018).

Empirical Application of IVE in Charitable Giving

The previous page shows that diverse walks of life demonstrated the identifiable victim effects. Finally, we tried to show how donors use their heuristic judgment and comply with IVE. The behaviour of a decision-maker might be a result of heuristic devices when she meets someone new. Age, gender, education, race, religion, and demeanour are relevant categories that make up this mental shortcut (Ullmann-Margalit, 2017). Meanwhile, the process of identifiability (in charitable giving) is moderated using different factors, including the age and gender of the victim, the number of victims (singular vs group), and the victim’s sense of belonging (in-group vs out-group) (Small, 2015; Lee and Feeley, 2016).

Comparing charitable responses to singular victims versus a group of victims, (Kogut and Ritov, 2005, Study 1) found that donations to identified victims were higher than those to statistical victims. This result could be justified using the heuristics approach. That is, donors would use system 1 for emotionally driven appeals—identified victims and system 2 for rule-based pleas—statistical victims. In the other application of IVE by (Kogut and Ritov, 2005, Experiment 1), donors donate more to a singular identified victim than the unidentified one. Though the authors did not explicitly mention the role of mental shortcuts in the decision-making process of the donors’, we presume donors in both groups were subjected to dual processing. For identified victims, system one could be dominant because, in such cases, as Railton (2015) mentioned, the victim’s identity would attract more attention and deeper consideration, which can raise the emotional response of the judge. However, due to the anonymous nature of the victims, a judge could use system two, which relies more on logic than on emotional association.

Furthermore, potential donors think about the victim’s membership, whether they belong to the same nationality or not. As an illustration, in the study by Kogut and Ritov (2007, Experiment 1), for an Israeli donor, when a victim was identified and compatriot, donation increased than an identified Indian victim.

1.2.3 Heuristics and charitable giving

Brackett (2018) argued that charitable giving is a complex, multifaceted subject of study. Furthermore, the author posited that behavioural economics could understand better human behaviours in a fundraising market. Donors’ rationality, as in their daily applic-

ation of other decisions, is bounded because of the amount of available information, lack of time and energy, and limitation of relevant knowledge. That is why they help their judgment by employing heuristics (Mahmoud and Ross, 2016). Thus, since our concern of the study is charitable giving, charitable organizations (policymakers) could use tools of behavioural economics like heuristics, to investigate the populace's willingness to donate.

In the following chapters of this thesis, we test the saliency of heuristics in charitable giving from two theories that employ heuristics heavily. First, we test the unpacking effect of the support theory in charitable giving, where the support of an unpacked plea might be evaluated based on heuristics and translated into higher judgment to donate than the packed hypothesis of appeal.

Second, we frame the message of a charitable request vis-a-vis the identifiable victim effect. Our study developed a donation appeal using a singular in-group vs out-group victim and when this victim is identified vs unidentified. In such scenarios, donors would apply those two systems (systems 1 and 2) to their minds. Thus, when the message interacts between the single identified and in-group victim, they will be supposed to employ system 1. However, when the appeal is the combination of an unidentified and in-group victim, they approach the issue using system 2. Meanwhile, donors would address the message via systems 1 and 2 if the donation appeal is framed for identified out-group vs unidentified out-group victims, respectively.

1.3 Conclusion

This chapter dwells on decision science that uses bounded rationality due to the failure of the rationality assumption of classical economists. Moreover, unlike the traditional economists, for a decision-maker that complies with bounded rationality, in behavioural economics, decisions are not based on optimization. KT&O is one of the forefront approaches that address decision-making under bounded rationality. Using the KT&O approach, different theories in several life scenarios of decision-making were elucidated in this chapter: human lives, plant lives, civil litigations, environmental laws, and gambling to charitable giving.

Heuristics are sources of judgment in the KT&O approaches. First, we followed the grouping nature of heuristics as a noun and an adjective for various types of heuristics. Then two theories that comply with this categorization were discussed in diverse applications: the unpacking principle of support theory and the identifiable victim effect. Thus, in the coming chapters, we will replicate the application of both approaches in

charitable giving.

Chapter 2

Testing for the Unpacking Principle in Charitable Giving

2.1 Introduction

Is donors' generosity influenced by the type and contents of the charities' donation appeals? The purpose of this chapter is to address the above question by adapting to the context of charitable giving the well-known *support theory* developed by Tversky and Koehler (1994), Redelmeier *et al.* (1995), Rottenstreich and Tversky (1997), Ayton (1997), Savitsky *et al.* (2005), among others.

An insight that motivated the development of the support theory was the observation that if a judge has to decide an outcome variable in the form of either a probability or frequency judgment, then her judgment typically depends on the type of descriptions. Support theory, by linking descriptions to beliefs, explains how alternative descriptions of the same event can quite often produce systematically different judgments about the probability or the frequency of the events.

An important implication of the support theory is the *unpacking principle*. This principle compares the subjective probability (or frequency) judgment an individual makes under two types of descriptions—packed vs unpacked—of the same event, where the unpacked description, being more detailed than the packed one, in general has more support. To elucidate the salience of unpacked description, Tversky and Koehler (1994, p. 565) make the following example: "like the measured length of a coastline, which increases as a map becomes more detailed, the perceived likelihood of an event increases as its description becomes more specific." Accordingly, based on the subadditivity principle, the unpacked description has a higher probability (frequency) judgment.

ment than the packed condition.

Accordingly, based on the subadditivity principle, the unpacked description has a higher probability (frequency) judgment than the packed condition. Subadditivity, for instance, in the case of probability judgment, happens when the judged probability of an event X_1 plus that of an event X_2 may be greater than that of event X , even though X_1 and X_2 are mutually exclusive events whose union constitutes X .

Meanwhile, subadditivity is lower in frequency judgments than probability (Tversky and Koehler, 1994; Brenner *et al.*, 2002). Brenner *et al.* (2002) interpreted the concept of probability as a propensity of judgment in the case of an individual. However, frequency is a propensity of judgment for a "collection of cases." As an illustration, take Tversky and Koehler (1994, Study 1) that assessed various possible causes of death in America, which was responsible for the deaths of nearly 2 million US citizens each year. Firstly, Stanford's students were asked to estimate the probability that a single patient will survive from the packed category of cause of death as "natural causes" and the unpacked category as "heart disease," "cancer," or "other natural causes." Thus, the probability estimate for the former group was 58% and 73% for the latter. Secondly, using frequency judgment, the same participants were asked to evaluate the *percentage* of patients sharing common symptoms who will survive. Then, participants that were grouped in the packed category—"natural causes" estimated 56%. Nonetheless, those participants that read unpacked categories. i.e., "heart disease," "cancer," or "other natural causes" evaluated their frequency judgment as 67%.

From both estimates, we witnessed the difference (i.e., probability judgments are higher than frequency judgment) in estimation using probability and frequency judgment for the identical description—of a cause of natural death (in both packed and unpacked categories). Brenner *et al.* (2002, p. 495) justified why subadditivity for judgment with frequency was less than probability judgment by saying: "evaluating collections of instances is more likely to invoke considerations of inclusion and exclusion relations among hypotheses."

While the early applications of the unpacking principle solely focused on probability (frequency) judgment, more recently its application has been extended to other issues, including *evaluative judgment* (Van Boven and Epley, 2003), *likelihood judgment* (Haselhuhn, 2015), *numeric judgment* (Kruger and Evans, 2004; Vilches-Montero, 2016). Indeed, these applications seem to support the claim made by Tversky and Koehler (1994, p. 549) that the unpacking principle is a "basic principle of human judgment."

On the other hand, Rottenstreich and Tversky's (1997) study proved the subadditivity assumption for the implicit hypothesis, which worked in two out of three experiments,

making the unpacking principle *inconclusive*. Meanwhile, depending on the nature (*typical* vs *atypical*) of instances, the unpacking effect can be zero (*additive*) or negative (*superadditive*). For instance, according to Sloman *et al.* (2004, Experiment 1), when participants from the University of Chicago were asked to estimate the probability of death of a random individual out of the total death from the coming year was attributed to "disease" as a packed hypothesis, "heart disease," "cancer," "stroke," or "any other disease" as a typical unpacked hypothesis, and "pneumonia," "diabetes," "cirrhosis," or "any other disease" as an atypical unpacked hypothesis. The authors found that the median judged probability for the typical unpacked group was not statistically higher than the packed group, that is, 0.60 vs 0.55, respectively. Here, the unpacking effect produced no effect or additivity (see other cases from Sloman *et al.*, 2004, Experiments 2 and 3; Hadjichristidis *et al.*, 2014, Study 3). In contrast, comparing the median probability judgment of atypical unpacked cause of death (i.e., 0.4) with the packed group (0.60) brought a significantly lower judgment. In other words, the unpacking effect was negative or superadditivity (see other instances from Sloman *et al.*, 2004, Experiment 2,3 and 4; Macchi *et al.*, 1999; Hadjichristidis *et al.*, 2001; Hadjichristidis *et al.*, 2014, Study 1 and 2).

The main objective of this chapter is to assess whether the intuition of support theory concerning the unpacking effect works when applied in the context of fundraising appeals made by charities.

The rest of the chapter is organized as follows. Section 2 gives an in-depth theoretical background about the unpacking principle. We started by assuming whether the unpacking effect works in charitable giving in section 2.1 (hypothesis A). After attesting the subadditivity assumption for the unpacking principle, we checked *how* the unpacking effect applies to charities. In section 2.2, we presume the more the appeals are unpacked, the more easily its components are available in the mind of a donor than the packed donation plea. To prove so, we used the availability heuristic (familiarity) as the mediator variable between our criterion and predictor variable. Model-4 of PROCESS macro of Hayes (2017)—simple mediation analysis—was used to estimate the coefficients of these variables (hypothesis B). Section 2.4 discussed the magnitude of donation for packed and unpacked appeals when moderated by the personal involvement of donors towards the pleas. Thus, model-1—moderation analysis—of Hayes's (2017) PROCESS macro was used to test hypothesis C.

Section 3 tested the three hypotheses. To do so, we employed two lab experiments using classEx (Giamattei *et al.*, 2019) that comprised 201 participants from the University of Insubria. The first experiment involves one of the mainstream choices of dona-

tion appeal for donors—preschool investment. The packed appeal mentioned the impact of investment on preschool in a village in Ethiopia; if a child has enrolled in it, the child benefits in the long run in terms of her educational, socio-emotional, and economic outputs. However, the unpacked appeal reminds donors of the detailed benefits of early childhood education in terms of educational, socio-emotional, and economic. After the donation decision, respondents are asked three questions adopted from Billings and Schaalman (1980) that measure their familiarity (i.e., availability heuristic) with the appeals. On the other hand, the second experiment used the residual choice—preservation of monuments (Dobbs *et al.*,2012). In the case of the packed plea, donors read the need for funds for the preservation of the monuments in Como, Italy. Meanwhile, those donors who read the unpacked appeal explained in detail what monuments consist of—villas, churches, towers, defensive walls, archaeological sites, paintings, and sculptures. Then, we asked both groups of participants questions that show how these donors were personally involved with monuments. To capture personal involvement, we adapted five questions from the European Commission, Directorate-General for Education, Youth, Sport and Culture (2017) and Bertacchini *et al.* (2011).

Participants for both experiments were randomly assigned either in packed or unpacked appeal by classEx. We also reversed the task of participants. Those who were assigned in the packed appeal for experiment one switched to the unpacked plea for experiment two and vice versa. Meanwhile, respondents were given the lottery-driven endowments for each experiment, which would share or not with the respective charities. Finally, participants took the participation fee and the kept endowment (if they won the lottery) for themselves in the form of an Amazon gift card.

Section 4 presented the result of our participants that were comprised of bachelor's and master's students; and 67% of the respondents were female, which was found from 11 fields of studies. For both experiments, the average donation amount brought an insignificant difference between the unpacked and packed appeals, which contradicts hypothesis A. This suggests that there was no unpacking effect. In other words, there was a prevalence of additivity. Concerning mediating factors between donation appeal (unpacked and packed) and amount of donation, the mechanics we supposed said: the more familiar participants were towards the benefits of preschooling, comes from the higher detailed appeal about preschooling. In turn, it determines the donation amount. This resulted in the rejection of hypothesis B. As of hypothesis C, although we found (i.e., statistically significant), the more donors personally involved with the monuments, the higher the donation amount, however, the interaction of personal involvement of donors towards the monument and detailing of the monuments did not significantly

affect the donation amount. This also contradicted hypothesis C.

Section 5 gives different scenarios as to why the unpacking effect did not become subadditive in both experiments. First, we challenged the platform of the experiment we used—the online experiment. Although the online experiment has advantages, lack of attention during the experiment is one of the disadvantages this platform incurs (Finley and Penningroth, 2015; Sauter *et al.*, 2020). In experiment one, we checked whether our respondents were attentive or not. The majority of our respondents were fully attentive to the intervention of the study; then, we rechecked the donation decision of this group of participants. Still, there was no significant difference between unpacked and packed appeal. Second, we supposed the participants (bachelor’s and master’s students) we chose were the right candidate. For instance, take experiment one; our respondents were thought to be more informed about the impact of early childhood education since most of them were from WEIRD nations (Western, Educated, Industrialized, Rich, and Democratic), which include Italy (Henrich, 2020). However, the donation amount for both groups of appeal was insignificant on average. Third, the degree of detail matters for the subadditivity of the unpacking effect. Further, both the unpacked appeals from our experiments were more detailed. Yet, donations for packed and unpacked appeals were significantly not different. The above-discussed scenarios were possible justifications for subadditivity of the unpacking principle to happen in both experiments. Nonetheless, we were obliged to produce additivity to the unpacking effect. Meanwhile, this assertion is also in line with Tversky and Kohler (1994).

The chapter ends with the final remarks in Section 6. Additionally, it includes the Italian(original) version of the experiments, the consent emails for both charities and oral instruction to participants during experiments using the Italian language.

2.2 Theoretical background

This section provides the theoretical background and the motivation of the two laboratory experiments conducted in this research.

2.2.1 Why the unpacking effect?

According to Tversky and Koehler (1994), the unpacking effect is the result of *attention* — a detailed description of the same un-detailed situation or event can call the attention to unseen outcomes — and *memory limitation* — a component-wise or unpacked description of the situation or event in terms of outcomes can be easier to remember

than a packed one. With reference to charitable giving, Smith and Schwarz (2012) suggest that the more donors recall about the charity's outcomes, the more they tend to be generous. In line with this reasoning, our hypothesis is that, if we consider donation appeals that differ in terms of the degree of details about the activities conducted, or the outcomes achieved, by the charity, then the more detailed appeals (unpacked) should produce higher levels of attention and memory for the potential donors than less detailed appeals (packed), and as a consequence more generous donations. In brief, we set the following hypothesis.

Hypothesis A. An unpacked (i.e., detailed) donation appeal raises more donations than a packed (i.e., concise) donation appeal.

2.2.2 How does the unpacking effect works?

Tversky and Koehler (1994, p. 549) central assertion about support theory is the bedrock of how the unpacking principle works. Their argument is the following one.

“When people assess their degree of belief in an implicit disjunction, they do not normally unpack the hypothesis into its exclusive components and add their support, as required by extensionality. Instead, they tend to form a global impression that is based primarily on the most representative or *available* cases. Because this mode of judgment is selective rather than exhaustive, unpacking tends to increase support.” (Italic is our's)

The support principle is crucial for the unpacking principle, since it translates into the judgment of probability or other outcome measures of situations or events by making the unpacked description more salient than the packed one (Brenner *et al.*, 2002).

The unpacking principle is not the only factor determining the support of an idea. Other key elements can be based on *objective data* and *subjective impressions mediated by heuristics* (Tversky and Koehler, 1994; Rottenstreich *et al.*, 1999). As for the latter, the availability heuristic (among the various heuristics, such as representativeness, anchoring and adjustment) is responsible for the construction of support for a hypothesis (Tversky and Koehler, 1994; Brenner *et al.*, 2002). Nonetheless, why do we choose the availability heuristic to answer how the unpacking effect is subadditive? For our purposes, we presumed the availability heuristic is critical because donors can be more charitable for an appeal that consists of an event easily brought to mind. This heuristic can create distortions of the packed description of a donation plea to easier to imagine appeal—unpacked description of donation appeal. Tversky and Kahneman (1974, p. 1127) reasoned the happening of a such phenomenon due to "instances of large classes

are usually recollected better and faster than instances of less frequent classes." The source for the easy and fast recollection of descriptions is a subjective experience of a judge (donor), and that is currently found "in long-term memory," which is vital for judgment (Hastie and Dawes, 2009). Thus, it is this heuristic that helps the memory of a decision-maker to estimate (in probability, frequency, or numeric judgements) the parts of a singleton event sum to greater than one—subadditive (Mulford and Dawes, 1999).

For a judge to operationalize the availability heuristic, Hastie and Dawes (2009) use the following seven-step subprocesses or subroutines:

- a.** Use long-term memory to store original or relevant information.
- b.** After forgetting some of stored information, some of them will retain.
- c.** Identify where to use the stored information to make a judgment.
- d.** Probe memory for relevant information.
- e.** Match the retrieved items that are associated with the memory probe.
- f.** Evaluate the ease of retrieval based on the amount recalled or quickness of recall.
- g.** Estimate ease of retrieval of information using frequency or probability judgment.

Hastie and Dawes (2009) summarize the above subprocess using the flowchart reproduced in Figure 2.1. The arrows of the flowchart indicate the temporal sequence of sub-stages in the global process.

To understand the mechanics of the unpacking effect on charitable giving, we use Bellur and Sundar's (2014) recommendation — treating heuristics as a variable (in our case, availability heuristic). As we have noted in (e), the fifth and in (f), the sixth subprocess of operation by Hastie and Dawes (2009), these subprocesses help to capture the roles of the availability heuristic. Here onwards, we treat the availability heuristic (mediating variable) as the reason for the unpacking effect for donation decisions. Likewise, Tversky and Kahneman (1973) posited the availability heuristic as the mediator for probability (frequency) judgments.

Moreover, in charitable giving, due to the type of participants we chose for our experiments (see section 4.1), we used one of the features of the availability heuristic elaborated by Billings and Schaalman (1980) that affects the outcome variable. That is "*familiarity*"—the degree of personal knowledge of a decision-maker towards the estimated hypothesis. If charitable appeals are unpacked, donors are more familiar with the causes and will easily come to their minds. Then donate more than the packed appeal.

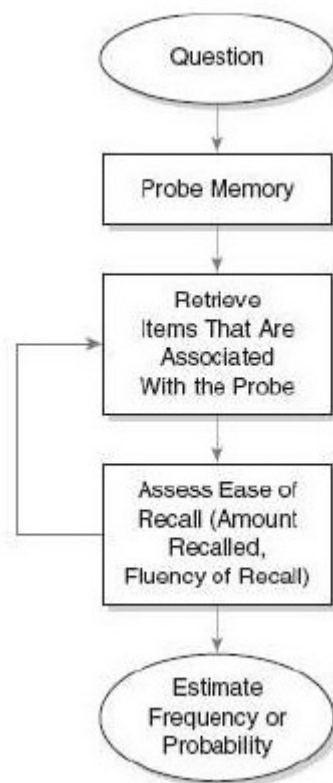


Figure 2.1: Flowchart of the availability heuristic in the judgment process.

Such a mediator between the criterion variable (donation amount) and the predictor variable (unpacked vs packed charitable appeal) explains differently.

In brief, for a decision on how much to donate, a mediator made up of psychological factors, like, familiarity, could explain how the unpacking effect works. It is not new to suggest the role of psychology in charitable giving. Haruvy *et al.* (2020) review how donors in the broad approach of “appeal-based” giving made donation decisions based on their psychological background rather than strategic reasonings. Besides, Baron and Kenny (1986) suggested the advantage of psychological factors, that is, they can explain the connection between independent (X) and dependent (Y) variables. Thus, a familiarity that is a subjective experience (direct and indirect experience) of a donor towards the hypothesis could be the mediator between X and Y .

On this backdrop, the charitability we applied will demonstrate how unpacked appeal could be the salient hypothesis than otherwise. The more detailed appeal for a donation could become more familiar for a donor, then this subjective experience (support) translates to more generosity than a lesser explicit appeal. In other words, when a charitable intervention of an appeal is made from more detail, it will be easy to remember due to the subjective experience of the plea to a donor. Then, more donations to detailed donation appeals than less detailed ones.

Although it is improbable to fully explain the mechanics of a donation appeal using unpacking principles by a mediator —heuristics or other tools. Hence, the relation between more (less) detailed donation appeal and donation amount could be explained better by familiarity (availability heuristic) and could affirm the assumption of subadditivity. We illustrate both the explainable and unexplainable feature of unpacking effect on donation decisions using Hayes’s (2017) “simple mediation model.” What does this model entail?

Mediation model

This model introduces “the mechanics of path analysis and demonstrates how a variable’s effect on an outcome can be partitioned into direct and indirect effects that can be quantified using OLS regression” (Hayes, 2017, p. 77). Further, the author suggested the indirect procedure in which X affects Y could be via “emotional,” “cognitive,” “biological,” or “otherwise.” Concerning our research, cognitive factors like the availability heuristic could play a role in showing an indirect effect of unpacking (packing) charitable appeals to determine the donation amount.

According to Hayes (2017), the conceptual framework of the simple mediation model

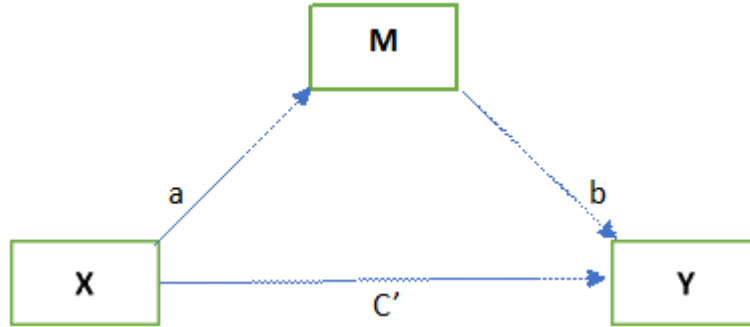


Figure 2.2: A conceptual diagram of a simple mediation model.

can be depicted by the diagram reproduced in Figure 2.2. Adapting the above diagram gives a better illustration for our analysis. The model contains two “consequent” variables: M (familiarity) and Y (amount of donation); and two “antecedent” variables: X (unpacked or packed appeal) and M (familiarity), with X causally influencing Y and M , and M causally influencing Y . The model has two paths: the first is when X (unpacked or packed appeal) *directly affects* Y (amount of donation). The second path is known as indirect because first, X (unpacked or packed appeal) influences M (familiarity), then M (familiarity) causally affect Y (amount of donation). Besides, the indirect path answers the how inquiry, in which, through cognitive mechanism (i.e., availability heuristic), unpacking appeal (X) influences the amount of donation (Y) and becomes more salient than a packed plea.

What is more, as (Hayes (2017)) suggested, we can use simple OLS regression to estimate X ’s direct, indirect, and total effects. From Figure 2.2, the author specifies two linear equations that we adopt those equations for our purpose. The equations are:

$$M = i_M + aX + e_M, \quad (2.1)$$

$$Y = i_Y + c'X + bM + e_Y, \quad (2.2)$$

where i_M and i_Y are regression constants, e_M and e_Y are errors in the estimation of M and Y , respectively, and a, b , and c' are the regression coefficients given to the antecedent variables in the model in the estimation of the consequents.

Every coefficient in the model assesses the causal effect of every variable in the systems. Furthermore, the objective is how each estimated coefficient will give a holistic message about this simple mediation model. Meanwhile, we can estimate the coefficients of the equations using the PROCESS macro “model-4” mediation analysis by

SPSS (Hayes, 2017). Then, using the following hypothesis, we can investigate how the unpacking principle works in charitable giving.

Hypothesis B. An unpacked (detailed) donation appeal is more salient than a packed (concise) appeal and therefore, by making potential donors more familiar with the programs undertaken by the charity, it also raises more donations.

2.2.3 When does the unpacking effect become salient?

Having pondered *Why* and *How* the unpacking principle can be relevant for the efficacy of charitable appeals, we finally address the *When* query.

To illustrate the circumstance in which the unpacking principle resonates more, the study by Bilgin and Brenner (2008, Experiment 1) is worth mentioning. According to Bilgin and Brenner, participants presented two scenarios that indicated their likelihood judgement of getting drinks of imported alcohol at a friend's birthday party and seafood at a catered event. The study manipulated the temporal proximity ("tomorrow night" vs "six months from today") of the scenarios. And the packed conditions are written as a general ("imported alcoholic drinks" and "seafood") and the unpacked events description ("Heineken, Corona, and Beck's or other imported alcoholic drinks" and "shrimp, lobster, salmon, or other seafood"). The interaction between temporal proximity and different description of the same event brought significant effects. For the distant event ("six months from today"), the unpacking condition brought higher likelihood ratings than the packed one. Here, the unpacking effect that was moderated by how the event was distant from now produced a higher likelihood of rating. However, for the proximal event ("tomorrow night"), packed description, participants rated higher than the unpacked description of scenarios. Thus, in our case, we make a moderation analysis that can strengthen (or weaken) the postulate rose in hypothesis A via the moderation model. Nonetheless, what is the moderation model?

Moderation Model

Using the conceptual diagram reproduced in Figure 2.3, Hayes (2017) elucidated the process in which the effect of a variable X (the focal antecedent) on a variable Y (the outcome) can be affected by a variable W (the moderator). The arrow pointing from W to the arrow pointing from X to Y represents the interaction process of the moderator on the independent variable X . That is, W is a moderator as long as it affects the magnitude, size, or strength of the influence of X on Y . In short, we say that W *moderates*

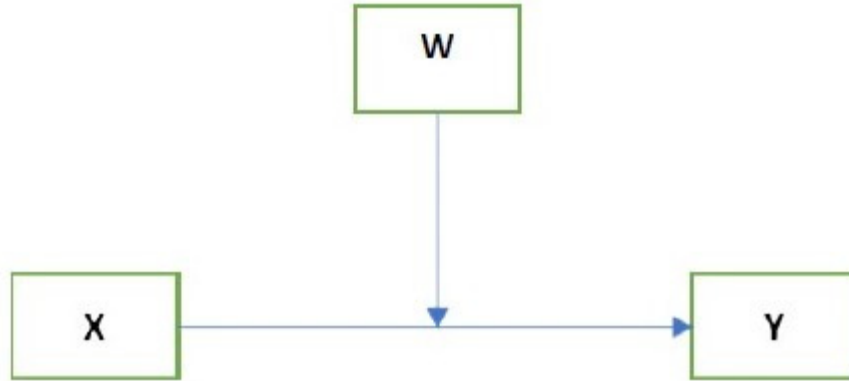


Figure 2.3: A conceptual diagram of a simple moderator model.

the effect of X on Y .

From the conceptual diagram represented in Figure 2.3, it is immediate to see that in empirical terms the moderation process can be estimated using the following linear OLS regression model:

$$Y_i = a + bX_i + cW_i + dX_iW_i + e_i, \quad (2.3)$$

where Y_i is the amount donated by individual i , X_i is a dummy variable representing an unpacked or a packed appeal, W_i is the moderator variable possibly affecting the way X impacts on Y through the interaction term X_iW_i . Hence, if $X_i = 1$ for the unpacked appeal and the coefficient d of the interaction term turns out to be statistically significant, it means that the moderator matters in determining the way unpacked versus packed appeals affect donations to the charity.

As for the choice of the moderator variable for our experimental study, we borrow from Koschate-Fischer *et al.* (2012) study in the marketing field, showing that the donors' degree of personal involvement in the interventions realized by the charity significantly interacts with both the propensity to donate and the amount donated. In our specific context, the hypothesis is that the donor's degree of involvement and familiarity is higher with the *sub-events* listed in an unpacked appeal than with the *events* named in a packed appeal, with the result that familiarity and personal involvement moderates the impact of the type of appeal on the amounts donated. The above discussion is summarized in our last testable hypothesis.

Hypothesis C. A higher degree of donor's personal involvement with the interventions realized by the charity positively interacts with an unpacked appeal. Therefore, for given degree of personal involvement, an unpacked appeal raises larger donations than a

packed appeal.

We conclude this section by observing that while the charities' fundraisers seem aware of the fact that more detailed donation appeals can be more effective than concise ones, the academic literature has not paid much attention to the issue. An exception is the study by Bernasconi *et al.* (2009), where, however, the unpacking principle is applied in a different setting than ours. In particular, they test the unpacking effect in a game of voluntary provision to public goods, finding that contributions for unpacked public goods — contributions to two identical and linear public goods — are higher than those to a single (packed) public good. Bernasconi *et al.* (2009) do not consider whether or not sub-additivity of unpacked public goods play a role in the results.

2.3 The two laboratory experiments

Two online experiments were conducted by recruiting students at Insubria University, during the period May 19 – July 28, 2021, along 15 experimental sessions.

2.3.1 Overview of the experiments

On the one hand, the two experiments are identical in that each one has a treatment condition with a packed (concise) appeal and a treatment condition with an unpacked (detailed) appeal. On the other hand, they are different in that in the first donations are solicited for a cause ranked high by the typical donor — improving pre-school education of disadvantaged children — whereas in the second donations are asked for a cause ranked low by the typical donor — the preservation of monuments and historical sites.

Experiment 1

In the first experiment, the participants were asked to make a donation in favor of the Italian Charity *Il Sole onlus* (<http://www.ilsole.org>), established in 1997 and active in the promotion of early childhood education in Italy, India, Sri Lanka, Ethiopia and Somalia. In the experiment, the object of the appeal is the realization of quality pre-schooling interventions in Ethiopia through the provision of educational materials to children assisted by volunteers of the charity.

The benefits of pre-schooling are documented in several studies. For instance, Tough (2012, p. xx) reports that children with good pre-schooling are “more likely to graduate from high school, more likely to be employed at age twenty-seven, more likely to be

earning more than twenty-five thousand dollars a year at age forty, less likely ever to have been arrested, and less likely to have spent time on welfare”. Moreover, Meloy *et al.* (2019) report long term benefits of pre-schooling in terms of social-emotional skills and economic outcomes, and also show that educational materials are vital in better providing early education. Therefore, the donation appeal presented to the participants describes the long-term benefits of preschooling and declares that the donations are used to purchase educational materials.

Experiment 2

In the second experiment, the donation is asked for one of the *residual choices* of average donors, namely, cultural heritage. For instance, Dobbs *et al.* (2012) reports that among the causes for which people give in the UK, arts and monuments is the the least preferred one. As for Italy, there is a limited contribution from individuals for cultural heritage. In 2008, a total of €29 million was collected for cultural heritages, of which only 0.4% came from individuals (Bertacchini *et al.*, 2011).

In the experiment, the appeal is referred to the preservation of the monuments in the Como area, which is rich of magnificent monuments, including one recognized by UNESCO.¹ However, as documented by Erba *et al.* (2016) and by Comerci *et al.* (2007), environmental, human, and natural threats call for funding interventions to preserve such a rich cultural heritage. Participants are solicited to donate in favor of a Como-based Foundation, *Fondazione Provinciale della Comunità Comasca onlus* (<https://www.fondazione-comasca.it>), which finances local charities operating in the Como Province in a wide array of social interventions, including the restoration and preservation of cultural heritages.

2.3.2 Recruiting participants and approaching the charities

We enrolled the participants from the pool of students attending 11 fields of studies, of both bachelor and master degrees, at the University of Insubria, a small to medium sized academic institution with two main branches in the cities of Varese and Como, in Lombardy Region. Students were invited to participate to the online experiment through invitation emails sent by the Student’s Office of their respective Department. A total of 349 students enrolled through a Google form, and then they received an email with the dates and times of the experimental sessions held through Microsoft Teams and the ClassEx

¹Sacro Monte di Ossuccio. Source: <https://www.summerinitaly.com/guide/lake-como/unesco-world-heritage-sites>

platform, an online software to do laboratory experiments (Giamattei and Lambsdorff, 2019). A total of 201 participants showed up in the 15 sessions of the experiment. Most of the participants are first and second year students, though there are also students in their third to fifth year, or in-extension, and most of them are female.

The two charities, Il Sole onlus and Fondazione Comasca, were contacted via email to obtain their consent to use their institution as the beneficiary of the donations given in the experiment. Both mails are available in the Appendix.

2.3.3 Experimental procedure

Instructions and randomization

The participants were given preliminary instructions about the experiment orally and with the help of slides on Microsoft Teams (see the Appendix), and then they were given instructions on how to log in to the ClassEx platform. All the experiment was conducted in Italian language.

Participants could use any type of mobile device (smartphones, tablets, notebooks, laptops) and non-mobile devices (desktop computers). Once all participants were logged in, as the experiment was started ClassEx randomly assigned 50% of the participants in one treatment (packed appeal) and 50% to the other (unpacked appeal).

Experiment 1 (Donations for pre-schooling programs)

In the first stage, participants are given a €5 endowment and are asked to use it to make a donation to the charity Il Sole Onlus. There are two treatment groups: packed and unpacked appeal for a donation. In the following the translation in English of the original Italian version available in the Appendix. In the second stage, participants are asked to complete a brief survey intended to elicit their familiarity and involvement with the importance of pre-schooling for children.

Treatment 1: Packed appeal.

Il Sole Onlus (link to the website) is a non-profit organization established in in Como in 1997 dealing with the protection and promotion of children rights.

You have a budget of 5 euros: enter the amount of the donation you intend to make in favor of Il Sole Onlus (minimum zero, maximum 5 euros) which will be used to purchase educational material for an infant school in a village in Ethiopia, *in order to allow children to start their educational track at an early age, so as to develop expressive and interpersonal skills, and to improve their economic prospects.*

Treatment 2: Unpacked appeal.

Il Sole Onlus (link to the website) is a non-profit organization established in in Como in 1997 dealing with the protection and promotion of children rights.

You have a budget of 5 euros: enter the amount of the donation you intend to make in favor of Il Sole Onlus (minimum zero, maximum 5 euros) which will be used to purchase educational material for an infant school in a village in Ethiopia, *in order to allow children to develop better reading and algebraic skills when they will attend primary and secondary schools, to increase their chances of obtaining a high school diploma and a good employment, to achieve a greater economic stability for her or his family, and also to limit the cases of involuntary pregnancy among teenagers and the propensity to petty crime.*

After completing the donation decision, with the purpose of collecting data for the mediation analysis, participants completed a survey. First, all participants were asked questions intended to measure their personal knowledge about preschool education programs, which eased their memory and affected their judgment to donate. As noted earlier (Tversky and Kahneman, 1973; Slovic *et al.*, 1976; Billings and Schaalman, 1980), familiarity is a mediator between the unpacking and the packing description appeal and how much to donate.

Therefore, to capture the familiarity, we asked three questions, adapted from Billings and Schaalman (1980), about the effect of preschooling on a child's well-being. The questions are:

1. Do you think that the pre-school education you received during your childhood (nursery, kindergarten) contributed to your current level of well-being?
2. Do you think that the pre-school education you received in childhood (nursery school, kindergarten) contributed to the current level of well-being of your peers?
3. Have you ever thought deeply about the possible benefits of pre-school education in childhood?

All these questions were answered on a 5-point scale.

Experiment 2 (Donations for conservation of monuments)

Also in the second experiment, in the first stage, participants are given a €5 endowment and are asked to use it to make a donation to the charity Fondazione Comasca. Again, there are two treatment groups: packed and unpacked appeal for a donation. However,

participants randomly assigned to the packed treatment in experiment 1 are assigned to the unpacked treatment in this second experiment, and viceversa. In the following the translation in English of the original Italian version available in the Appendix. In the second stage, participants are asked to complete a brief survey intended to elicit their familiarity and involvement with the importance of preserving monuments.

Treatment 1: Packed appeal.

The Fondazione Provinciale della Comunità Comasca Onlus (link to the website) was established in 1999 with the aim of helping people to donate and actively participate in the definition and realization of the common good. One of the activities carried out by the Foundation is to raise funds *to finance interventions to safeguard, restore and promote the artistic and historical heritage located in the Como area.*

You have a budget of 5 euros: enter the amount of the donation you intend to make in favor of Fondazione Provinciale della Comunità Comasca (minimum zero, maximum 5 euros).

Treatment 2: Unpacked appeal.

The Fondazione Provinciale della Comunità Comasca Onlus (link to the website) was established in 1999 with the aim of helping people to donate and actively participate in the definition and realization of the common good. One of the activities carried out by the Foundation is to raise funds *to finance interventions to safeguard, restore and promote period villas, churches, towers, defensive walls, archaeological sites, paintings, and sculptures located in the Como area.*

You have a budget of 5 euros: enter the amount of the donation you intend to make in favor of Fondazione Provinciale della Comunità Comasca (minimum zero, maximum 5 euros).

After completing the donation decision, a survey was conducted to collect data for the moderation analysis, where the moderating variable —personal involvement— was expected to express the strength or the weakness of the unpacking effect on the donation decision of donors.

The personal involvement of donors toward the donation in favor of the preservation of monuments was measured by four questions adapted from the Cultural heritage (2017) and one (the fifth) from Bertacchini *et al.* (2011), which read as follows:

1. Have you ever volunteered for organizations operating in the cultural heritage field (e.g., museums, cultural associations)?

2. Excluding any donation made a little while ago to the Comasca Foundation, have you ever made donations to organizations operating in the cultural heritage field?
3. Do you frequently visit museums and monuments?
4. Is the area where you live very rich in historical monuments and artistic heritage?
5. How important is a historical and artistic heritage to you?

The first four questions were measured on a two-scale of one—*disagree*, two—*agree*. However, the fifth question was measured on a three-scale of one—*low*, two—*medium*, and three—*high*.

Final survey and payoffs

After completing the second experiment, we elicited the demographic data of the participants, and finally payoffs were disbursed. All participants received a €3 participation fee. Then, for a less than 20 minutes tasks, classEx randomly selected 25% of the participants as the *winners* of collecting their *residual endowment*, i.e., the part of the two €5 endowments not donated to the charities.

Participants were paid with Amazon Gift Cards, and the donations of the randomly selected winners were sent to the charities Il Sole Onlus and Fondazione Comasca.

2.4 Results

In this section, we first present some demographic data on the sample of participants, and then illustrate and discuss the results of the two experiments.

2.4.1 Demographic data about participants

After cross-checking the number ClassEx logins with the Microsoft Teams attendance sheet — to avoid multiple participation by a single individual — the sample consists of 201 students. Since three have been excluded because they dropped out in the middle of the experiment, the final sample used for the analysis consists of 198 participants.

The mean age is 22.44 ($SD = 3.87$), within a range of 18 – 44 years. The proportion of females is 70.7%; First-year and Tourism Science students are the dominant class of students, 40.9% and 24.75% of the total, respectively. Table 2.1 details the information about field and year of study.

	Proportion
Education Level	
Bachelor's	.88
Master's	.11
Year of enrolment	
First	.41
Second	.30
Third	.21
Fourth (for Law only)	.02
Fifth (for Law only)	.01
In-extension	.06
Fields of study	
Tourism science	.25
Sciences of linguistic and intercultural communication	.17
Law	.10
Modern languages for international communication and cooperation	.01
Economics and management	.22
Economics, Law and Corporate Finance (EDIFI)	.02
Global Entrepreneurship Economics and Management (GEEM)	.05
Communication Sciences	.13
Chemical and Industrial Chemistry, Mathematics, Physics, Engineering for work and environment safety	.07
Total number of participants	198

Table 2.1: Descriptive statistics for education variables.

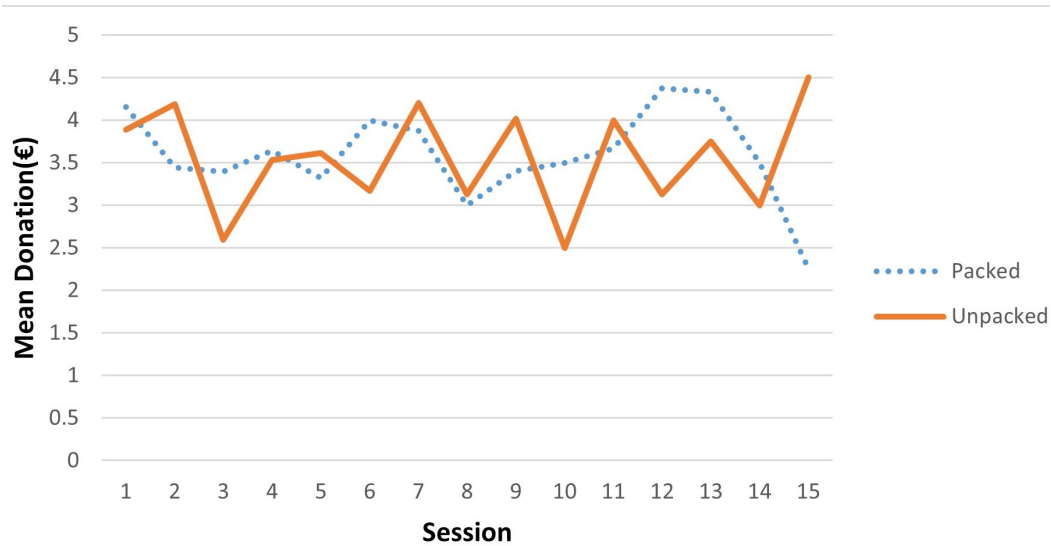


Figure 2.4: Experiment 1: Mean donations by treatments across sessions.

2.4.2 Results of Experiment 1

Average donations

Figure 2.4 shows the average donations given to the charity Il Sole along the 15 sessions of the experiment. There is no evident pattern: in some sessions the average donation is higher for the unpacked appeal, in others it is the opposite.

Figure 2.5 shows the kernel estimates of the density distribution of donations in the two treatments. The packed and the unpacked appeals have almost similar density curves.

Female participants were more generous than male in both treatment groups — the difference is statistically significant — as reported in Figure 2.6.

Our Hypothesis A — an unpacked donation appeal raises more donations than a packed one — is clearly rejected by the data collected. Using a *t-test*, by comparing the difference in mean donations between the unpacked ($n = 94$, $M = 3.49$, $SD = 1.23$) and the packed appeal ($n = 104$, $M = 3.65$, $SD = 1.16$) it turns out that $t(196) = 0.9599$, $p = 0.1692$, which is statistically insignificant.

Recall that, on the basis of the theoretical reasoning, we expected participants that experienced direct or indirect benefits from pre-schooling to enhance their support for the charity if pleaded with the unpacked list of benefits of early childhood education. The data on mean donations across treatments do not support such a conclusion.

Therefore, we turn to our Hypothesis B, testing *how* the unpacking effect works.

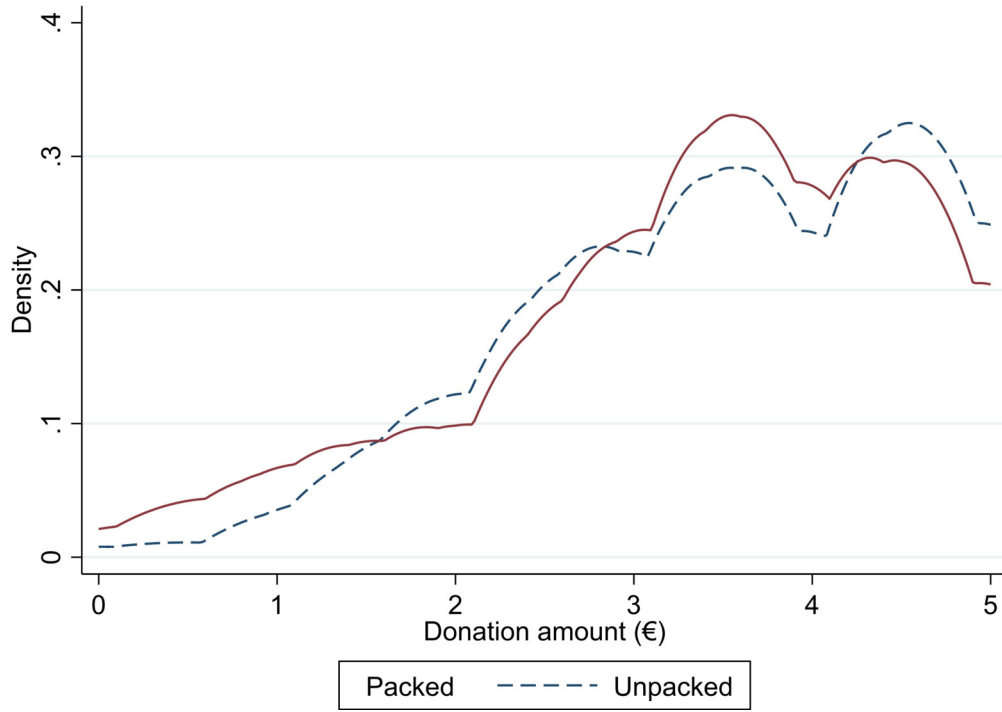


Figure 2.5: Experiment 1: Density plot for distribution of donations across treatments.

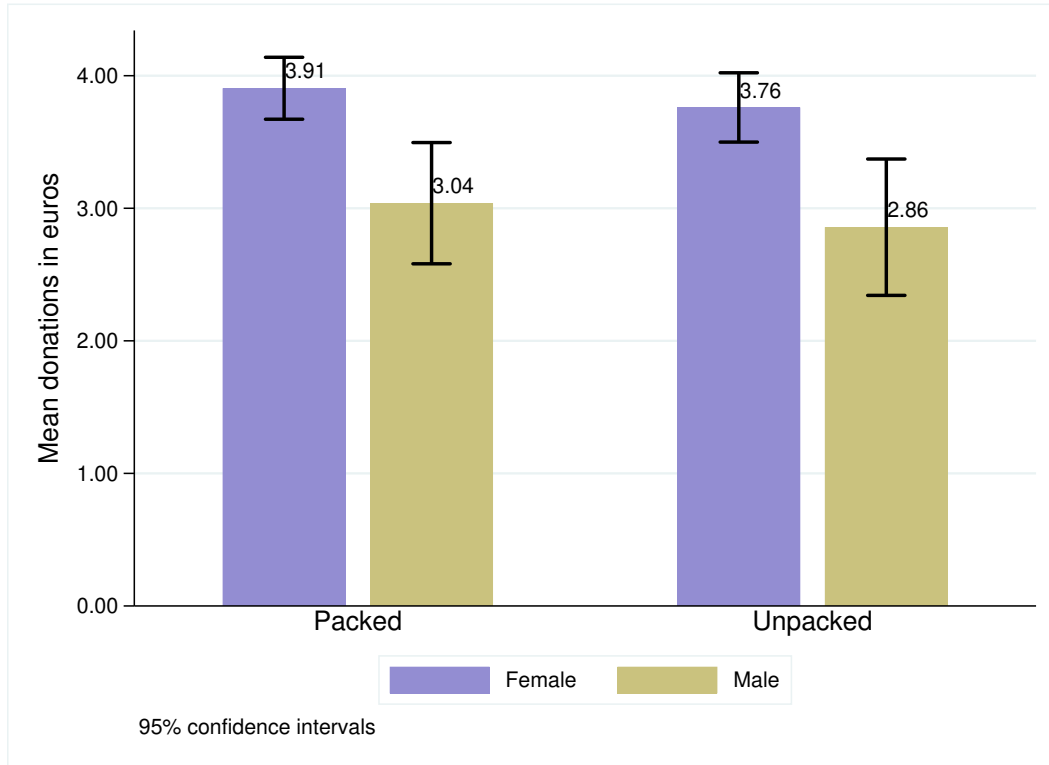


Figure 2.6: Experiment 1: Mean donation by treatment and gender.

Antecedent	Consequent					
	Familiarity(M)			Donation(Y)		
	Coeff.	SE	p	Coeff.	SE	p
Unpacked appeal (X)	-.08	.11	.47	-.14	.17	.41
Familiarity (M)	–	–	–	.34	.11	< .001
constant	3.30	.07	< .001	2.52	.38	< .001
	R^2	= 0.00		R^2	= 0.05	
	$F(1, 196)$	= .51, p	= .47	$F(2, 195)$	= 5.4, p	< .01

Table 2.2: Output from the PROCESS procedure for SPSS Model-4.

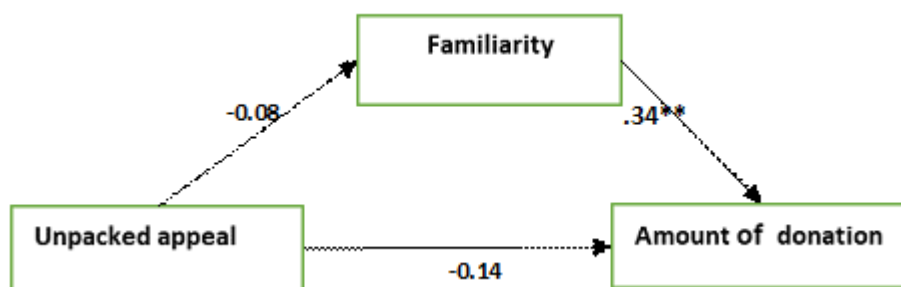


Figure 2.7: Experiment 1: Mediation analysis (Note: ** $p < 0.05$).

Mediation analysis

Recall that our mediating variable is a composite one, since participants were asked to answer three questions about familiarity with pre-school education on a 5-point Likert scale.

This composite variable turns out to be reliable, since the Cronbach's α , which is equal to 0.6883, is acceptable (Tavakol and Dennick, 2011). Hence, for each respondent we considered the mean value of the three answers so as to define a single variable proxying for familiarity. The software package programmed to do mediation analysis — SPSS: PROCESS macro, model-4 by Hayes (2017) — was then used, with the results reported in Table 2.2. Note that X is dichotomous variable, 1 for unpacked appeal and 0 for packed appeal. M and Y are continuous variables.

Figure 2.7 illustrates the results. The indirect path has -0.0779 and 0.3444 coefficients, where the former represents the mean difference between the unpacked and packed appeal on familiarity (statistically insignificant), and the latter indicates that a one scale increase in familiarity increases donations by €0.3444 (statistically significant if the appeal is unpacked). To have the indirect effect of the unpacked appeal on donations through familiarity, the "only one requirement" is that the product of the two

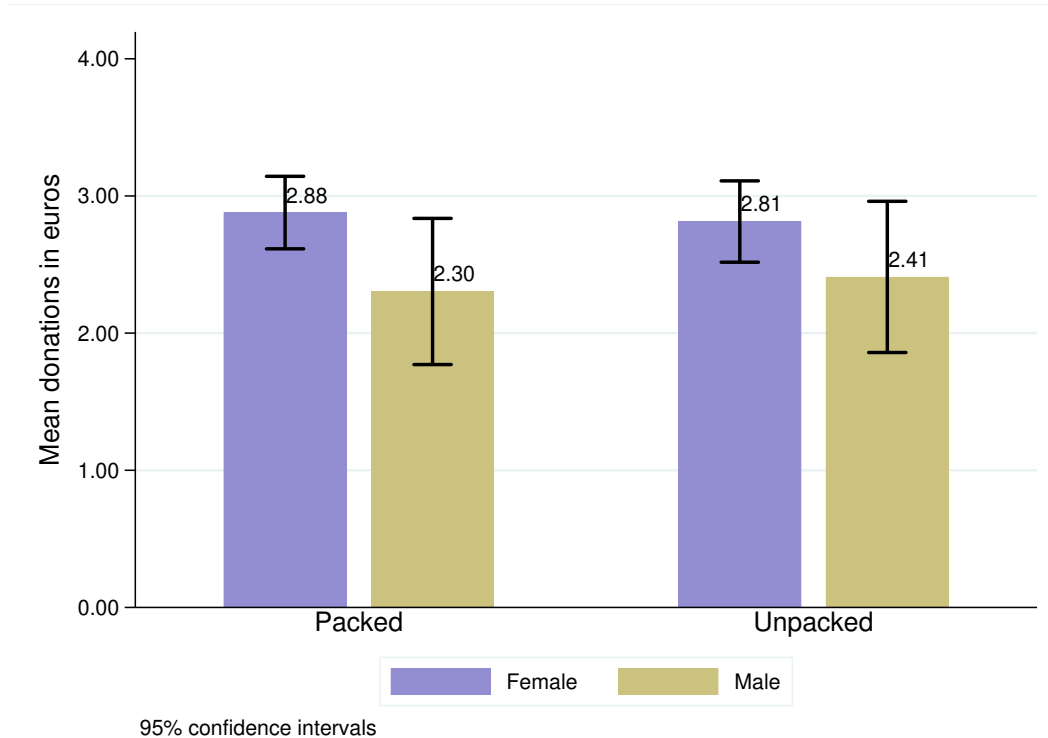


Figure 2.8: Experiment 2: Mean donations by treatments and gender.

effects be significant (Zhao *et al.*, 2010). However, our result shows that one impact is zero while the other is not, which gives an insignificant effect (see Table 2.2). Hence, this result rejects our Hypothesis B, implying that the availability heuristic (familiarity) we intended to show as the mechanics of the unpacked principle in charitable giving did not work in our experiment.

2.4.3 Results of Experiment 2

The same participants of Experiment 1 take part to Experiment 2, in which the appeal is in favor of Fondazione Comasca for interventions devoted to the restoration and preservation of monuments in the Como Province. Recall that participants assigned to the packed appeal in Experiment 1 are assigned to the unpacked appeal in Experiment 2, and viceversa.

Average donations

The mean donation for the unpacked and the packed appeal across gender is represented in Figure 2.8. As in experiment 1, female participants significantly donate more

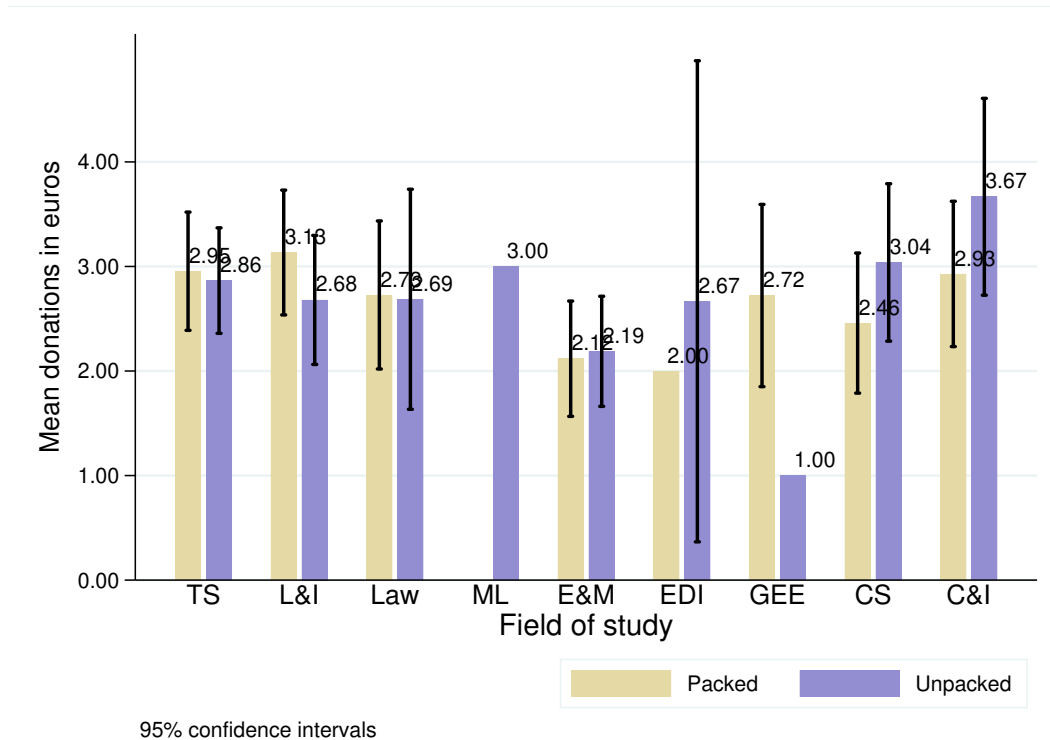


Figure 2.9: Experiment 2: Mean donation by treatments across fields of study.

than male participants in both treatment conditions. However, there is no significant difference in the average donations of the packed and the unpacked appeal. For the unpacked appeal the mean donation is €2.69 ($n = 104$, $SD = 1.37$) while for the packed plea is €2.70 ($n = 94$, $SD = 1.22$). Using a t -test proves there is no significant difference between treatments ($t(196) = 0.0568$, $p = 0.4774$). Hence, Hypothesis A is rejected also in this experiment. In the packed appeal, we asked the participants to donate by generically referring to artistic and historical heritage in the Como area. In contrast, in the unpacked appeal, there was explicit mention of what artistic and historical heritage consists of in detail. Our assumption was that when the participant read every component of the artistic and historical heritages in the Como area, her or his support for the plea would be higher. But the hypothesis was not confirmed.

In the case of historical heritage, it could be possible that the field of study influenced the decision to donate. In fact, as shown in Figure 2.9, depicting the average donation across treatments and across fields of study, there is no clear pattern in this respect. In Figure 2.9, TS stands for tourism science, L&I for sciences of linguistic and intercultural, ML for modern languages for international communication and cooperation, E&M for economics and management, EDI for Economics, Law and Corporate Finance, GEE for

	Coeff.	SE	t	p
Constant	1.16	.50	2.31	.02
Unpacked appeal (X)	-.33	.69	-.47	.64
Personal Involvement(W)	2.79	.25	3.18	<.001
Unpacked × involvement(XW)	.12	.33	.35	.73
	R^2	= .12 ,	MSE	= 1.51
	$F(3, 194)$	= 8.82 ,	p	<.001

Table 2.3: Output from the PROCESS procedure for SPSS Model-1.

global entrepreneurship economics and management, CS for communication sciences , C&I for chemical and industrial chemistry, mathematics, physics, engineering for work and environment safety.

Moderation analysis

Recall that the survey conducted after the donation for cultural heritage consisted of five questions, four on a two-point Likert scale (agree vs disagree), one on a three-point Likert scale. To obtain a single measure of personal involvement in the preservation of monuments, we first we linearly transformed the four two-scale questions into three-scale using $2x-1$, adapting from <https://www.ibm.com/support/pages/transforming-different-lik>. Second, we checked for the internal consistency of the composite measure that resulted in a value of 0.5630, which is outside the range of Cronbach's α specified by Tavakol and Dennick, 2011). Finally, we aggregated the mean values of five questions and obtained a single variable —personal involvement, to be used for the moderation analysis in order to test for our Hypothesis C. That is, to test *when* the unpacking effect works.

In technical terms, we applied model-1 by Hayes (2017), with the results reported in Table 2.3, where the output is produced from the PROCESS procedure for SPSS Model-1. Specifically, these regression analysis results examine the moderation of the effect of unpacking appeal for preserving monuments on donations amount through personal involvements of donors toward monuments. Note that X is dichotomous variable, 1 for unpacked appeal and 0 for packed appeal. M and Y are continuous variables.

The results of the moderation analysis are summarized in Figure 2.10. Hypothesis C is that if the appeal is unpacked and the donor has a high personal involvement with the cause (i.e., preservation of monuments), then the interaction of the two would enhance the donation amount more than the packed appeal. However, the estimates of model-1 show that the interaction between the unpacked donation appeal, which is a dichotomous variable, and personal involvement, is statistically insignificant (coeffi-

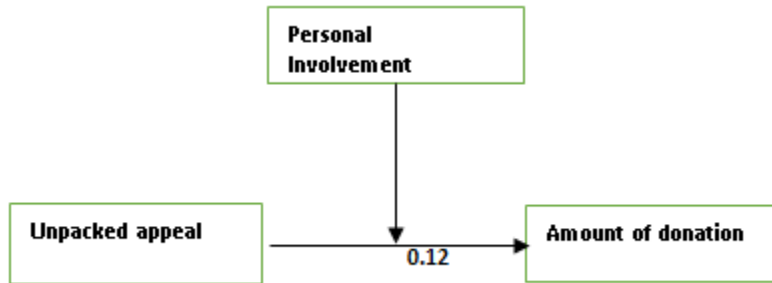


Figure 2.10: Experiment 2: Moderation analysis.

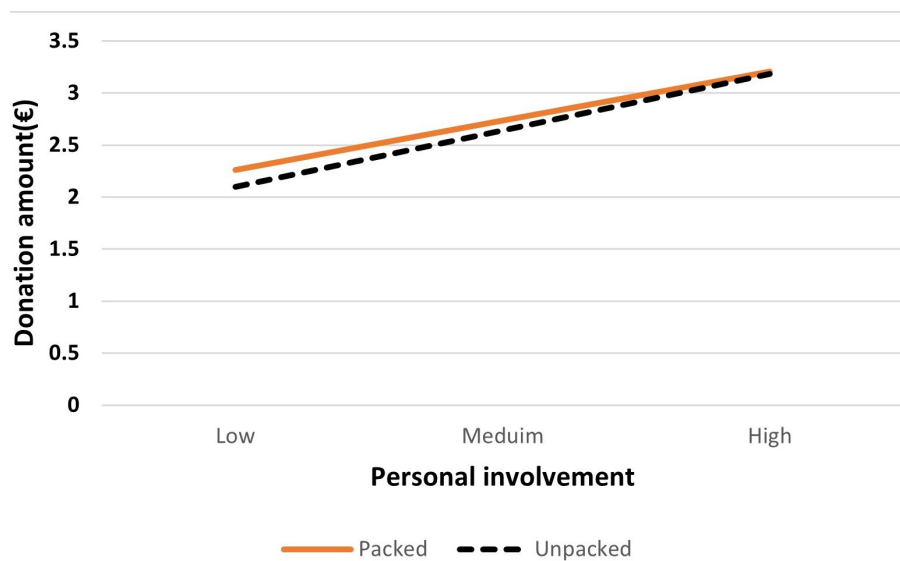


Figure 2.11: Experiment 2: Impact of personal involvement toward monuments on donations under packed vs unpacked appeals.

cient 0.12, $p = .7266$) in affecting the donation amount. Therefore, our Hypothesis C is rejected.

The above (non)result can be illustrated as in Figure 2.11, where it is shown that there is a positive and significant correlation between personal involvement towards monuments and donation amount for both appeal treatments. The lower the personal involvement, the lower the donation. However, the interaction effect is statistically insignificant since at different levels of personal involvement the donations are similar in the packed and unpacked appeals.

2.5 General Discussion

The three hypotheses we dwelled on in both studies were not confirmed. Moreover, the mainstream (pre-school education) and residual (preservation of monuments) choice of actual (or potential) donors did not assert the subadditivity of the unpacking principle in charitable giving. Hence, why does a donor's numeric judgment (the donation amount) is not affected by more detailed outcomes of a plight and deviated from the ex-ante hypotheses?

We discuss three possible causes. Namely, the type of experiment we chose (i.e., an online platform), the type of participants we recruited (i.e., university students), the variation in the degree of unpacking we set up.

2.5.1 Type of laboratory experiment

Although online experiments have various advantages: from having a large sample to their cheapness and easiness to experiment, different researchers proved that lack of attention by the participants is a significant disadvantage that this platform incurs (Finley and Penningroth, 2015; Sauter *et al.*, 2020). However, in our experiments, we helped the respondents to be attentive (by making red and bold) to the specific donation message for both treatments. Then, we made an attention check immediately after the donation decision for the first study. As a result, we found that 57% (fully attentive) of respondents rightly answered for what purpose they donated, and 34% (attentive) responded similarly to the intervention we intended (they replied they donated to primary school in Ethiopia). The rest, 9% (inattentive), answered the unrelated issue.

Furthermore, we checked the mean difference of donation amount only for fully attentive participants (57%), still the treatment effect was the same (i.e., unpacked treatments mean donation €3.42, $n = 55$, $SD = 1.17$; packed treatments mean donation €3.67, $n = 58$, $SD = 1.16$).

Even we patterned the attention of all participants (that is, fully attentive, attentive, and inattentive) using their response time to the donation decision, assuming the less detailed appeal needs lesser time to respond than the more detailed one. As a result, we found the choice-process data using the mean response time for the unpacked request was 87.67 seconds, while for the packed plea, 82.88 seconds. Meanwhile, the mean difference was still similar for only fully attentive participants, 82.63 seconds for unpacked treatments and 78.19 seconds for the packed ones.

In general, our results indicate that the platform (online experiment) we employed

did not encounter the lack of attention that changed the subadditivity of the unpacking principle to be an additive in both studies.

2.5.2 Type of participants

Brenner *et al.* (2002) pinpointed that if the evidence to be judged is accessible to the decision-maker, she determines the support and judgment. However, the result we got from study one was unexpected. For the participants (decision-makers) made from master's and bachelor's students, we assumed this cluster of the respondents were better judges to evaluate the impact of preschooling in their life and surrounding due to their WEIRD (Western, Educated, Industrialized, Rich, and Democratic) nature of most participants (Henrich, 2020). Meanwhile, the benefits of preschooling might not be visible for this group of participants, which is why the mean donation difference between treatments is statistically insignificant. Thus, maybe, it is better to check with different participants.

2.5.3 Degree of detail in the unpacking condition

One of the determinants of the degrees of subadditivity is the number of components in the detailed hypothesis. The more the number of components, the more subadditivity for the hypothesis (Tversky and Koehler, 1994; Brenner *et al.*, 2002). In our case, the unpacked donation appeal had seven elements for both studies. However, we found additivity.

Despite the possibilities mentioned above for attainable subadditivity, our result was consistent with the support theory's assertion. That is, support theory imposes subadditivity of support. According to Tversky and Koehler (1994, p. 549), "the support of a summary representation of an implicit hypothesis is generally less than the sum of the support of its exclusive components." Or

$$s(X) \leq s(X_1) + s(X_2), \tag{2.4}$$

where $s(X)$ is support for hypothesis X , whereas $s(X_1)$ and $s(X_2)$ are supports of constituent hypotheses, according to the representation from equation (4), the relation of implicit disjunction and the sum of the support for constitute hypotheses could also be equal. In other words, the illustration stipulated in equation (4) about the subadditivity of support was weak inequality. Therefore, consistent with support theory, both of our studies that used the unpacking principle might be the other (additivity) representation

of support.

2.5.4 Other limitations and future directions

All the possibilities we raised above might bring different results if we changed the nature of the experiment platform from the online lab to a controlled lab or field experiment. However, when we started making the investigation, the Covid-19 pandemic was prevalent. Thus, due to Covid-19 protocols, we did not have the luxury to make a controlled laboratory experiment.

On the other hand, we could not give much endowment due to our budget constraints. Nevertheless, if the incentivized money, including the participation fee, increases, we might see different donors' behavior. Thus, future studies could incorporate different platforms than ours and using participants other than university students would confirm the result we found or not.

2.6 Conclusions

This chapter examines the unpacking effect of support theory in charitable giving using an online lab experiment.

By giving endowments to the participants, two experimental studies tested the memory of donors for appeals of charity. The requests are different choices for potential donors (i.e., mainstream, the impact of preschool education vs residual, preservation of monuments). However, for both pleas, the mean donation difference between the less detailed and more detailed appeal was statistically insignificant, which disproves our hypothesis. Besides, unlike our hypothesis, the mechanism between unpacked appeal and donation decision could not be explained by availability heuristics — familiarity (as the mediator). On the other hand, the hypothesis that tried to answer when the unpacking effect work is not confirmed. The interaction of donors' involvement (as the moderator) towards the unpacked donation appeal did not statistically significantly affect the donation amount, which was against our hypothesis.

2.7 Appendix

2.7.1 Consent appeal email for charity *Il Sole*

Gent.ma dott.ssa (name omitted)

Le scrivo su indicazione di Paola Zanaboni, che ha frequentato il Master in Promotori del Dono all'Università dell'Insubria, presso il quale sono docente di economia del settore nonprofit. Le scrivo a questo proposito. In collaborazione con il collega Giuseppe Porro e con uno studente di dottorato in Economia (Wubeshet Regasa) sto progettando di effettuare un cosiddetto esperimento di laboratorio (un metodo per condurre ricerca empirica che ha preso piede, "imitando" gli psicologi cognitivi, anche in campo economico) coinvolgendo degli studenti dell'Università dell'Insubria. In estrema sintesi, l'esperimento consiste nell'assegnare a ciascun partecipante una dotazione di denaro e nel presentare un ente nonprofit. Il partecipante deve poi decidere se donare una parte della somma all'ente, trattenendo la parte restante per sé. La contatto per chiedervi se sareste d'accordo di utilizzare il vostro ente come destinatario delle donazioni, le quali, per quello che saranno, provvederemo a farvi pervenire. La vostra adesione potrebbe anche essere utile a far conoscere il vostro ente a giovani che magari ancora non lo conoscono. Nel caso in cui siate interessati a valutare la nostra proposta, vi forniremo una descrizione dettagliata delle informazioni comunicate ai partecipanti e della struttura dell'esperimento, in modo che possiate decidere se aderire o meno avendo chiari i gli obiettivi della ricerca. In attesa di un suo gentile riscontro, le invio i miei più cordiali saluti,

Umberto Galmarini

2.7.2 Consent appeal email for charity *Fondazione Comasca*

Gent.ma dott.ssa (name omitted)

sono docente del Master per Promotori del dono, ho avuto il suo indirizzo da (name omitted) e la contatto per questo motivo. Insieme al collega Giuseppe Porro e ad un nostro studente di dottorato in Economia (Wubeshet Regasa) stiamo progettando di effettuare un esperimento di laboratorio (tipo quelli che ho illustrato nel mio modulo di Economia al Master) coinvolgendo degli studenti dell'Università dell'Insubria. In estrema sintesi, l'esperimento consiste nell'assegnare a ciascun partecipante una dotazione di denaro e nel presentare un ente nonprofit. Il partecipante deve poi decidere se donare una parte della somma all'ente, trattenendo la parte restante per sé. La contatto per chiedervi se sareste d'accordo di utilizzare il vostro ente come destinatario delle donazioni, le quali, per quello che saranno, provvederemo a farvi pervenire. La vostra adesione potrebbe anche essere utile a far conoscere il vostro ente a giovani che magari ancora non lo conoscono. Nel caso in cui siate interessati a valutare la nostra proposta, vi forniremo una descrizione dettagliata delle informazioni fornite ai parte-

Benvenuto/a e grazie per aver aderito all'iniziativa.

L'esperimento si svolge in tre fasi, in ciascuna delle quali ti sarà presentato un ente nonprofit e ti sarà assegnata una dotazione di denaro. Dopo aver letto attentamente le informazioni relative alle attività svolte dall'ente, dovrai decidere quale parte della somma di cui disponi donare all'ente e, di conseguenza, quale parte trattenere per te. (c'è anche il link alla webpage dell'ente, che se vuoi puoi visitare)

(NOTA BENE: se vuoi donare 3 euro e 55 centesimi puoi digitare 3.55 oppure 3,55)

Al termine dell'esperimento, a ciascun partecipante sarà riconosciuto un gettone di partecipazione di tre euro. Inoltre, un partecipante ogni quattro sarà estratto a sorte e le sue decisioni saranno effettivamente implementate: le donazioni saranno effettivamente devolute agli enti nonprofit e le somme trattenute saranno corrisposte al partecipante estratto (sotto forma di Buono Amazon).

Per incassare il gettone di partecipazione, più l'eventuale somma assegnata a estrazione, dovrai inviare una mail a Wubeshet Regasa all'indirizzo wregasa@uninsubria.it indicando il tuo **codice partecipante**, che ti è stato comunicato sia all'inizio sia al termine dell'esperimento. Nota bene: per inviare la mail devi utilizzare la tua casella @studenti.uninsubria.it.

Per sicurezza, ti suggeriamo anche di prendere uno screenshot della notifica della vincita a estrazione.

Chiediamo anche due cose. 1) Non comunicate fra di voi durante l'esperimento (ad esempio via whatsapp) ; è importante che ciascuno faccia le «proprie scelte». 2) Non raccontate a chi parteciperà alle future sessioni dell'esperimento in cosa esso consiste, né che decisioni avete preso. Entrambe le cose sono molto importanti per ottenere risultati «veri e genuini».

Figure 2.12: General instructions about the experiments.

cipanti, in modo che possiate decidere avendo chiari i contenuti dell'esperimento. In attesa di un suo gentile riscontro, le invio i miei più cordiali saluti,
Umberto Galmarini

2.7.3 Oral Instructions to participants

Figure 2.12 shows the instructions given to participants regarding the experiment.

Figure 2.13, Figure 2.14, Figure 2.15, Figure 2.16 and Figure 2.17 are the instructions given for logging into the ClassEx platform.

2.7.4 Treatment conditions (in Italian)

Figure 2.18 and Figure 2.19 are the two treatment conditions for Experiment 1, while Figure 2.20 and Figure 2.21 are those for Experiment 2.

Istruzioni per partecipare all'esperimento

utilizza il browser del tuo smartphone o PC per accedere alla homepage del sito **ClassEx** all'indirizzo

<https://classex.de>

Attenzione: i browser supportati sono

Firefox, Chrome, Safari

Non si può utilizzare Explorer

Figure 2.13: Instructions for logging into the ClassEx platform (I).



Figure 2.14: Instructions for logging into the ClassEx platform (II).

3 modalità di accesso



1) login

1. go to: <https://classex.uni-passau.de>
2. choose: Università degli Studi dell Insubria
3. choose: Insubria Como | Scienza delle finanze
4. choose: participant
5. enter password: [redacted]

3) automatic link for login

[https://classex.uni-passau.de/bin/\[redacted\]](https://classex.uni-passau.de/bin/[redacted])

questo link lo invio sulla chat di Teams

Figure 2.15: Instructions for logging into the ClassEx platform (III).

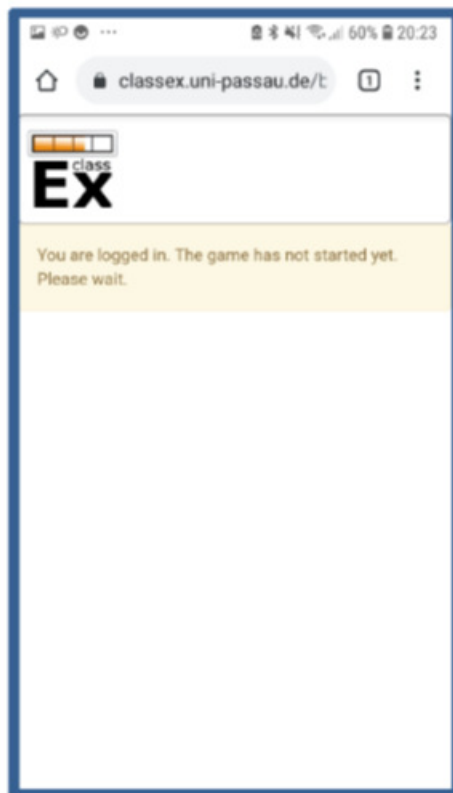
The screenshot shows the ClassEx login interface. At the top left is the ClassEx logo with a progress indicator. At the top right, it says 'version 3.6.1' and 'Information on classEx classEx@school (DE)'. Below the logo are three dropdown menus: 'Università degli Studi dell Insubria', 'Insubria Como | Scienza delle finanze', and 'participant'. Below these is a 'password' input field with a red box around the redacted text. At the bottom is a 'login' button. A yellow box at the bottom contains a message about the update to version 3.6.1.

seleziona così



inserisci password e clicca login

Figure 2.16: Instructions for logging into the ClassEx platform (IV).




una volta effettuato il login dovrebbe comparire questa schermata.

Il messaggio conferma che sei «loggato» e ti chiede di attendere che l'esperimento sia avviato.

Attendi l'inizio dell'esperimento senza uscire da questa pagina.

NOTA che NON ti è stato chiesto nome e cognome: la partecipazione è anonima. Non possiamo (e non vogliamo) utilizzare le risposte per valutarvi.

Figure 2.17: Screenshot of the waiting room after log in.




Il Sole Onlus ([Link al sito](#)) è un'organizzazione senza scopo di lucro nata a Como nel 1997 che si occupa della tutela dei diritti dei bambini.

Disponi di una dotazione di 5 euro: digita l'importo della donazione che intendi effettuare a favore de Il Sole Onlus (minimo zero, massimo 5 euro) che sarà destinata all'acquisto di materiale didattico per una scuola dell'infanzia in un villaggio dell'Etiopia, per consentire ai bambini di sviluppare migliori capacità di lettura e di calcolo quando frequenteranno la scuola primaria e secondaria, di aumentare le probabilità di ottenere un diploma di scuola superiore, un buon impiego e raggiungere una maggiore stabilità familiare sotto il profilo economico, contenendo anche i casi di gravidanza involontaria nelle giovani e la propensione alla microcriminalità.

 euro

Invia

Figure 2.18: Experiment 1 donation appeal: Unpacked condition.




Il Sole Onlus ([Link al sito](#)) è un'organizzazione senza scopo di lucro nata a Como nel 1997 che si occupa della tutela dei diritti dei bambini.

Disponi di una dotazione di 5 euro: digita l'importo della donazione che intendi effettuare a favore de Il Sole Onlus (minimo zero, massimo 5 euro) che sarà destinata all'acquisto di materiale didattico per una scuola dell'infanzia in un villaggio dell'Etiopia, per consentire ai bambini di avviare già in tenera età il loro percorso di istruzione, sviluppare abilità espressive e relazionali, e migliorare le loro prospettive economiche.

 euro

Invia

Figure 2.19: Experiment 1 donation appeal: Packed condition.




La **Fondazione Provinciale della Comunità Comasca Onlus** ([Link al sito](#)) è nata nel 1999 con l'intento di aiutare le persone a donare e a partecipare attivamente alla definizione e alla realizzazione del bene comune. Una delle attività svolte dalla Fondazione è quella di raccogliere fondi **per finanziare interventi di tutela, restauro e valorizzazione del patrimonio artistico e storico presente sul territorio comasco.**

Disponi di una dotazione di 5 euro: digita l'importo della donazione che intendi effettuare a favore della Fondazione Provinciale della Comunità Comasca (minimo zero, massimo 5 euro).

euro

Invia

Figure 2.20: Experiment 2 donation appeal: Packed condition.



La **Fondazione Provinciale della Comunità Comasca Onlus** ([Link al sito](#)) è nata nel 1999 con l'intento di aiutare le persone a donare e a partecipare attivamente alla definizione e alla realizzazione del bene comune. Una delle attività svolte dalla Fondazione è quella di raccogliere fondi **per finanziare interventi di tutela, restauro e valorizzazione di ville d'epoca, chiese, torri, mura difensive, siti archeologici, opere pittoriche e scultoree presenti sul territorio comasco.**

Disponi di una dotazione di 5 euro: digita l'importo della donazione che intendi effettuare a favore della Fondazione Provinciale della Comunità Comasca (minimo zero, massimo 5 euro).

euro

Invia

Figure 2.21: Experiment 2 donation appeal: Unpacked condition.

Chapter 3

In-Group (vs Out-Group) Unidentified (vs Identified) Beneficiaries in Charitable Giving

3.1 Introduction

The *social distance* between a donor and the beneficiaries assisted by a charity can influence the generosity and hence the amount given by the donor.¹ Beneficiaries can be differentiated based on their *identifiability* (i.e., *identified* versus *unidentified* beneficiaries) and *group belongingness* (i.e., with respect to the social group to which potential donors belong, *in-group* versus *out-group* beneficiaries), with both dimensions conceivably influencing donation decisions. It is precisely the analysis of how these two factors impact on donation decisions the main goal of this chapter. In particular, the objective is to elucidate how donors' social distance from either in-group or out-group beneficiaries, who in turn can be either unidentified or identified, impacts on the donations cashed by a charity.

The chapter is organized as follows. Section 3.2 defines the concept of social distance to an out-group as intergroup attitude with regard to a competitor group. In empirical terms, social distance can be measured through the Dynamic Identity Fusion Index (DIFI), which is described in Section 3.2.1. The measure of social distance we use is the amalgamation of the pictorial scale of fusion by Swann (2009) and verbal scale fusion

¹In the charitable giving literature, depending on the type of activity undertaken by the charity, the individuals assisted are termed either as *beneficiaries* (e.g., a charity providing after school programs to children belonging to low-income households) or as *victims* (e.g., a charity assisting in a refugee camp migrants escaping from a conflict). Given the object of our experiment, we refer to *beneficiaries*.

by Gomez (2011), and we apply in relation to “Italian culture” and to “multiculturalism”, arriving at the testable hypothesis that Italians could show more affinity to the former than to the latter (Hypothesis A).

Section 3.3, by surveying the relevant literature on the subject, first examines the role of the identifiable beneficiary effect on donation decisions, arriving at formulating the hypothesis that an identified beneficiary should receive, on average, more donations than an unidentified beneficiary (Hypothesis B). It then explores the relation between social distance and group belongingness of the beneficiaries in predicting donation decisions, arriving at the hypothesis that Italian donors are more generous with an Italian than with an immigrant beneficiary (Hypothesis C), and the more so the larger is the social distance of the donor to the multicultural world (Hypothesis D).

Section 3.4 describes the experiment conducted online with 201 students of Insubria University using the platforms ClassEx (Giamattei et al., 2019) and Lioness (Giamattei et al. 2020). The experiment comprises two stages. In the first stage, we elicit from participants their perceived social distance from “Italy” and from “the multicultural world”, with the latter distance then used as a proxy of the social distance toward immigrants. For obvious reasons, in eliciting social distance we avoided making explicit reference to immigrant subjects, as this could have influences the subsequent donation decision. In the second stage, the donation appeal of a charity — a charity providing assistance to adolescents suffering of specific learning disorders and special educational needs — is presented in a two-by-two between subjects design. In Treatment 1, the charity appeals for an unidentified adolescent, without specifying his or her nationality. In Treatment 2, the appeal is for an unidentified adolescent belonging to a regular-immigrant family. In Treatment 3, the charity appeals for an identified — by age and name, and hence also sex: 15 years old Andrea — adolescent, where the name Andrea implies Italian nationality. Finally, in Treatment 4, the appeal is for an identified (by age and name, and hence also sex: 15 years old Ibrahim) adolescent belonging to a regular-immigrant family. With these four treatments, we account for random variation along the two dimensions on which we focus our analysis: identifiability and group-belongingness of the beneficiary.

The analysis of the experimental data delivers 5 results, which are illustrated and discussed in Section 3.5. They are based on the sample formed by the 169 participants whose parents are both Italians. Scarcity of observations (25 subjects across four treatment groups) suggested to exclude from the sample the participants with one or two parents of foreign nationality.

In a nutshell, the experiment shows that Italian donors give, on average, the same amount to an Italian and to an immigrant beneficiary (Result 2, in contradiction with

Hypothesis C), and give *more*, on average, to an unidentified than to an identified beneficiary (Result 1, in contradiction with Hypothesis B). *Ex-post*, and clearly without the possibility to test the argument, we argue that the latter result — an identified beneficiary receives less donations, instead of more, than an unidentified beneficiary — could be explained by the fact that while most of the previous experimental research on identifiability focused on *victims*, our experiment is focused on *beneficiaries*. In short (more on this in Section 3.5.4) we argue that a charity appeal for a *victim* usually involves highly emotional and tragic situations in which a donation for a specific individual is perceived as highly worth for. Instead, an appeal for an *identified beneficiary*, being referred to address current and ordinary needs, might be perceived by the donor as not much worth for, since it goes to help a single individual to cover ordinary and widespread needs. A second — alternative or complementary — interpretation of Result 1 comes from the research by Rydgren (2004) and Small (2015), suggesting that anonymous beneficiaries might bring more pronounced feelings of closeness than an identified one. Anonymity of the beneficiary could increase, and not decrease, the closeness between the donor and the beneficiary, since an unidentified appeal can invite the donor to think of a beneficiary who is socially closer to her or him than an identified appeal.

The analysis of average donations also shows that female donors tend to be more generous than male donors, in all treatment conditions (Result 3). Given the available data, no interpretation can be given to the result, apart from noting that female donors donate more even though the appeals for an identified beneficiary is referred to a male subject.

As for Result 2 about the non-significant difference in the donations received, on average, by an Italian and by an immigrant beneficiary (a result contradicting Hypothesis C), a first interpretation comes from the celebrated *contact hypothesis* formulated by Allport (1954), hinting that when individuals belonging to different social groups get in contact — as it is the case for the participants to our experiment: university students from both Italian and immigrant families — then it is likely that prejudicial attitudes do not show up. However, concerning the same result, in Section 3.5.5 we show that the focus on average donations hides a significant difference in the distribution of donations. In particular, we observe that participants solicited to give in favor of an Italian beneficiary were more likely to donate the entire endowment (€10) than those solicited for an immigrant beneficiary, whereas the latter participants were more likely than the former to give a *high* donation, one between €6 and €9 (Result 4). Also in this case, we can only provide an *ex-post* interpretation of the result, which is based on two widely

analyzed motivations for charitable giving, namely, warm-glow (Andreoni, 1989, 1990) and social pressure (Della Vigna et al., 2012, Andreoni et al., 2017).

The final part of Section 3.5 looks at whether social distance impacts on donations, as predicted by our Hypothesis D. The experimental data do not support the hypothesis, in that although donations are significantly lower among donors who exhibit a wider distance toward the multicultural world, the impact is not significantly different when comparing donations to Italian with donations to immigrant beneficiaries. Hence, in our experiment, social distance to the multicultural world, while inversely related to generosity *per se* (Result 5), does not bear any relation with prejudice towards immigrant beneficiaries.

The chapter ends with the final remarks in Section 3.6. Since the experiment was conducted in Italian language, and in the main text we provide English translations of the relevant material, the original elements in Italian language are presented in Appendix.

3.2 Social distance to out-group

Social distance can be defined as “the perceived affinity and nearness between groups” (Ahmed, 2007) or as “the subjective feeling of proximity or remoteness to other groups” (Stephan et al., as cited in Hogsdal, 2021).

This study examines social distance within a new social categorization. Namely, in-group (Italian citizens) vs out-group (Immigrants; in particular, *legal* immigrants to Italy) for Italian respondents.

Immigration is a hot issue in European countries. In the aftermath of the 2014-2017 ‘refugee crisis’, diverse repercussion has happened, from significant electoral gains for right-wing parties to fierce debates on how to re-design the welfare system in different European countries, including Italy — a frontline nation coping with the ‘crisis’ (Alesina et al. 2018, Campo, 2020).

The perceptions and the attitudes of the native population towards the immigrants is the primary source of the backlash. For instance, according to Alesina et al. (2018), college-educated Italians perceive the share of legal immigrants in the country as high as 26%, while the real value is only 10%. About the origin of immigrants, Italians overestimate the size of northern African and Middle Eastern immigrants. Moreover, the actual religion of immigrants is overestimated by 14 percentage points in favor of Islam. These misperceptions and attitudes toward immigrants, coupled with the narration — ‘refugee crisis’ — can easily end up in a categorisation of individuals living in Italy as

divided between "us" (natives) and "them" (immigrants).

To analyze the attitudes of natives toward the social categories of "us" and "them", the social psychology literature starts with focusing on the intergroup relations. Under which conditions the existence of different sorts of prejudice against a group become real? Prejudicial attitudes toward "them" usually arise, firstly, when in-groups individuals (natives) perceive that out-groups individuals (immigrants) pose serious threats to their material resources or "economic conditions" (Sarrasin et al., 2018). Secondly, when the existence of out-groups are felt as a danger to the "identity of the in-group as a whole" (Brewer, 2007, Morrison, 2010). Clearly, these attitudes and perceptions are also affected by how much immigrants identify and integrate themselves with the host nation, or to which extent they feel close with the in-group of natives (Sarrasin et al., 2018). The two aforementioned factors — perceptions about threats in terms of material conditions and in-group identity — represent the typical backgrounds for prejudice against immigrants that are likely to activate "intergroup comparison and competition" in the relation between natives and immigrants (Brewer, 2007).

In the light of the above discussion, it is clear that lay-outing the degree of affinity of Italians toward their group — on the one hand — and immigrants — on the other hand — is the first necessary and preliminary stage of this research, since it provides a measure of the degree of social distance of potential Italian donors toward (legal) immigrants. This intergroup attitude of participants is measured by using the so-called Dynamic Identity Fusion Index (DIFI), to which we turn in the following subsection.

3.2.1 Dynamic Identity Fusion Index

The Dynamic Identity Fusion Index (DIFI) is an index for measuring the degree of social attachment — the personal attitude toward groups — by means of a web-based survey. As such, in our context it can be applied to measure the social distance that donors perceive toward a group of individuals and households characterized by religious affiliation, ethnicity, country of origin, and so on.

The script of DIFI is written in JavaScript code and compatible using HTML and Qualtrics. This web-based design is the amalgamation of two earlier indexes of fusion; namely, the pictorial scale of fusion by Swann (2009) and verbal scale fusion by Gomez (2011). According to Jimenez (2016), the justification behind such a mix of scales is that the "simplicity of the single pictorial item with the higher predictive fidelity of the verbal scale" makes DIFI a robust measure of both conscious and nonconscious emotions of individuals.

The DIFI results in output data consisting of two components: the *distance* and the *overlap* components. However, given our objective — the evaluation of the intergroup attitudes between Italians and immigrants — the distance component is the suitable index, hence we employ only this component of the DIFI in our analysis. In fact, Jimenez et al. (2016) show that the distance component of the DIFI measures the social distance relative to an out-group while overlap component is a measure of identity fusion. As an illustration, take an individual who indicates 0% overlap; in this case, there is still the possibility of expressing various distance values (from 0 to –100), thus reveal different attitudes toward the out-group.

As we describe in Section 3.4.3, in order to measure the level of affinity of Italians toward both in-group (Italians) and out-group (legal immigrants) individuals, we set up a single page in which each group is represented by a picture. Besides using HTML, the application of the DIFI on the same webpage is a novel procedure, by which we improve upon Jimenez (2016) original JavaScript code where groups are represented on different pages. This novel feature can encourage a more conscious comparison of fusion between in-group and out-group. As a corollary, we can also use the DIFI to mindfully evaluate the social distance of Italian participants between Italians and immigrants.

Our DIFI continuous measure involves asking Italian participants to position a smaller circle representing oneself with respect to bigger circles representing meaningful depictions of in-group and out-group. For the former, we use the Italian flag. For the latter, we employ a patchwork of flags of different countries, both rich and developing countries, which is meant to represent the *multicultural world*. On purpose, we avoid characterizing the out-group as the pool of countries from which immigrants move to Italy, since this could have had an impact on the subsequent donation decision toward an out-group beneficiary. With the application of the DIFI, our purpose is instead that measuring the difference in attitudes (if any) between in-group and a *neutral* out-group.

However, there is also another reason for choosing a depiction of multiculturalism to represent the group of immigrants. As noted by Rios (2016), as an ideology that strives to acknowledge and appreciate diversity, multiculturalism can improve intergroup attitudes. Furthermore, immigrants have preferences toward the process of multicultural attitude (Celenk, 2014). That is why we choose this ideology as a proxy for immigration. According to Deaux (2014), multiculturalism is an “attractive ideology for immigrants” because within mainstream society, maintaining own culture is acceptable. Thus, the multicultural worldview can capture attitudes toward immigrants (Ponterotto 2014). In other terms, and to be more concrete, suppose that an individual — a member of the majority in a nation — has a negative (respectively, positive) attitude towards immig-

rants and cross-cultural diversity. In this case, the individual is also less (respectively, more) likely to appreciate and support the ideology of multiculturalism.

As noted above, one of the two components of the DIFI scheme —distance — is intended to measure the relation (attitude) between a small circle (oneself) and two circles, in our specific case Italy and multiculturalism. The initial position of the circles is set at distance equal to -50 , with permitted distances ranging from -100 , the greatest allowed distance (representing the least in-group biased attitude toward Italy; or the highest out-group prejudice attitudes toward immigrants), to $+125$, the smallest allowed distance (representing the highest in-group biased attitude toward Italy; or the least out-group prejudice attitude toward immigrants).

In summary, based on the above discussion, we set the following hypothesis.

Hypothesis A. Italians have more affinity for Italian culture than for multiculturalism.

3.3 Identified beneficiary effect

The anecdotal evidence about the famous case of "Baby Jessica", a victim child found in a well near her home in Texas in 1987, recounts that more than \$700,000 were donated from the public (Small, 2007). Similarly, Ali Abbas, an Iraqi boy who lost both his arms and parents in 2003's Iraq war with US-led forces, received £275,000 for his medical care (Small, 2007). What is more, in Sweden, the pictures of the dead body of Alan Kurdi (a refugee boy from Syria drown while trying to pass the Mediterranean Sea), were able to raise, within 20 hours, the amount of 4,000,000 SEK (Erlandsson, 2016), about \$40,000. These, and many others, generosity boosts show how donors were motivated by their hearts, not by their heads, and represent a clear demonstration of the so-called *identifiable victim effect* (IVE) in charitable giving.

IVE is the theory arguing that identification (by picture, name, or any other potentially relevant kind of identifier) of a victim, or a beneficiary, is more salient in spurring charitable donations than an unidentified one, the reason being that the response to cues related to the former type of appeals is greater than the response to cues related to the latter type of appeals.

In the literature on charitable giving, the effect of identifiability on donations has been empirically estimated by considering the role played by different types of identifiers. Namely, information — e.g., age, name, picture — about the beneficiary (Kogut and Ritov, 2005a), the number — single vs group — of the victims (Kogut and Ritov, 2005b), the perception of the impact of the donation for the assisted individual (Kogut and Ritov,

2005b), and belongingness — in-group vs out-group — of the beneficiary to the group to which the donor belongs (Ritov and Kogut, 2007, 2011). In these studies, identifiability of the beneficiary, and affinity with the social group of the donor, lead in general to more generous donations.

Among the aforementioned moderators, in this work we are interested in examining the interaction between group belongingness (in-group vs out-group) and identifiability (identified vs unidentified beneficiary). In this setting, as argued by Lee (2016), donors' feelings and responsibilities toward a beneficiary who is socially and psychologically near to them — as when she or he belongs to the same group — tend to be high, and as a result also the donations. Moreover, donations are likely to increase when the beneficiary is identifiable by age, name, or picture (Kogut and Ritov 2005a, Study 1). At the same time, the use of various social categories (for instance, nationality, ethnicity, religion), the relation between group belongingness and identifiability can be strengthened (Kogut and Ritov, 2007; Kogut and Ritov, 2011; Deshpande and Spears, 2016).

By considering the above classifications, one should also account that they may result in peculiar donation decisions. For instance, categorizing a victim by her nationality is a way to increase her or his identifiability. By investigating this case, Kogut and Ritov (2007) find that the interaction between in-/out-group and identifiability of victims (in the specific case, Israeli vs Indian nationals) result in biased donations, in that Israelis' participants on average donate more to a single identified in-group victim than to an identified Indian one, with the result extending also to the case in which victims are unidentified.

In a complementary study to the one by Kogut and Ritov (2007), Deshpande and Spears (2016) employ the interaction between identifiability and intra-group social category in India (using societal hierarchy in that country). As the caste system is still prevalent in India, the study of Deshpande and Spears (2016) also proves this point in charitable giving. For "Internet-using, English-speaking, young, educated Indians" participants (donors), the donation decision is affected by prejudicial attitudes toward a different caste. Thus, donors' attitudes result in discriminatory generosity decisions against the identified low-caste family.

In the present work, the focus is on how Italian donors react to donation appeals that incorporate Italian vs immigrant beneficiaries interacting with identifiability of the beneficiaries. This leads to the following testable hypotheses.

Hypothesis B. An identified Italian (respectively, immigrant) beneficiary receives, on

average, more donations than an unidentified Italian (respectively, immigrant) beneficiary.

Hypothesis C. An identified (respectively, unidentified) Italian beneficiary receives, on average, more donations than an identified (respectively, unidentified) immigrant beneficiary.

3.3.1 On the association of social distance and beneficiary identification in an inter-group context

The degree of affinity (social distance) toward immigrants, measured in the first stage of the experiment (see the next section for the details) through the DIFI index on Italy vs multiculturalism, is likely to be linked to the donation behavior expressed in the second stage of the experiment by considering different treatments with in-group members vis-à-vis intergroup members. To clarify the claim, consider how an in-group participant feels when she sees the description of a beneficiary belonging to her group. As Park and Rothbart (1982), cited in Hogsdal (2021) suggest, the depiction of an in-group member is more "concrete and complex" than that of an out-group member. Moreover, if there is a significant social distance to out-groups, donors' empathy toward this group is likely to decline (Hein et al., 2010, as cited in Hogsdal, 2021). At the same time, Kogut et al. (2018) claim that the higher the social distance with a group, the less the moral responsibility and urgency of help is felt for that group. Therefore, the higher the social distance with people or groups, the weaker the motivation to donate to individuals belonging to that groups (Weinmann and Mishra, 2019; Hogsdal, 2021).

By jointly considering the measure of social distance expressed by the Italian participants toward multiculturalism in the first stage of the experiment (see the next section for the details), and the donation decisions taken in the second stage of the experiment, we can test whether or not generosity is biased toward an Italian beneficiary (either identified or unidentified). More formally, the testable hypothesis is the following one.

Hypothesis D. A higher social distance of an Italian donor from immigrants tend to be associated to smaller donations to an unidentified (respectively, identified) immigrant beneficiary than to an unidentified (respectively, identified) Italian beneficiary.

3.4 The laboratory experiment

This section describes the experiment conducted online from May 19, 2021, to July 28, 2021 (15 sessions) by recruiting students at Insubria University.

3.4.1 Overview of the experiment

The experiment is inspired by the above cited work by Alesina et al. (2018), where it is reported the prevalence of misperceptions and negative attitudes toward immigrants from poor countries to Italy. It is also inspired by the studies by Kogut and Ritov (2007), and Deshpande and Spears (2016), showing that donations are biased toward in-group and identifiable beneficiaries.

In order to assess for the impact of these factors in a charitable giving context, the experiment is framed in two stages. The first one, measuring inter-group attitudes among Italian donors; i.e., the social distance of donors toward in-groups and out-groups beneficiaries. The second stage, dwelling on the donation plight for beneficiaries assisted by a charity operating in the Province of Como — EduCo, providing educational programs for adolescents with specific learning disorders and special educational needs — by incorporating group belongingness and identifiability.

3.4.2 Recruiting participants and approaching the charity

The 201 students who participated to this experiment are the same who participated to the experiment described in Chapter 2 (the two experiments have been held in sequence). In this experiment, after receiving 3 euros as a participation fee, each participants was given 10 euros of endowment to be splitted between her- or himself and the charity EduCo. Participants were also informed that, after decisions have been taken, only one in four participants, randomly drawn, would receive the amount not donated, and the amount donated transferred to EduCo.

The staff of charity EduCo had been previously contacted by email to obtain the consent to use their institution as our charitable organization for the experiment. Their answer was positive (the text of the email is available in the Appendix).

3.4.3 Experimental procedure

Instructions

The participants were recruited by sending an invitation by email to enroll for the experiment to all students attending Bachelor and Master courses in four of the six Departments of Insubria University.² The students who subscribed were then free to participate to anyone of the online sessions conducted through Microsoft Teams by Umberto Galmarini, Giuseppe Porro and Wubeshet Regasa. The general instructions has been orally given and displayed to participants through a slide. Then participants received instructions for logging into the ClassEx online platform (Giamattei and Lambsdorff, 2019), and, for the DIFI index, to the parent Lioness online platform (Giamattei et al. 2020). The experiment was entirely run in Italian language and comprised two stages.

First Stage

In the first stage, the social distance of participants to Italy and to the multicultural world (as an undeclared proxy for immigrants) was measured using the Dynamic Identity Fusion Index (DIFI) described in Section 3.2.1 through a Lioness session. The English translation of the page shown to participants is in Figure 3.1 (the Italian version is in the Appendix). After completing this task, participants were directed to ClassEx,³ where the second stage was conducted.

Second Stage

The second — donation — stage comprises four treatment groups, to which participants are randomly assigned by ClassEx in a two-by-two between-participants design: either an Italian or an immigrant beneficiary, and either an unidentified or an identified beneficiary. The four different versions of the donation appeal are reported below, where boldface text highlights the peculiarities of each treatment (the Italian version is in the Appendix).

²The Università degli Studi dell’Insubria is a small-medium sized public university based in Varese and Como, two provincial cities located north of Milan in the Lombardy Region. The recruitment of students was conducted in the following Departments: Dipartimento di Diritto, Economia e Culture (Law, Tourism), Dipartimento di Economia (Economics), Dipartimento di Scienze Umane e dell’Innovazione per il Territorio (Foreign languages, Cultural mediation, ICT), Dipartimento di Scienza e Alta Teconologia (Mathematics, Physics, Chemistry).

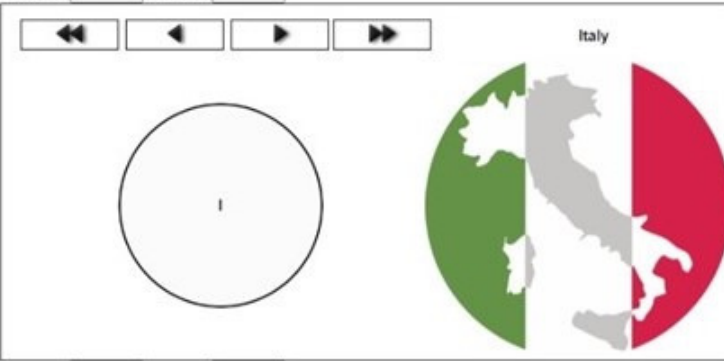
³We used Lioness for stage one because classEx does not have the luxury to program sophisticated JavaScript codes.

Measurement of Attitude

The two figures below are intended to represent your relationship or affinity with **"Italy"** and with **"The multicultural world"**. Drag (or move by clicking the arrows) the circle "I" (representing you) to the position that best expresses your degree of relationship or affinity with each of the two elements. Finally, press the green CONTINUE button

Distance: Overlap:

◀◀ ◀ ▶▶ ▶

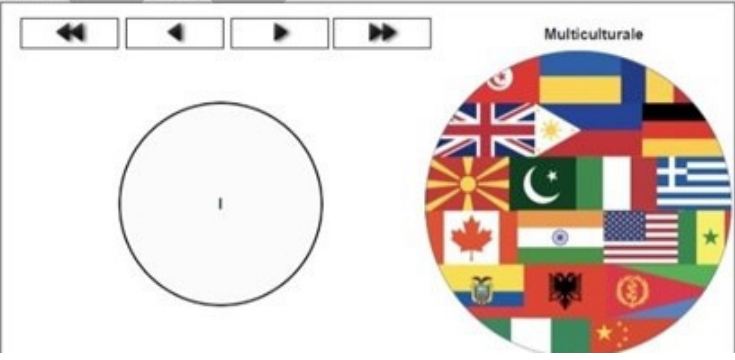


Italy

A circular interface for measuring attitude toward Italy. On the left is a white circle with a small 'I' in the center. On the right is a circular graphic divided into three vertical sections: green on the left, a grey map of Italy in the center, and red on the right. The word 'Italy' is written above the graphic. Above the interface are four arrow buttons: two pointing left and two pointing right.

Distance: Overlap:

◀◀ ◀ ▶▶ ▶



Multiculturale

A circular interface for measuring attitude toward a multicultural world. On the left is a white circle with a small 'I' in the center. On the right is a circular graphic filled with a collage of various national flags from different countries. The word 'Multiculturale' is written above the graphic. Above the interface are four arrow buttons: two pointing left and two pointing right.

Figure 3.1: Measurement of attitudes toward Italy and a multicultural world.

Treatment 1: In-group and unidentified beneficiary.

*EduCo is a social-promotion association (Link to the website) founded in 2017 with the aim of fighting the phenomenon, unfortunately growing also in our area, of early school drop outs. By employing qualified tutors, EduCo provides personalized educational programs to adolescents suffering of Specific Learning Disorders (SLD) and of Special Educational Needs (SEN). In particular, **the donations here collected by EduCo will be used to assist a teenager belonging to a low-income family residing in the Como area.** You have a budget of 10 euros: enter the amount of the donation you intend to make in favor of EduCo (minimum zero, maximum 10 euros).*

Treatment 2: Out-group and unidentified beneficiary.

*EduCo is a social-promotion association (Link to the website) founded in 2017 with the aim of fighting the phenomenon, unfortunately growing also in our area, of early school drop outs. By employing qualified tutors, EduCo provides personalized educational programs to adolescents suffering of Specific Learning Disorders (SLD) and of Special Educational Needs (SEN). In particular, **the donations here collected by EduCo will be used to assist a teenager belonging to a family of low-income regular-immigrants residing in the Como area.** You have a budget of 10 euros: enter the amount of the donation you intend to make in favor of EduCo (minimum zero, maximum 10 euros).*

Treatment 3: In-group and identified beneficiary.

*EduCo is a social-promotion association (Link to the website) founded in 2017 with the aim of fighting the phenomenon, unfortunately growing also in our area, of early school drop outs. By employing qualified tutors, EduCo provides personalized educational programs to adolescents suffering of Specific Learning Disorders (SLD) and of Special Educational Needs (SEN). In particular, **the donations here collected by EduCo will be used to assist Andrea, a 15 years old affected by SLD, belonging to a low-income family residing in the Como area.** You have a budget of 10 euros: enter the amount of the donation you intend to make in favor of EduCo (minimum zero, maximum 10 euros).*

Treatment 4: Out-group and identified beneficiary.

*EduCo is a social-promotion association (Link to the website) founded in 2017 with the aim of fighting the phenomenon, unfortunately growing also in our area, of early school drop outs. By employing qualified tutors, EduCo provides personalized educational programs to adolescents suffering of Specific Learning Disorders (SLD) and of Special Educational Needs (SEN). In particular, **the donations here collected by EduCo will***

be used to assist Ibrahim, a 15 years old affected by SLD, belonging to a family of low-income regular-immigrants residing in the Como area. You have a budget of 10 euros: enter the amount of the donation you intend to make in favor of EduCo (minimum zero, maximum 10 euros).

Note that, in Treatment 3, we employed an overt Italian name: Andrea. Instead, in Treatment 4, also because of misperception and overestimation of the number of Muslim immigrants resident in Italy (Alesina et al. 2018), we used an overt Muslim sounding name: Ibrahim.

As a final step, after the donation decision a brief survey was submitted to elicit some the demographic data about participants: age, field of study, year of study, area of residence, origins of parents.

Payoffs to participants and the charity

As already reported above, at the end of the experimental session 25% of the participants were randomly drawn to be sent the part of the €10 endowment not donated to the charity, while a €3 participation fee was sent to everybody completing all tasks. Payments took the form of Amazon Gift Cards, and were made in a way to ensure that participants could not think that claiming the payment disclosed their donation choice to the experimenters.

3.5 Experimental results

We now turn to the analysis of the data collected through the experiment, which involved 201 students in 15 online sessions. To avoid multiple responses from a single participant, we cross-checked the opened ClassEx links with the Microsoft Team's attendance sheet of participants. After dropping 6 participants with missing data, the available dataset consists of 195 observations.

3.5.1 Origin and location of participants

Of the 195 participants included in the dataset, most of them, 169 (86.7%) are of Italian nationality with both parents of Italian nationality. As for the rest of participants, 19 have both parents of foreign nationality, and 7 have one parent of Italian, and one of foreign, nationality. Given that one of the objectives of the research is to assess the impact on donations of group belongingness of the beneficiary, in the analysis that follows we

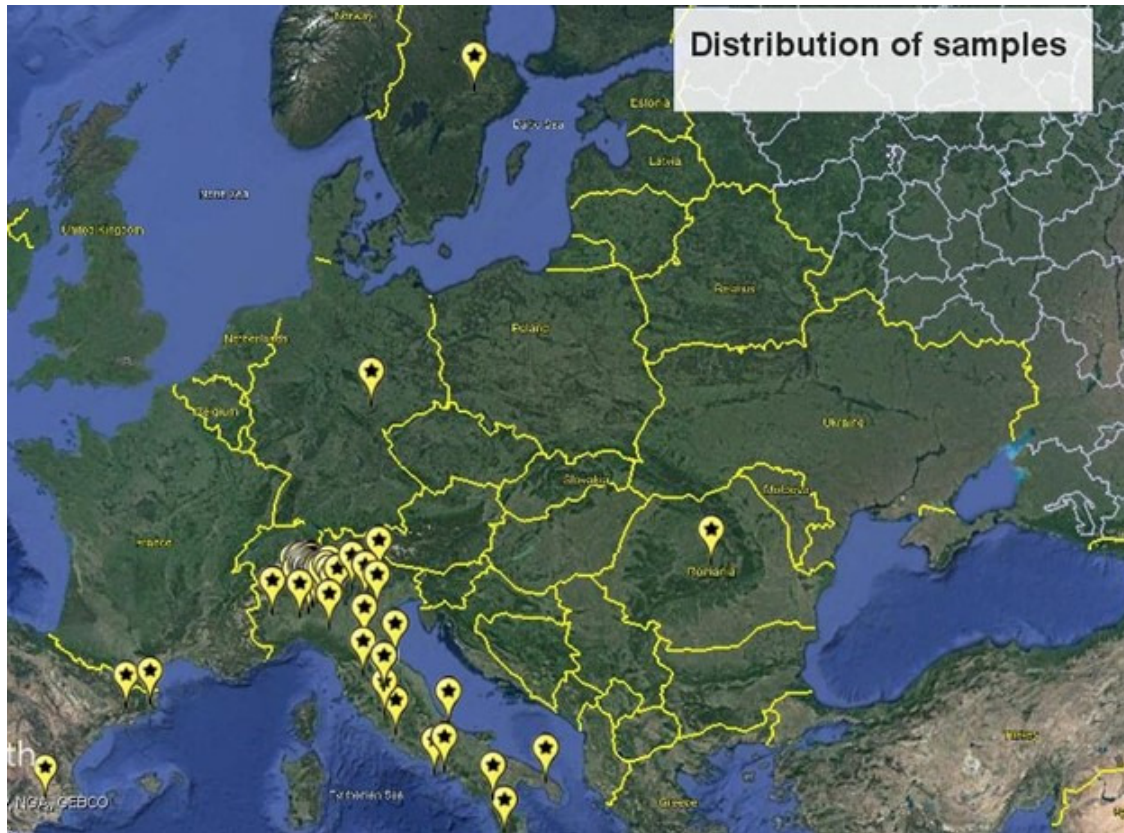


Figure 3.2: The locations of participants during the online experimental sessions.

restrict to the sample of the 169 participants whose parents are both Italians. Scarcity of observations about non-Italian participants (26 observations across 4 treatments) precludes any meaningful use of the data collected from them.

As for location,⁴ see the map in Figure 3.2, during the experimental sessions most of the participants were connected from Northern Italy, while only few respondents from abroad (mainly outgoing Erasmus students in Spain, Germany, and Sweden, but also some foreign students,⁵ for instance from Romania, who in 2021 were attending online classes from home because of the Covid-19 pandemics).

3.5.2 Personal data on participants

After completing the two stages of the experiment, we asked the participants to provide some personal data. Table 3.1 shows that more than 50% of the participants are aged

⁴Lioness, while providing anonymized IP addresses of participants that allow to check for double connections while preserving privacy, it provides also the geographical coordinates of participants that we transferred on Google Earth Pro to obtain the map in Figure 3.2.

⁵As remarked above, foreign students are excluded from the sample object of the empirical analysis.

Type of information	Frequency	Percent	T1	T2	T3	T4
Age	169	100.00	100.00	100.00	100.00	100.00
18–21	89	52.66	54.55	62.50	44.44	50.00
22–25	65	38.46	34.09	37.50	44.44	37.50
26–43	15	8.88	11.36	0.00	11.11	12.50
Gender	169	100.00	100.00	100.00	100.00	100.00
Female	117	69.23	70.45	67.50	77.78	60.00
Male	52	30.77	29.55	32.50	22.22	40.00
Place of Residence	169	100.00	100.00	100.00	100.00	100.00
Varese Province	68	40.24	50.00	35.00	42.22	32.50
Como Province	41	24.26	15.91	20.00	26.67	35.00
Milan Province	28	16.57	15.91	17.50	13.33	20.00
Other Italian Provinces	32	18.93	18.18	27.50	17.78	12.50

Table 3.1: Control variables and their distributions across treatments (I).

18–22, while only 8.9% are aged 26 or more. More than 2/3, 69.23%, are female; the prevalence of female participants is due to the fact that in most fields of studies from which we recruited from, female students are the majority of the students' population (for instance, in Foreign Languages 90.62% of participants are female, in Tourism 84.62%; the only field that turned out to be perfectly balanced in terms of gender is Economics & Management). The last part of Table 3.1 shows that, as expected, most of participants live in the Provinces of Varese and Como, where Insubria University is located.

Additional personal data collected are shown in Table 3.2. About 41% of the participants are first year students, and about 30% are second year. Almost 50% of the participants come from two fields of studies, 26.04% from Economics & Management, and 23.08% from Tourism. The last part of the table reports also the distribution of participants in terms of number of participants in the experimental session: more than 50% of participants attended a session with 21 to 30 participants, while 19.5% attended a session with less than 11 participants. Although in our experiment each participant takes a decision in isolation, without communication or strategic interaction with the other participants, the number of participants in the session can potentially play a role in the decision process, and it is for this reason that we included this type of information in the profile about participants.

Type of information	Frequency	Percent	T1	T2	T3	T4
Year of Study	169	100.00	100.00	100.00	100.00	100.00
First	69	40.83	36.36	45.00	46.67	35.00
Second	50	29.59	27.27	22.50	26.67	42.50
Third or higher	49	28.99	36.36	32.50	24.44	22.50
missing data	1	0.59	0.00	0.00	2.22	0.00
Field of Study	169	100.00	100.00	100.00	100.00	100.00
Economics & Management	44	26.04	22.73	30.00	26.67	25.00
Tourism	39	23.08	25.00	22.50	20.00	25.00
Foreign Languages	32	18.93	22.73	20.00	22.22	10.00
Media & Communication	23	13.61	13.64	10.00	13.33	17.50
Law	18	10.65	11.36	7.50	6.67	17.50
Hard Sciences	12	7.10	4.55	10.00	8.89	5.00
missing data	1	0.59	0.00	0.00	2.22	0.00
Experimental session	169	100.00	100.00	100.00	100.00	100.00
4–10 participants	33	19.53	20.45	17.50	20.00	20.00
11–20 participants	50	29.59	34.09	27.50	26.67	30.00
21–30 participants	86	50.89	45.45	55.00	53.33	50.00

Table 3.2: Control variables and their distributions across treatments (II).

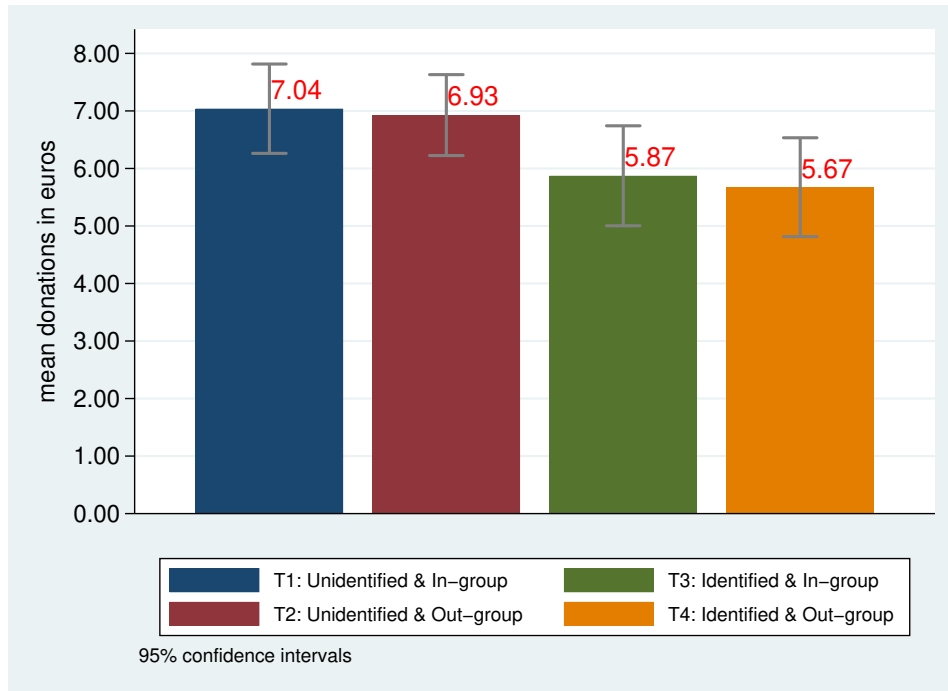


Figure 3.3: Mean donations by treatment groups.

The personal data summarized in Tables 3.1 and 3.2 are the control variables that we employ in the regression analysis in Section 3.5.4.

3.5.3 Average donations by treatments and donors' gender

Average donations by treatments

The average donations to the charity by treatment groups are shown in Figure 3.3. The largest average donation, €7.04, is associated to an Italian unidentified beneficiary (T2), while the smallest, €5.67, is associated to an identified immigrant beneficiary. Standard deviations and number of observations are reported in Table 3.3, while 95% confidence intervals are represented in Figure 3.3.

One-way ANOVA shows that there are significant (at better than 5% level) differences among the average donations of the four treatment groups ($F(3, 165) = 2.94, p < 0.0346$). However, two-sample t -tests with equal variances indicate that the only pairwise differences in average donations that are statistically significant at 5% or less p-values p are T1 vs T3 (mean T1 greater than mean T3: $p = 2.58\%$), T1 vs T4 (mean T1 greater than mean T4: $p = 1.11\%$), T2 vs T3 (mean T2 greater than mean T3: $p = 3.51\%$), and T2 vs T4 (mean T2 greater than mean T4: $p = 1.44\%$). This preliminary analysis shows that while group belongingness of the beneficiary (Italian vs Immigrant) seems to play no

Treatment	Mean	Std. Dev.	n. obs.
T1: Unidentified Italian beneficiary	7.04	2.61	44
T2: Unidentified immigrant beneficiary	6.93	2.25	40
T3: Identified Italian beneficiary	5.87	2.95	45
T4: Identified immigrant beneficiary	5.67	2.75	40
Total	6.38	2.71	169

Table 3.3: Average donations by treatment groups.

role in donations decisions by Italian donors (thus contradicting Hypothesis C), identifiability of the beneficiary seems to play a role, but of opposite direction with respect to the claim in Hypothesis B, in that identified beneficiaries receive *less*, and not more, donations than unidentified beneficiaries.

In fact, abstracting from identifiability of the beneficiary (i.e., by pooling observations along the unidentifiable and identifiable beneficiary dimensions), Figure 3.4 shows that, contrary to our (pooled) Hypothesis C, alignment or misalignment, in terms of group belongingness, of the donor-beneficiary pair, seems to play no role in terms of donation amounts (mean T1 & T3 greater than mean T2 & T4: $p = 63.8\%$). Italian donors exhibit the same level of generosity for Italian and immigrants beneficiaries (which is a good news in terms of social prospects).

Abstracting from group belongingness (i.e., by pooling observations along the In-group and Out-group dimensions), Figure 3.5 confirms that, contrary to our Hypothesis B, a charity appeal for an unidentified beneficiary — either an Italian or an immigrant teenager — receives on average more donations than one for an identified beneficiary — either Andrea or Ibrahim (mean T1 & T2 greater than mean T3 & T4: $p = 0.17\%$). We postpone the interpretation of this result to Section 3.5.4.

Average giving by donors' gender

As shown in Figure 3.6, a factor that seems to play a role in the donation amounts is the gender of the donor, in that the mean donation of female donors is €6.65, while that of male is €5.76 (mean donations by female donors greater than mean donations by male donors: $p = 2.40\%$).

Figure 3.7 reports the average donations by gender of the donor and treatment groups, while Figure 3.8 reports the same means by treatment groups and gender of the donor.

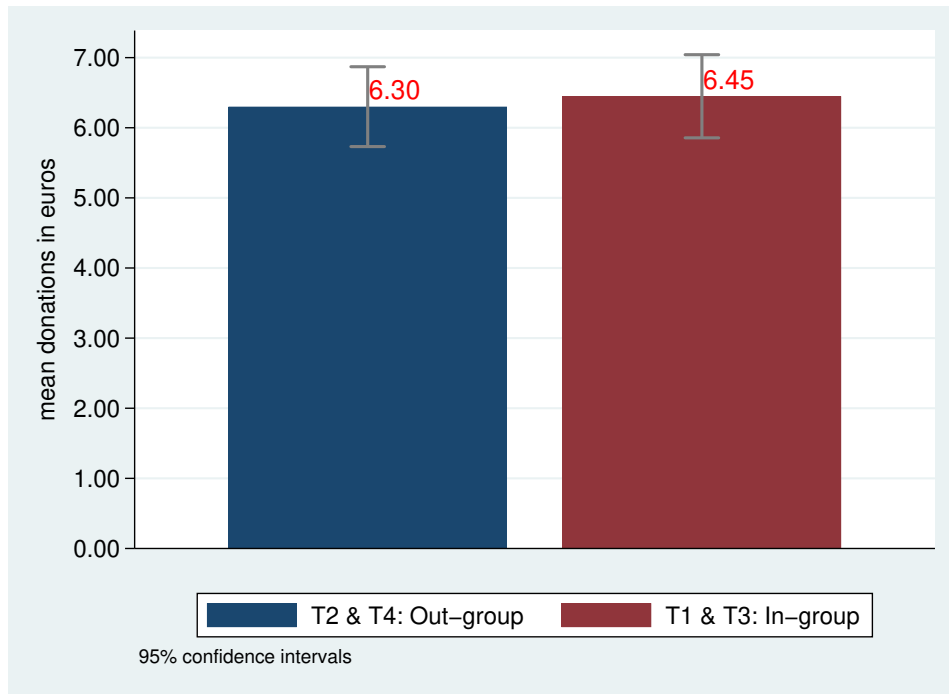


Figure 3.4: Mean donations and group belongingness.

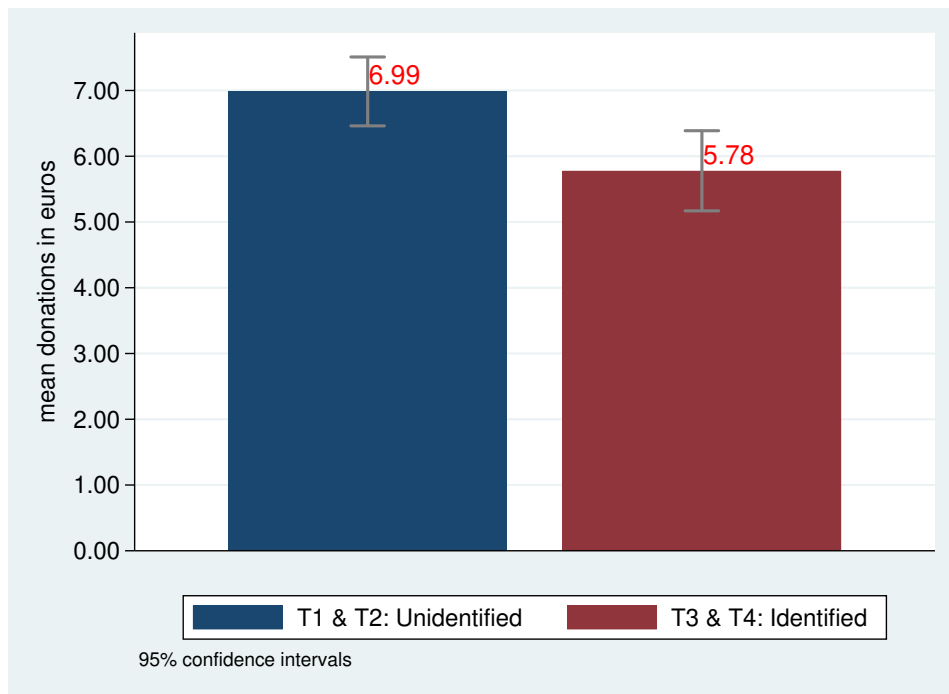


Figure 3.5: Mean donations and identifiability of the beneficiary.

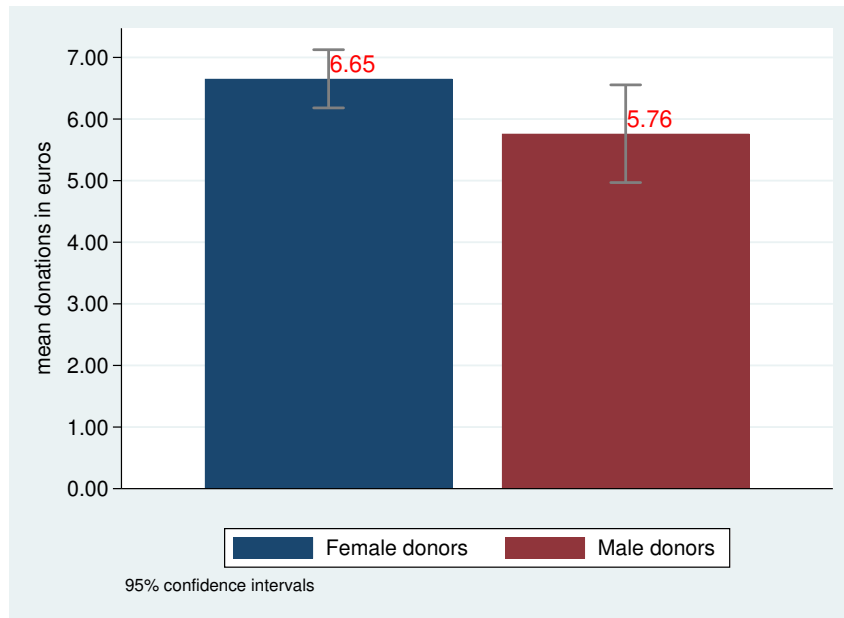


Figure 3.6: Mean donations by gender of the donor.

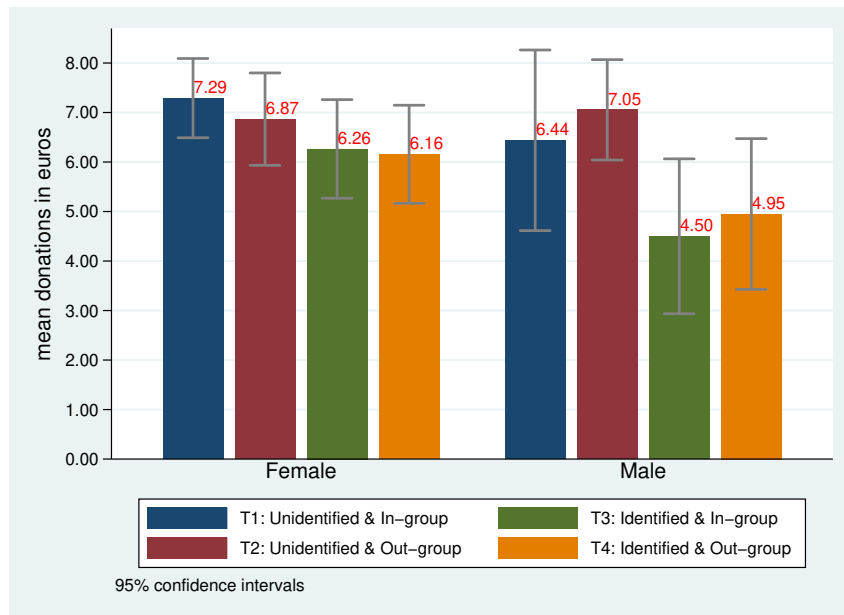


Figure 3.7: Mean donations by gender of the donor and treatment groups.

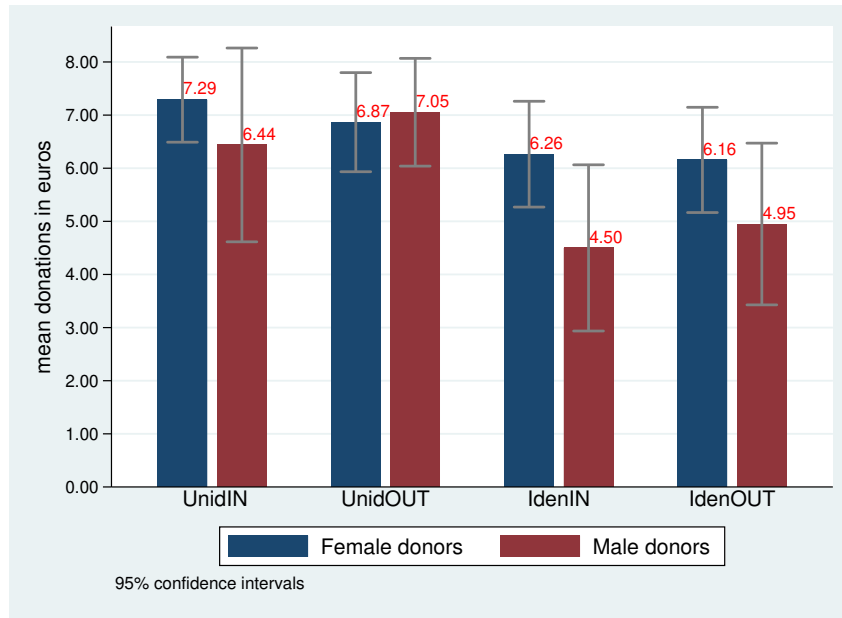


Figure 3.8: Mean donations by treatment groups and gender of the donor.

Standard deviations and number of observations are in Table 3.4.

The highest average donation is associated to female donors in favor of an unidentified Italian beneficiary (€7.29), while the lowest average donation (€4.50) is associated to males donors in favor of an identified Italian beneficiary. Figure 3.7 shows that both female and male donors tend to give less to identified beneficiaries than to unidentified ones, males in a more pronounced way than females, a result that was not obvious at the outset, since our identified beneficiaries — Andrea and Ibrahim — are male teenagers. Figure 3.8 shows finally that, but for treatment 2 — unidentified and out-group beneficiary — male donors give less than female donors in all treatments. This analysis

Treatment	F Mean	F S.D.	F n. obs.	M Mean	M S.D.	M n. obs.
T1: Unidentified Italian	7.29	2.26	31	6.44	3.33	13
T2: Unidentified immigrant	6.87	2.45	27	7.05	1.85	13
T3: Identified Italian	6.26	2.98	35	4.50	2.51	10
T4: Identified immigrant	6.16	2.46	24	4.95	3.08	16
Total	6.65	2.59	117	5.76	2.90	52

Table 3.4: Mean donations by treatments and gender.

suggests that in our experiment donors' gender is an important determinant of giving, to be considered in the regression analysis that follows.

3.5.4 The determinants of giving: Regression analysis

Based on the analysis in the previous section, our econometric strategy is to estimate the following model:

$$\text{Donation}_i = \alpha_0 + \alpha_1 \text{Ident}_i + \alpha_2 \text{IdentOut}_i + \alpha_3 \text{UnIdentOut}_i + \beta \text{Gender}_i + \gamma \mathbf{x}_i + \varepsilon_i \quad (3.1)$$

where i indexes donors, Donation_i is the amount donated in euro, the dummy variable Ident_i jointly denotes treatments 3 and 4 (identified beneficiaries), IdentOut_i denotes treatment 4 (identified and out-group beneficiary), and UnIdentOut_i denotes treatment 2 (unidentified and out-group beneficiary). The dummy Gender_i is 0 for female and 1 for male donors; \mathbf{x}_i is the vector of control variables described in Section 3.5.2, with vector of coefficients γ , and finally ε_i the error term.

In Eq. (3.1), the baseline treatment is T1: unidentified and in-group beneficiary (the average donation of which is estimated by the intercept term α_0). With the coefficient α_1 we then estimate the marginal impact of identifiability of the beneficiary, no matter whether in- or out-group (i.e., Andrea and Ibrahim). The additional marginal impact of identifiability of an out-group beneficiary (i.e., Ibrahim) is then captured by coefficient α_2 , while the marginal impact of an unidentified out-group beneficiary (i.e., immigrant family) is accounted for by α_3 .

The estimates of the basic model, without accounting for gender and other controls, is in Table 3.5, column (1) under OLS and column (2) under Tobit estimations (with Tobit, censoring of the dependent variable is 0 and 10 euros). The estimates show a significant negative impact (at 5% level) on donations of identifiability of the beneficiary (minus €1.17 under OLS, minus €1.50 under Tobit), while belonging to an out-group has no significant impact.

The negative impact of identifiability is reinforced after controlling for gender of the donors, as columns (3) and (4) show. Under OLS, identifiability of the beneficiary, still significant 5% level, marginally impacts for minus €1.23 under OLS and minus €1.56 under Tobit. Finally, see columns (5) and (6), adding the controls illustrated in Section 3.5.2 further reinforces the marginal negative impact of identifiability: minus €1.25 under OLS and minus €1.58 under Tobit. However, the added controls make non significant the impact of donors' gender, the reason being that some of the controls highly correlates with gender (for instance, as we have seen, some fields of study have a minor-

Model	(1)	(2)	(3)	(4)	(5)	(6)
Dep. var.	Donation	Donation	Donation	Donation	Donation	Donation
Method	OLS	Tobit	OLS	Tobit	OLS	Tobit
Ident	-1.17** (.564)	-1.50** (.690)	-1.23** (.560)	-1.56** (.683)	-1.25** (.557)	-1.58** (.647)
IdentOut	-0.20 (.578)	-0.37 (.696)	-0.04 (.579)	-0.18 (.694)	0.00 (.580)	-0.09 (.663)
UnIdentOut	-0.11 (.582)	-0.36 (.710)	-0.08 (.577)	-0.32 (.702)	0.12 (.574)	-0.05 (.662)
Gender			-0.89** (.444)	-1.07** (.535)	-0.49 (.464)	-0.64 (.531)
Controls	no	no	no	no	yes	yes
Obs.	169	169	169	169	169	169

* $p \leq .1$, ** $p \leq .05$, *** $p \leq .01$, standard errors in parentheses

Table 3.5: Estimates of Eq. (3.1) model of average donations by treatments.

ity of male students).

The regression analysis on average donations is summarized in the following results.

Result 1. Contrary to Hypothesis B, an identified beneficiary receives, on average, less donations than an unidentified beneficiary.

Result 2. Contrary to Hypothesis C, an In-group beneficiary does not receive, *on average*, larger donations than an Out-group beneficiary, since the mean donation difference is not statistically significant.

Result 3. Female donors tend, on average, to donate more than male donors, under all treatments conditions.

Based on the design of the present laboratory experiment, we do not have an explanation for the larger donations by female donors, apart from noting, as already done above, that female donors donate more than male donors in a situation in which the name of the identified beneficiaries is of male gender. We have no elements to predict what could emerge in the situation of female identified beneficiaries.

As for Result 2 — no biased donations by Italian donors to the detriment of an immigrant beneficiary — a possible interpretation comes from the influential *contact hypothesis* advanced by Allport (1954), further developed by Pettigrew and Tropp (2005),

suggesting that when individuals belonging to different social groups get in contact or in some type of relationship, it is likely that prejudicial attitudes will decline. And this is likely to be the case for a relevant portion of our participants: being young university students, they are likely to have links and friends with fellows belonging to immigrant families, a situation that, according to the contact hypothesis, can determine unbiased attitudes toward immigrants. We return to Result 2 with an alternative interpretation in the next section.

Finally, we can advance a couple of hypotheses to explain Result 1. Although in contrast with the literature on *victim's identifiability* discussed in the previous sections, this result is potentially interesting and deserves investigation in further research. Our first conjecture is that there might be a substantial difference, in motivating a donor to give, between a *victim* and a *beneficiary*, where the former term refers to needs arising from highly emotional and tragic situations whereas the latter term refers to somewhat current and ordinary needs. Therefore, making a donation in favor of an *identified victim* may fulfill a donor's desire to do a good thing under a strong emotional feeling. And in case of a victim, being asked to donate for an unidentified individual hinders the emotional feelings. On the contrary, in the case of a beneficiary, an appeal in favor of an identified individual may give the impression to the donor that his or her donation is not much worth, since it goes to help a single individual to cover ordinary and widespread needs. Instead, an appeal in favor of an *unidentified beneficiary*, easily understood as applied to a group of beneficiaries, may give the donor the impression that the impact of the charity's activities is wider, as it assists a social category, and not just a single individual. Clearly, testing for such an hypothesis requires an additional laboratory experiment.

Our second interpretation of Result 1 is inspired by the research of Jones and Rachlin (2006), finding that participants asked to report how much they would be willing to give up to send \$75 to each individual along an imagined list of 100 people, ranked in order of from the dearest friend or relative to mere acquaintances, resulted in a decline in generosity that fits an hyperbolic function. This finding has been used by Rydgren (2004) and Small (2015) to suggest that anonymous beneficiaries might bring more pronounced feelings of closeness than an identified one. Similarly, our participants might know — hence, they might be closer to — a beneficiary who is not identified as a 15-year-old Andrea or immigrant Ibrahim, and therefore be more generous in responding to an appeal for an unidentified beneficiary than for one to an identified one. In other terms, anonymity of the beneficiary could increase, and not decrease, the closeness between the donor and the beneficiary, since an unidentified appeal can invite the donor to think of

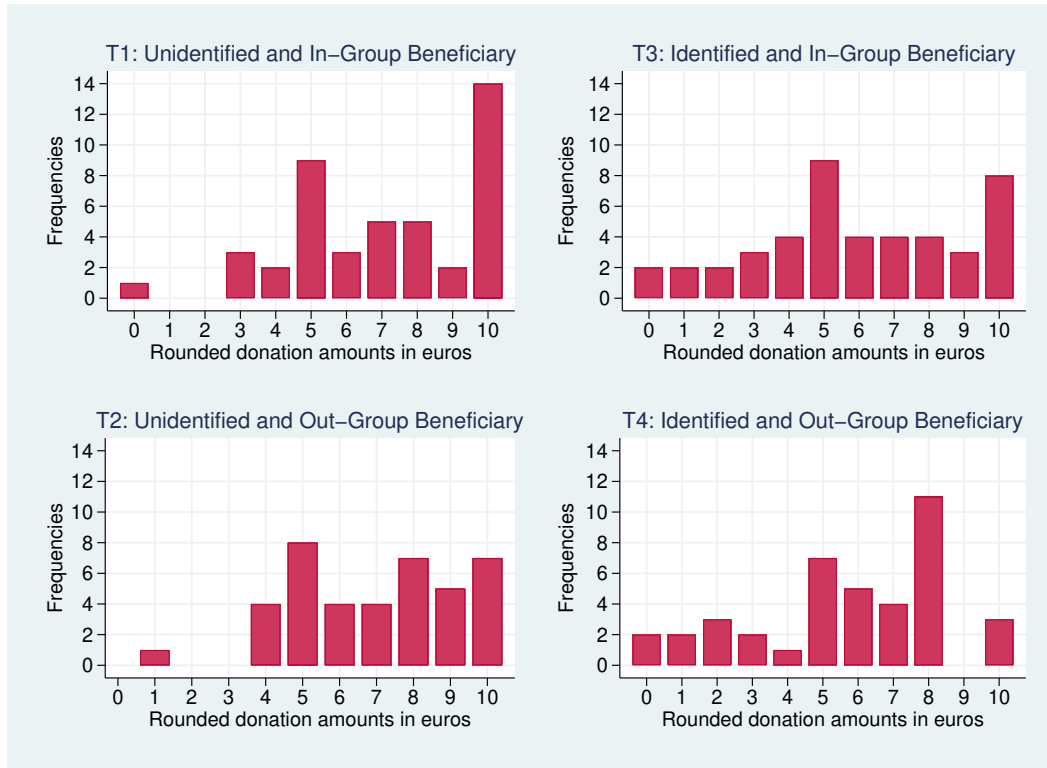


Figure 3.9: Distributions of donations by treatment groups.

a beneficiary who is socially closer to her or him than an identified appeal.

3.5.5 Beyond mean values: Distribution of donations

The analysis in the previous sections focused on a single pair of indicators of giving: the *means* and the *standard deviations* of donations by treatment groups and by gender. In this section, we focus on the *distribution of donations*, in the attempt to see whether any additional result can emerge.

The distributions of donations by treatment groups, rounded at the closest integer value, are shown in Figure 3.9. Although the plots of Kernel densities, representing the smoothed histograms under non-parametric density estimates, shown in Figure 3.10, indicate that the four treatments have almost similar density curves, by looking at both types of representations — effective and Kernel distributions — an important difference is evident. Namely, that treatments T1 and T3 — referred to In-group beneficiaries — exhibit a higher density at higher donation levels than treatments T2 and T4 — referred to Out-group beneficiaries. This pattern is clear from Figure 3.11, showing the plots of the cumulative distributions of rounded donations for In-group (T1 and T3 pooled) and Out-group (T2 and T4 pooled) beneficiaries.

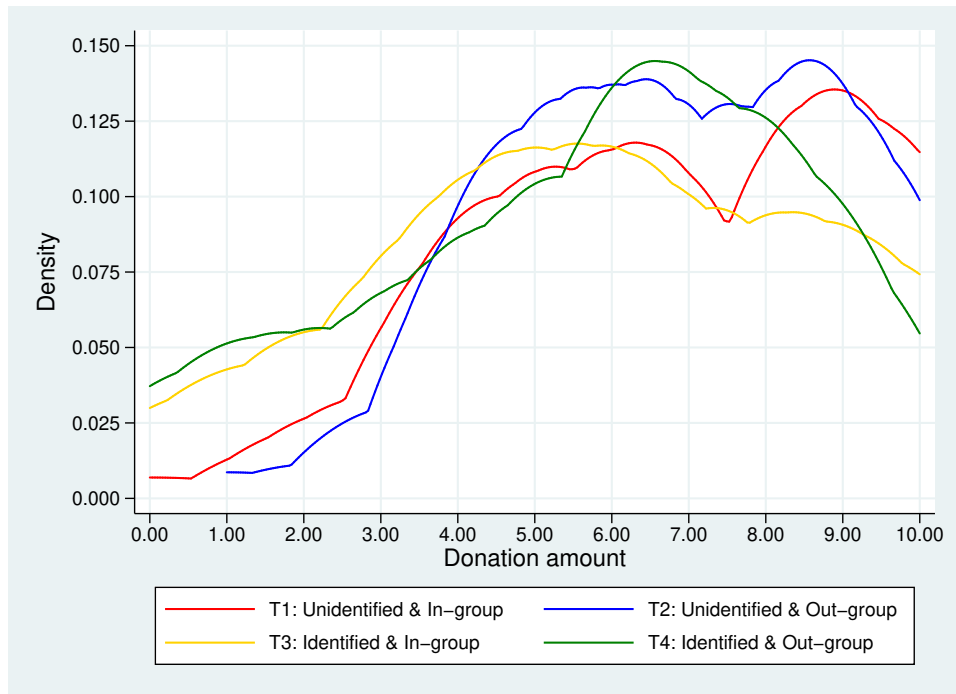


Figure 3.10: Density plots of the distributions of donations across treatments.

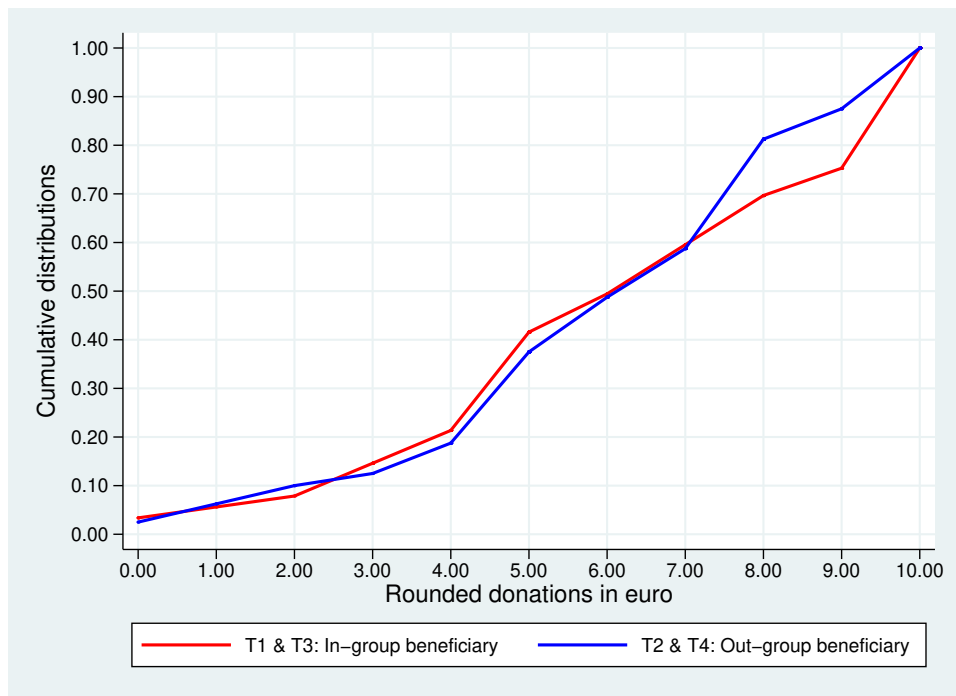


Figure 3.11: Cumulative distributions of donations: In- and Out-group beneficiaries.

Treatment	Class of donation				
	Low	Split	High	Top	Total
T1: Unidentified Italian beneficiary	13.64	20.45	34.09	31.82	100.00
T2: Unidentified immigrant beneficiary	12.50	20.00	50.00	17.50	100.00
T3: Identified Italian beneficiary	28.89	20.00	33.33	17.78	100.00
T4: Identified immigrant beneficiary	25.00	17.50	50.00	7.50	100.00
Total	20.12	19.53	41.42	18.93	100.00
T1 & T3: Italian beneficiary	21.35	20.22	33.71	24.72	100.00
T2 & T4: Immigrant beneficiary	18.75	18.75	50.00	12.50	100.00
Total	20.12	19.53	41.42	18.93	100.00

Table 3.6: Distributions of donations (relative frequencies) by class of donation.

Following this intuition, let us categorize the (rounded) donations in four categories: Low donations (from €0 to €4), Equal-split donations (€5, since the endowment used to make the donation is €10), High donations (from €6 to €9), and finally Top donations (€10). Based on this classification, Table 3.6 compares the distributions of donations received by an in-group (Italian) beneficiary and an out-group (immigrant) beneficiary. What emerges is the following: Top donations (€10) are substantially more frequent for Italian beneficiaries than for immigrants, while the reverse occurs for High donations (€6–9). As for Low (€0–4) and Equal-split donations (€5), the distributions are similar for Italian and immigrants beneficiaries.

The pattern shown in Table 3.6 and Figure 3.11 is confirmed by the regression analysis reported in Table 3.7, where, using in turn each of the four donation classes as dummy dependent variable, first is shown the OLS and the Probit estimation of the probability of a donation of the corresponding class to an Out-group beneficiary, and secondly is shown the marginal impact (again in terms of probability) of an In-group beneficiary.

As Table 3.6 shows, group belongingness of the beneficiary has no statistically significant impact on the probability of getting a Low or an Equal Split donation. Instead, with respect to an Out-group beneficiary, an In-group beneficiary has a twice as high probability (from 12.5 to 24.7%) of getting a Top donation, and correspondingly the probability of receiving a High donation falls from 50.0 to 33.7%. Summing up, we can

Dependent (dummy) variable	Class of donation			
	Low	Eq.Split	High	Top
Method	OLS	OLS	OLS	OLS
Base Prob. (Out-group beneficiary)	0.187	0.187	0.500	0.125
Marginal impact of In-group beneficiary	0.026	0.015	-0.163**	0.122**
	(.062)	(.061)	(.075)	(.060)
Obs.	169	169	169	169
Method	Probit	Probit	Probit	Probit
Constant (Out-group beneficiary)	-0.887	-0.887	-0.000	-1.150
Coefficient of In-group beneficiary	0.093	0.053	-0.420**	0.467**
	(.220)	(.222)	(.196)	(.231)
Base Prob. (Out-group beneficiary)	0.188	0.188	0.500	0.125
Marginal impact of In-group beneficiary	0.026	0.015	-0.163**	0.122**
Obs.	169	169	169	169

* $p \leq .1$, ** $p \leq .05$, *** $p \leq .01$, standard errors in parentheses

Table 3.7: Regressions on classes of donations by treatments.

state the following result.

Result 4. While an In-group beneficiary does not receive, on average, larger donations than an Out-group beneficiary (Result 2), the probability that the former receives a Top donation is twice as high as the corresponding probability for the latter type of beneficiary, who instead is more likely to receive High donations.

On purely speculative grounds, our interpretation of the result is as follows. Three of the main drivers of giving theorized and empirically assessed in the charitable giving literature are altruism (i.e., the concern for the welfare of the beneficiaries), warm-glow (i.e., a pure and *selfish* joy of giving *per se*), and social pressure (i.e., giving in order to avoid regret, shame, or to maintain social image). While giving under the so called *im-pure altruistic motivation* (Andreoni, 1989, 1990) increases donors' welfare, giving motivated by social pressure can reduce donors' welfare (Della Vigna et al., 2012, Andreoni et al., 2017). In terms of this framework, our Result 4 can be rationalized as follows. Perhaps when a donor is asked to make a donation for a beneficiary belonging to the same group, then her or his incentives are biased in favor of warm-glow rather than social pressure, and the more so the closest is her or his identification with the group. This increases the probability to opt for a Top donation. Instead, when a donor is asked

to make a donation for a beneficiary *not* belonging to the same group, then her or his incentives might be biased in favor of social pressure rather than warm-glow, and the more so the greater is her or his social distance with the beneficiary's group. This increases the probability to opt for a High donation rather than a Top one.

3.5.6 Social Distance toward In- and Out-group

To whom do Italians feel stronger affinity? To their country or to the world that embraces different cultures, including Italy? The distance component of the DIFI can answer the query by providing a measure about the degree of *proximity* a participant feel to the corresponding groups.

Recalling that the distance range runs from a minimum of -100 (maximum distance) to a maximum of $+125$ (minimum distance), the data we collected show that Italians display an average affinity to Italy of 96.30 ($SD = 31.26$), and an average affinity to the multicultural world of 72.84 ($SD = 43.7$). Using the paired t-test, the difference between the two mean distances is statistically significant (difference = 23.46 , $P = 0.000$, $\alpha = 1\%$). In other terms, Italians feel less social distance (more affinity) toward Italy and its culture than toward a multicultural world, a result that is in line with Hypothesis A spelled out above.

However, the objective is to use the distance measures as proxies of the affinity of Italian donors toward in-group (Italian) and out-group (immigrants) beneficiaries of a charity's appeal. Then the question is whether both distance measures, or just the out-group distance, form a suitable proxy for the distance toward the out-group. To solve the issue, we appeal to the concept of *parochialism*, defined by Schwartz (1991) as “the tendency of people to favor a group that includes them while underweighting or ignoring harm to outsiders”.

According to Choi (2019), parochialism consists of two components. One is the in-group bias. In the case of our DIFI measure, if a respondent reveals that 125 is her or his level of affinity with the Italian flag, then this indicates the highest degree of affinity to Italy (in-group bias) that a participant can show. The other component is the out-group prejudice. In our case, if a respondent reveals that -100 is her or his level of affinity with the multicultural flag, then this indicates the lowest degree of affinity with multiculturalism and, by extension, with immigrants in general. In other terms, both distance measures or components of parochialism — the distance from the multicultural world, and the inverse of the distance from Italy — are apt to proxy the social distance of an Italian donor to an immigrant beneficiary.

For the use in the empirical analysis, both continuous values of social distance — in-group bias and out-group prejudice — has been converted into dummy variables by using the respective median values. For the in-group bias, the median value is 104; hence, a value above 104 means a smaller social distance (dummy value of 0), and a value below 104 a greater social distance (dummy value of 1), to Italy than the majority of the respondents. In our sample, 49.7% of the participants show a social distance to Italy above the median value, and 50.3% a distance below the median value. As for the out-group prejudice, the median cut-off value is 76, implying that participants reporting a value above 76 (50.89% of the total) indicate a smaller degree of social distance (dummy value of 0) to immigrants than the majority of respondents, and the converse for those (49.11%) reporting a value below 76 (dummy value of 1). As described in Section 3.5.7, these dummy variables are employed to associate the degree of social distance toward immigrants to the donation decisions between identifiable inter-group members, in order to test for our Hypothesis D.

3.5.7 Social distance and donations to In- and Out-group beneficiaries

To examine the role of social distance toward immigrants in predicting participants' donation decisions, we separately compare donations in Treatments 1 and 2 — an Italian unidentified beneficiary vs an immigrant unidentified beneficiary, respectively — and in Treatments 3 and 4 — an Italian identified beneficiary vs an immigrant identified beneficiary, respectively.

Table 3.8 shows the estimates of a model in which donations are regressed against two explanatory variables: the dummy variable indicating an above-the-median distance (value 1) or a below-the-median distance (value 0) of the donor toward the multicultural world, and the interaction of the latter dummy variable with the treatment of an Out-group beneficiary. Social distance toward Italy is excluded because it turns out to be completely non-significant.

As the first part of Table 3.8 reports for the case of an unidentified beneficiary, a distance to the multicultural world above the median value bears a statistically significant effect on the amount donated, on average minus €1.18 under OLS regression and minus €1.72 under Probit regression, with respect to average donations of €7.68 and €8.47, respectively. However, the less generous donations by individuals who are socially distant from the multicultural world do not depend on whether or not the beneficiary belongs to the same social group, in that the interaction between social distance from multicult-

	Dep. var. Method	Donation OLS	Donation Tobit
Unidentified beneficiary: T1 In-group vs T2 Out-group			
Distance to the multicultural world		-1.18** (.523)	-1.72** (.671)
(Distance to the multicultural world)*(Out-group)		-0.11 (.521)	-0.34 (.662)
Constant		7.68*** (.459)	8.47*** (.605)
Obs.		84	84
Identified beneficiary: T3 In-group vs T4 Out-group			
Distance to the multicultural world		-1.42** (.618)	-1.53** (.710)
(Distance to the multicultural world)*(Out-group)		0.09 (.619)	-0.06 (.711)
Constant		6.47*** (.491)	6.70*** (.567)
Obs.		85	85

* $p \leq .1$, ** $p \leq .05$, *** $p \leq .01$, standard errors in parentheses

Table 3.8: Estimates of the impact of social distance on donations.

turalism and group belongingness of the beneficiary is non-significant. A similar pattern emerges in the case of an identified beneficiary, since a distance above the median value to the multicultural world bears a statistically significant effect on the amount of donation, on average minus €1.42 under OLS and minus €1.53 under Probit, again irrespective of the fact that the beneficiary is In-group or Out-group.

In summary, the estimates in Table 3.8 contradict our Hypothesis D, that social distance toward immigrants, as proxied by distance from multiculturalism, could negatively impact on donations in favor of an immigrant beneficiary. However, we can state the following result.

Result 5. Individuals who are more distant from multiculturalism are less generous than individuals who feel close to it, independently of treatment conditions.

3.6 Concluding remarks

The results of the experiment presented in this chapter show that Italian donors, in responding to a charity appeal, are not influenced in their donation decisions by the social distance toward the beneficiary — an Italian or an immigrant teenager — assisted by the charity. Social distance that is expressed to exist by participants through the Dynamic Identity Fusion Index in the first stage of the experiment, but that bears no impact on (average) donations decisions. Moreover, contrary to what reported by the literature, the experiment shows that donors are more generous toward an unidentified than toward an identified beneficiary.

As discussed in Section 3.5.4, further laboratory experimentation could help to test whether the result about no biased donations (on average) by Italian donors to the detriment of an immigrant beneficiary can be interpreted in terms of the *contact hypothesis* advanced by Allport (1954). Or whether, as discussed in Section 3.5.5 commenting on the different shares of Top and High donations received by Italian and immigrant beneficiaries, the main motivation for giving is warm-glow or social pressure. Finally, it could be tested whether, as discussed in Section 3.5.4, the result on the identifiability of the assisted individual is driven by our proposed differentiation between a *victim* and a *beneficiary*, or by the hypothesis suggested by Rydgren (2004) and Small (2015), that anonymous beneficiaries might bring more pronounced feelings of closeness than an identified one.

As with all laboratory experiments involving university students, the external validity of the results is limited, in that respondents are not a representative pool of the Italian

population or of the type of individuals approached by charities in a fundraising campaign. A field experiment could help in testing the robustness of the results obtained in the laboratory.

3.7 Appendix

3.7.1 E-mail letter to charity EduCO (in Italian)

Gent.ma dott.ssa (name omitted)

Come forse ricorderà, sono docente del Master per Promotori del dono. Ho avuto il suo indirizzo da Bernardino Casadei e la contatto per questo motivo. Insieme al collega Giuseppe Porro e ad un nostro studente di dottorato in Economia (Wubeshet Regasa) stiamo progettando di effettuare un esperimento di laboratorio (tipo quelli che ho illustrato nel mio modulo di Economia al Master) coinvolgendo degli studenti dell'Università dell'Insubria. In estrema sintesi, l'esperimento consiste nell'assegnare a ciascun partecipante una dotazione di denaro e nel presentare un ente nonprofit. Il partecipante deve poi decidere se donare una parte della somma all'ente, trattenendo la parte restante per sé. La contatto per chiedervi se sareste d'accordo di utilizzare il vostro ente come destinatario delle donazioni, le quali, per quello che saranno, provvederemo a farvi pervenire. La vostra adesione potrebbe anche essere utile a far conoscere il vostro ente a giovani che magari ancora non lo conoscono. Nel caso in cui siate interessati a valutare la nostra proposta, vi forniremo una descrizione dettagliata delle informazioni fornite ai partecipanti, in modo che possiate decidere avendo chiari i contenuti dell'esperimento. In attesa di un suo gentile riscontro, le invio i miei più cordiali saluti,
Umberto Galmarini

3.7.2 Measurement of DIFI index (in Italian)

Figure 3.12 shows the page presented to participants through the Lioness platform to elicit social distance to Italy and a multicultural world.

3.7.3 Donation appeals (in Italian)

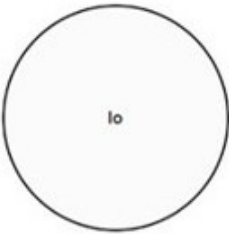
Figures 3.13-3.16 contain the donation appeals shown to participants in Italian language through the ClassEx platform.


Misura attitudinale

Le due figure sotto riportate intendono rappresentare, rispettivamente, la tua relazione o affinità con **"L'Italia"** e con **"Il mondo multiculturale"**. Trascina (o muovi cliccando le frecce) il cerchio **"Io"** (che rappresenta te) nella posizione che meglio esprime il tuo grado di relazione o affinità con ciascuno dei due elementi. Alla fine, premi il tasto verde CONTINUA

Distanza: Sovrapposizione:

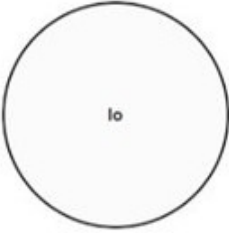
Italy





Distanza: Sovrapposizione:

Multiculturale







Figure 3.12: Measurement of DIFI index.




L'associazione di promozione sociale EduCo ([Link al sito](#)), nata nel 2017, combatte il fenomeno, purtroppo crescente anche nel nostro territorio, dell'abbandono scolastico. Servendosi di tutor qualificati, EduCo fornisce percorsi didattici personalizzati a favore di adolescenti con Disturbi Specifici dell'Apprendimento (DSA) e Bisogni Educativi Speciali (BES). In particolare, le donazioni qui raccolte da EduCo saranno destinate ad accompagnare un adolescente italiano appartenente ad una famiglia a basso reddito residente nel comasco.

Disponi di una dotazione di 10 euro: digita l'importo della donazione che intendi effettuare a favore di EduCo (minimo zero, massimo 10 euro).

 euro

Invia

Figure 3.13: Treatment 1: Unidentified Italian beneficiary.




L'associazione di promozione sociale EduCo ([Link al sito](#)), nata nel 2017, combatte il fenomeno, purtroppo crescente anche nel nostro territorio, dell'abbandono scolastico. Servendosi di tutor qualificati, EduCo fornisce percorsi didattici personalizzati a favore di adolescenti con Disturbi Specifici dell'Apprendimento (DSA) e Bisogni Educativi Speciali (BES). In particolare, le donazioni qui raccolte da EduCo saranno destinate ad accompagnare un adolescente appartenente ad una famiglia di immigrati regolari a basso reddito residente nel comasco.

Disponi di una dotazione di 10 euro: digita l'importo della donazione che intendi effettuare a favore di EduCo (minimo zero, massimo 10 euro).

 euro

Invia

Figure 3.14: Treatment 2: Unidentified immigrant beneficiary.




L'associazione di promozione sociale EduCo ([Link al sito](#)), nata nel 2017, combatte il fenomeno, purtroppo crescente anche nel nostro territorio, dell'abbandono scolastico. Servendosi di tutor qualificati, EduCo fornisce percorsi didattici personalizzati a favore di adolescenti con Disturbi Specifici dell'Apprendimento (DSA) e Bisogni Educativi Speciali (BES). In particolare, le donazioni qui raccolte da EduCo saranno destinate ad accompagnare Andrea, un adolescente di 15 anni con DSA, appartenente a una famiglia a basso reddito residente nel comasco.

Disponi di una dotazione di 10 euro: digita l'importo della donazione che intendi effettuare a favore di EduCo (minimo zero, massimo 10 euro).

 euro

Invia

Figure 3.15: Treatment 3: Identified Italian beneficiary.



L'associazione di promozione sociale EduCo ([Link al sito](#)), nata nel 2017, combatte il fenomeno, purtroppo crescente anche nel nostro territorio, dell'abbandono scolastico. Servendosi di tutor qualificati, EduCo fornisce percorsi didattici personalizzati a favore di adolescenti con Disturbi Specifici dell'Apprendimento (DSA) e Bisogni Educativi Speciali (BES). In particolare, le donazioni qui raccolte da EduCo saranno destinate ad accompagnare Ibrahim, un adolescente di 15 anni con DSA, appartenente a una famiglia di immigrati regolari a basso reddito residente nel comasco.

Disponi di una dotazione di 10 euro: digita l'importo della donazione che intendi effettuare a favore di EduCo (minimo zero, massimo 10 euro).

 euro

Invia

Figure 3.16: Treatment 4: Identified immigrant beneficiary.

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