



Victim's identification and social categorization: first- and second-order effects on altruistic behavior

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Abstract

We explore in laboratory how donations to a charity can be influenced by the identifiability and the social categorization of the recipients. We find that donors give more, on average, to unidentified than to identified beneficiaries, since the latter are more likely to receive small donations than the former. Average donations are the same for in- and out-group beneficiaries; however, an in-group recipient is more likely to receive a top donation than an out-group one, whereas the latter is more likely than the former to receive an intermediate donation. Both first- and second-order effects are associated to the Dynamic Identity Fusion Index elicited from participants toward the ‘Multicultural World’.

Keywords Charitable giving · Psychological distance · Identified victim effect · Social categorization · Dynamic Identity Fusion Index (DIFI) · Multiculturalism

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1 Introduction

A crucial element affecting charitable giving decisions is the psychological distance that the prospective donor perceives from the beneficiaries of any potential donation. As documented by social psychological research, psychological distance impacts on helping decisions by lessening the donor's degree of empathy and identification with the beneficiary (Batson et al. 1991, 1997), the intensity of the emotions caused by the victim's misfortunes (Piliavin et al. 1969; Dovidio et al. 1991), the perceived impact of the donation on the recipient's welfare (Touré-Tillery and Fishbach 2017), the sense of 'being responsible' to help (Darley and Latané 1968; Fischer et al. 2011, on the bystander effect; Baron and Miller 2000, on moral responsibility).

But which are the factors influencing the psychological distance perceived by the prospective donor? Two prominent ones are the degree of identification of the beneficiary—resulting in the so-called 'identified victim effect' (Schelling 1968; Jenni and Loewenstein 1997; Small and Loewenstein 2003; Small et al. 2007; Small 2015), and the social categorization of the recipients as belonging to the same or to a different social group as the one to which the prospective donor belongs to (Brewer and Gardner 1996; Levine et al. 2002; Fong and Luttmer 2011; Abbink and Harris 2019; Antinyan et al. 2023). Because of reduced psychological distance, the donor's willingness to help is more pronounced when the victim is in some way identified than when it appears as a 'statistical' victim. The motives that can explain the identified victim effect (vividness, certainty and uncertainty, proportion of the reference group that can be saved, ex post versus ex ante evaluation; see Jenni and Loewenstein 1997) have been scrutinized by a copious literature (see the meta-analysis by Lee and Feeley 2016). For the same reason of reduced psychological distance, in-group victims are more likely to evoke generosity from prospective donors compared to out-group victims.¹ Also the motives that can explain the bias in favor of the 'in-group' have been the focus of a growing literature, with the economic research highlighting the roles of 'statistical' based (Arrow 1972) and 'taste' based (Becker 2010) discrimination (see the meta-analysis by Lane 2016), and the psychological research focusing on social identity and bounded generalized reciprocity (see the meta-analysis by Balliet et al. 2014).

An important insight from the literature that combines the two lines of research is that the identification with and the social categorization of the victim may not have an additive impact on the donor's willingness to help. In a highly emotional context of aid to victims of natural disasters, Kogut and Ritov (2007) show that the identified victim effect is effective at encouraging helping behavior when the prospective donor and the recipient belong to the same ethnic and national group, while it is absent when they belong to different groups.² Kogut et al. (2018) find similar

¹ Another important factor influencing the psychological distance is remoteness and lack of tangibility due, for instance, to the geographical distance separating the prospective donors from those in need (Touré-Tillery and Fishbach 2017; Imas and Loewenstein 2018).

² Building on their earlier work on identifiability (Kogut and Ritov 2005a, 2005b), Kogut and Ritov (2007) also examine the role of group belonging in donation decisions by comparing the impact of a single victim versus a group of victims.

results in situations where the in-group and out-group are less distinct, such as when individuals are prompted to donate to fellow citizens affected by an earthquake but living in different regions of the country. Generosity toward in-group and out-group recipients interacts with identifiability even in laboratory settings in which grouping results from artificial manipulations that induce weak forms of group cohesiveness (Ritov and Kogut 2017).

Another important finding is that identification can also backfire, as when the victim can be blamed of being responsible of their condition or when they belong to a stigmatized group. Kogut (2011) shows that identification with the beneficiary can induce negative perceptions when they are perceived as responsible for their misfortunes, resulting in a lower willingness to help from prospective donors. Deshpande and Spears (2016) examine the identified victim effect in Indian society, where caste affiliation functions like ethnic group affiliation, and find that identifiability reduces donations to lower-caste beneficiaries. In a field experiment in Greece, Linos et al. (2021) find no explicit preference for donating to an in-group beneficiary (a Greek child) versus a 'neutral' one (a non-ethnically identified child), but observe a strong negative bias against an out-group beneficiary (a Roma child) who belongs to a severely stigmatized ethnic group. On the other hand, in situations of inter-group conflict, Ritov and Kogut (2011) find that identifiability can enhance generosity toward a member of the adversary group while reducing it toward a member of one's own group. Sabato and Kogut (2021) show that the impact of recipient identifiability varies with donors' mood. Specifically, donors in a negative mood are more likely to sympathize with a specific identified victim, leading to greater generosity towards them compared to an unidentified recipient. In contrast, donors in a positive mood may prefer to focus on the broader benefits of donations for a generic, unidentified recipient, rather than on the individual story of a specific victim. On the discrimination side, Lane (2021) shows how priming Christians with the concepts of Jesus or God can have a different impact on the pro-sociality of prospective donors and on their propensity to discriminate against LGBTQ people.

In this paper, we explore how the identification and social categorization of beneficiaries influence the willingness to donate to charities in the Italian socio-cultural context. Recently, Italy has evolved into a multi-ethnic society, and its flourishing charity sector now extends beyond emergency assistance for new immigrants to also provide regular support to both native Italians and socially-integrated old immigrants, who are often disproportionately represented among families living near the poverty line. Therefore, it is important to examine how these societal changes may impact the charity sector, particularly focusing on donor attitudes toward the immigrant segment of society.

Italy has its own peculiarities that make it an interesting context of analysis. Significant and continuous immigration flows from developing countries began in the mid-1990s, with more substantial arrivals during the recurring 'refugee crisis' of the past years, which particularly affected Italy due to its location along the Mediterranean Sea. Over the period 2004–2015, the number of immigrants residing in Italy increased from about 2 to approximately 5 million, leading to an increase in

their incidence within the total population from 4% to over 8% (8.8% as of 2022).³ This makes Italy different from countries such as the USA, which have a long history of ethnic and cultural diversity, as well as from Israel, with its two conflicting groups. Italy differs also from former colonialist countries such as the United Kingdom, France, Belgium and the Netherlands, where the flow of immigrants from former colonial territories began after the conclusion of the Second World War, and from Germany, where, in the 1960s, the German industry recruited foreign workers primarily from Turkey, whereas the Italian industry, located in the northern part of the country, recruited Italian workers from the southern regions.

The experiment—conducted online by recruiting university students—consists of two stages.⁴ In the first, we elicit from each participant their degree of affinity toward ‘Italy’ and, separately, toward the ‘Multicultural world’. The scope is to elicit two measures of individual’s inclinations—one toward their own specific cultural background and the other toward the coexistence of different cultures—that may show some association with donation behavior. To assess affinity we employ the Dynamic Identity Fusion Index (DIFI), a tool developed in applied psychological research for measuring one’s own degree of attachment or affinity towards social groups or values (Swann et al. 2009; Gómez et al. 2011).

In the second stage, in a two-by-two randomized between-subjects design, the participants are first presented the donation appeal of a charity providing after-school tutorials to adolescents suffering of specific learning disorders and special educational needs, and then they are invited to make a donation out of an assigned endowment of money. In one treatment condition, the beneficiary is either an unidentified or an identified adolescent. In the other condition, the beneficiary belongs either to an Italian family or to a family of regular-immigrants.

The rest of the paper is organized as follows. In Sect. 2 we present the experimental hypotheses and summarize the results. In Sect. 3 we describe the design of the experiment. In Sect. 4 we present the results and in Sect. 5 we provide a general discussion. We give concluding remarks in Sect. 6.

2 Hypotheses and outline of results

We formulate four testable hypotheses.

Hypothesis A An out-group beneficiary receives, on average, less donations than an in-group beneficiary.

³ Italian National Statistical Institute (Istituto Nazionale di Statistica, Istat) at <https://www.istat.it/it/archivio/280672>.

⁴ Although among the students who participated to the experiment there are both native Italians and foreigners immigrated to Italy or born in Italy from immigrant parents, the analysis is restricted to the decisions of Italian students, since the sample of immigrant students is too small for any meaningful statistical analysis.

Hypothesis B A higher affinity toward the 'Multicultural world' is, on average, associated with larger donations and a smaller positive gap between in-group and out-group beneficiaries.

Hypothesis A and B concern the degree of psychological distance induced by social categorization by in-group and out-group recipients. In this respect, social psychology research focuses on the factors that may feed prejudicial attitudes toward the members of an out-group (Brown and Zagefka 2005; Balliet et al. 2014). One of such factors is the perception by in-group individuals (e.g., natives) that out-group individuals (e.g., immigrants) pose severe threats to their material resources or economic conditions (Sarrasin et al. 2018). Another one is the belief that the presence of out-groups endanger the identity of the in-group as a whole (Brewer 2007; Morrison et al. 2010). These feelings are usually bolstered by misperceptions about out-group communities. For instance, Alesina et al. (2023) report that college-educated Italians perceive the share of legal immigrants in the country as high as 26%, while the real value is only 10%. Misperceptions regard also the origins and religions of immigrants: the shares of immigrants from the Middle East and from Africa are overestimated, the share of Christian immigrants is underestimated whilst that of Muslims is overestimated. Interestingly, Campo et al. (2021) find evidence that, in Italy, at the local level, the support for radical-right anti-immigration parties is stronger in communities with a larger presence of asylum seekers, while paradoxically Campo et al. (2023) show that negative attitudes about immigration are more pronounced in affluent areas, where immigrants pose less threats to the economic conditions of natives. All in all, the aforementioned factors lead us to conceive Hypothesis A. As for Hypothesis B, its rationale lies on the fact that the degree of affinity toward the 'Multicultural world' is likely to be positively associated with more altruistic attitudes and reduced misperceptions about immigration-related phenomena and socio-economic issues.

Hypothesis C An identified beneficiary receives, on average, more donations than an unidentified beneficiary.

Recall from the literature reviewed above that a key element of the identified victim effect is the heightened sense of closeness and empathy elicited by an identified recipient compared to a generic one, even when the information conveyed for identification is not highly informative or emotional, as in our experiment. However, we have seen that identification can also backfire, such as when recipients can be blamed for their adversities or belong to stigmatized social groups. We believe this is not applicable to the recipients depicted in the charity's appeals in our experiment. Overall, we therefore have a penchant for identification to work in favor of an identified recipient.

Hypothesis D Italian participants express, on average, closer affinity toward 'Italy' than toward the 'Multicultural world'.

The justification for this last hypothesis is simple. At the DIFI stage (see Sect. 3.3.1 for details), the representations for ‘Italy’ and for the ‘Multicultural world’ do not convey, in our opinion, the idea of two entities in conflict. In this situation, we hold that the respondents express their attitudes based on what is their effective, and not ideological, knowledge and familiarity with the respective ‘cultural entities’ represented in the pictorial frames. This implies that native Italians are simply more likely to be more familiar with ‘Italy’ than with the ‘Multicultural world’.

When examining average donations (what we refer to as *first-order effects*), the results of the experiment contradict Hypotheses A and C. In fact, the donations received by in-group beneficiaries are not significantly different, on average, from those received by out-group ones. Moreover, unidentified beneficiaries collect higher average donations compared to identified ones. Independent of treatment conditions, individuals expressing close affinity with ‘Multicultural world’ are more generous, on average, than those expressing only partial affinity—thus confirming the content of Hypothesis B—whereas the degree of affinity with ‘Italy’ does not correlate to donation decisions.

When examining donation distributions (referred to as *second-order effects*), we find that in-group beneficiaries more frequently receive the maximum amount of donation, whereas out-group beneficiaries more frequently receive amounts just below the maximum, a pattern partially explained by the degree of affinity with the Multicultural World. In Sect. 5, we offer a speculative interpretation of this result referring to the primary drivers of giving identified in the economics literature: altruistic and warm-glow motivations (Andreoni 1989, 1990) on the one hand, social pressure and concern for self-image (Della Vigna et al. 2012; Andreoni et al. 2017) on the other.

We also observe second-order effects related to the recipient’s identifiability, which help interpret the findings regarding the first-order effect. Specifically, we find that at the lower end of the donation distribution identified beneficiaries receive very small donations more frequently than unidentified beneficiaries, while conversely, at the upper end of the distribution unidentified beneficiaries receive the maximum donation more frequently than identified beneficiaries, again a pattern partially explained by the degree of affinity with the Multicultural World. Our speculative interpretation is based on attribution-based theories of help giving (e.g., Weiner et al. 2011).

While acknowledging that our results lack of statistical power (because of sample size) and are expression of a non representative sample of donors (university students), still we believe that they represent a step forward in the understanding of how the identification and the social categorization of the beneficiaries may impact on the charity sector in a multicultural society.

3 Experimental design

3.1 Overview

The experiment is framed in two main stages. In the first, the participant is asked to express their degree of affinity with ‘Italy’ and, separately, with the ‘Multicultural

world', through the DIFI index. In the second stage, the participant is presented a charity and is randomly selected to read one of four different appeals for a donation, in a 2×2 between-subjects design: Identified versus Unidentified, and In-Group versus Out-Group, beneficiaries. Upon receiving an endowment of money, the participant is then asked to decide how to share it with the charity. The experiment concludes with a brief survey to collect some personal information.⁵

3.2 Procedures

The experiment was conducted by recruiting via email students attending the University of Insubria.⁶ Of the 345 students who enrolled through a Google Form, 208 participated to one of the 15 online sessions, held from May 19 to July 28, 2021, using the platform Microsoft Teams.⁷ The experiment was run in Italian language. Firstly, oral and written instructions (the latter through screen sharing, see Section A.2 of the Online Appendix) about the experiment were provided by one of the authors. The participants were then instructed to login to the classEx (Giamattei and Graf Lambsdorff 2015, 2019) and the LIONESS (Giamattei et al. 2020) platforms (the former was employed for the donation stages and the survey, the latter for the DIFI stage).

Each student received a €3 participation fee and a €10 endowment for the donation stage. As for the latter, participants were informed that only the decision of one in four participants, randomly drawn, would be implemented, by sending the donation (if any) to the charity and by adding the remaining part of the endowment to the participation fee. Each student logged into the classEx platform without providing personal identification data, and received a 6 digits participant code (ID). In order to cash the participation fee plus any possible part of the endowment not donated to the charity, the participants were instructed to send an email with the assigned ID to one

⁵ Contrary to current recommended practice, the experiment was not pre-registered; hence, we can present only a post hoc power analysis, not a prospective one. Note also that the present donation decision is the last one of a series of three that the participants were asked to take, with the first two focusing on different research questions than those addressed in this paper. In Section A.1 of the Online Appendix, we provide evidence that the two preceding donation stages did not contaminate the decisions taken in the third one.

⁶ The *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 involved 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 Tecnologia (Mathematics, Physics, Chemistry).

⁷ Because of the Coronavirus pandemic restrictions, we were forced to run an online experiment. The timing of the sessions followed the step by step recruitment of students in the various Departments. Since the latter are located in different campuses of the cities of Como and Varese, it is unlikely that participants in earlier sessions had the opportunity to speak about the contents of the experiment to participants in the following sessions. We also limited the number of participants in each session to a maximum of about 30 to keep control over the experiment. We ensured that the participants were students of Insubria University by asking them to login to the Microsoft Teams meeting using their institutional credentials.

of the researchers not conducting the experiment, who then proceeded with the payment by sending the code of an Amazon Gift Card in reply to the email.

The charity staging in the experiment, EduCo (<https://educoaps.it/>), is a local not-for-profit organization operating in the Province of Como, providing educational programs for adolescents with specific learning disorders and special educational needs. One of their staff members had been previously contacted to obtain the consent to employ EduCo in the experiment. The amounts donated to the charity by the 25% of the participants randomly drawn was sent by bank transfer at the completion of the 15 experimental sessions.

3.3 The experiment

3.3.1 First stage: elicitation of the DIFI

Figure 1 shows the screenshot of the LIONESS page used to elicit from participants their degree of affinity toward ‘Italy’ and toward the ‘Multicultural world’. The instructions at the top of the page (not shown in Fig. 1), read as follows (Italian version in Section A.3 of the Online Appendix): *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 “I” circle (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.*

In terms of data collected, the *distance* of the ‘I’ circle to either ‘Italy’ or the ‘Multicultural World’ can range from a minimum of -100 , if the ‘I’ circle is moved left-most with respect to its initial position of -50 , to a maximum of 125 , if the ‘I’ circle is moved right-most so that it is perfectly centered within the bigger circle. At the value of 0 the two circles are tangent. Hence, for values in the range $[-100, 0]$ the two circles do not overlap, for values in the range $[0, 100]$ they partially overlap, and for values in the range $[100, 125]$ they fully overlap.⁸

The design of the DIFI shown in Fig. 1 is the amalgamation of two earlier indexes of fusion: the pictorial scale of fusion by Swann et al. (2009) and the verbal scale fusion by Gómez et al. (2011). The inherent simplicity of having to drag a circle on a single pictorial item makes the DIFI a robust measure of both conscious and unconscious attitudes of individuals (Jiménez et al. 2016). Note that, with reference to an Italian participant, ‘Italy’ is represented by the Italian flag and territory. The ‘Multicultural World’ is represented by a patchwork of flags of different countries, including both rich and developing countries, and Italy as well. Purposely, we avoid to represent the ‘Multicultural World’ by including only the flags of countries from which immigrants move to Italy, since this would constitute an overt priming effect

⁸ The script of the DIFI shown in Fig. 1 stores not only the *distance* between the two circles, but also how much they *overlap* in percentage terms. Although in some contexts of analysis it is useful to employ both measures, with distance expressing social distance and overlap expressing identity fusion (see, e.g., Jiménez et al. 2016), in our analysis it is sufficient to employ a simple three-item categorization based on no-, partial-, full-overlap.

for the participants subsequently assigned to treatments with out-group immigrant beneficiaries. Instead, the one given in Fig. 1 is a *neutral* representation of the ‘Multicultural World’.

3.3.2 Second stage: donation to the charity

The donation stage comprises four treatment groups, to which participants are randomly assigned in a 2×2 between-participants design: either an Italian or an immigrant beneficiary, and either an unidentified or an identified beneficiary. The four versions of the donation appeal are as follows (Italian versions in Section A.4 of the Online Appendix).

[Text common to all treatments] *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...*

[Texts specific to treatments]

[T1: In-Group and Unidentified beneficiary] *...an Italian teenager belonging to a low-income family residing in the Como area.*

[T2: Out-Group and Unidentified beneficiary] *...a teenager belonging to a family of low-income regular-immigrants residing in the Como area.*

[T3: In-Group and Identified beneficiary] *...Andrea, a 15 years old affected by SLD, belonging to a low-income family residing in the Como area.*

[T4: Out-Group and Identified beneficiary] *...Ibrahim, a 15 years old affected by SLD, belonging to a family of low-income regular-immigrants residing in the Como area.*

[Text common to all treatments] *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, we used a name—Ibrahim—that most Italians recognize as belonging to the Arab world, from which a relevant share of immigrants to Italy come from.⁹

⁹ Although at the time of the experiment the charity Educo was not assisting a specific 15 years old boy named Andrea, neither a specific one of the same age named Ibrahim, in order to avoid deceptive instructions the agreement with the charity specified that the donations cashed through the experiment would be divided into four earmarked slots corresponding to the four treatments: one for assisting a generic Italian boy, one for assisting a generic foreign boy, one for assisting a specific Italian boy, one for assisting a specific foreign boy, all aged in the range 13–16.

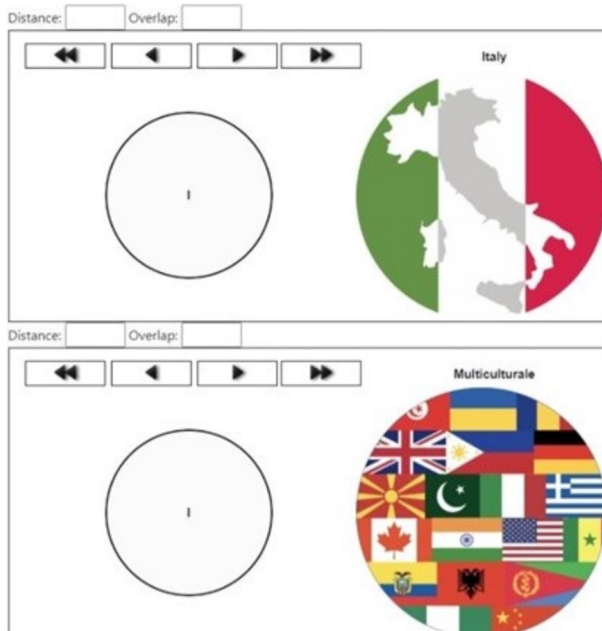


Fig. 1 Elicitation of the DIFI toward *Italy* and *The Multicultural World*

4 Results

A total of 208 students participated to the experiment. After dropping 5 records because the participant did not complete the task, 5 because of missing responses, and 3 because of repeated participation,¹⁰ the complete sample consists of 195 observations. We first examine the demographic information collected in the final survey. Then we compare average donations across treatments, controlling also for demographics and the affinity measures expressed at the DIFI stage. Finally, we examine the distributions of donations and the time spent to take the decision.

4.1 Demographics, sample selection, and balance of treatments

Of the 195 participants included in the dataset, 169 (86.7%) are of Italian nationality, with both parents of Italian nationality. As for the rest, 19 have both parents of foreign nationality, and 7 have one parent of Italian, and one of foreign, nationality (the latter information was collected in the final survey). Given that one of the

¹⁰ We checked for attempts of multiple participation by a single individual by cross-verifying the opened classEx links, the Microsoft Team's attendance sheet, and the anonymized IP address generated by LIONESS, leading to the exclusion of a couple of participants. One student participated to two sessions, and we dropped the record of the second attendance. One student participated twice in the same session with two devices, and we dropped both records.

objectives of the research is to assess how the psychological distance between potential donors and beneficiaries affects the donation decisions, we confine the analysis to 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.

For the sample of 169 Italian participants, the information collected in the final survey is summarized in Table A.7.¹¹ More than 2/3 of participants, 69.23%, are female, the reason being that in some fields of study female students are prevalent. For instance, 90.62% of participants studying Foreign Languages, and 84.62% of those studying Tourism, are female; the only field that turned out to be perfectly balanced in terms of gender is Economics & Management. The majority of participants, 52.66%, is aged 18–21, while only 8.88% is aged 26 or more. More than 60% of the participants are first or second year students. Almost a half of the participants come from two fields of studies, Economics & Management (26.04%) and Tourism (23.08%). Most participants live in the Provinces of Varese and Como, where Insubria University is located.

The bottom part of Table A.7 reports summary information on the 15 experimental sessions. More than 50% of participants attended a session with a total number of participants between 21 and 30, while 19.5% attended a session with less than 11 participants. Although in our experiment each participant takes an individual decision, without communication or strategic interaction with other participants, the number of participants in the session can potentially play a role in the decision process (for instance, the well known *experimenter demand effect* could be stronger in small than in large groups of participants).

Overall, the demographics reported in Table A.7 are balanced across the randomly assigned treatment groups.¹² Hence, any differences in donation decisions across treatments can be reasonably attributed to the different framing of donation appeals across treatments, and not to relevant heterogeneity of participants between treatment groups.

A different issue is the fact that, as already noted above, a large majority of the overall sample of participants is composed of female students. This does not represent a limitation for the following reason. The main purpose of the experiment is not that of estimating *absolute* levels of generosity under the various types of donation appeals that are representative of the general population. Rather, the purpose is to test whether the different messages determine different behaviors *at the margin*. In other words, having a majority of female participants can, of course, affect the average levels of donations, if males and females respond differently, on average, to donation appeals (in fact, they do, as we show below). However, the objective of the analysis is to test whether the different donation appeals determine significantly

¹¹ All the A.# tables are in the Online Appendix.

¹² For all categorical variables reported in Table A.7, using the Chi-square test, the null hypothesis of independent distribution across treatments is not rejected: Gender ($\chi^2(3) = 3.230$, $p = 0.357$), Age ($\chi^2(6) = 6.755$, $p = 0.344$), Year of study ($\chi^2(12) = 14.94$, $p = 0.245$), Field of study ($\chi^2(18) = 10.82$, $p = 0.902$), Place of residence ($\chi^2(9) = 8.598$, $p = 0.475$), Experimental session ($\chi^2(6) = 1.053$, $p = 0.984$).

different donation responses, an outcome that is less likely to be affected, at least in its qualitative terms (the direction of the difference between treatments), by gender composition.¹³

4.2 First-order effects: average donations

The average donations to the charity by treatment groups are shown in Fig. 2 (data in Table A.9). The largest average donation, €7.04, is associated to an Italian unidentified beneficiary (T1); the smallest, €5.67, to an identified immigrant beneficiary (T4).¹⁴

Two independent samples *t*-tests indicate that the only differences in means that are statistically significant are those where the beneficiary switches from unidentified to identified: T1 versus T3 ($p = 0.053$), T2 versus T4 ($p = 0.028$). Switching from in-group to out group results in non-significant differences in average donations: T1 versus T2 ($p = 0.840$), T3 versus T4 ($p = 0.754$). The remaining pairwise comparisons—T1 versus T4 ($p = 0.024$), T2 versus T3 ($p = 0.067$)—show a significant difference in means but are of limited interest since they involve the comparison of treatment groups that differ on both dimensions. Because of the multiplicity of the null hypothesis simultaneously being tested—due to multiple treatment groups—following List et al. (2019) in Section A.5 of the Online Appendix we report the multiplicity adjusted p values. Although with reduced statistical significance (as expected), the comparisons evidenced above are robust to multiple hypothesis testing: T1 versus T3 ($p = 0.094$, T1 as control group), T2 versus T4 ($p = 0.075$, T2 as control group).

Our first conclusion is therefore that while social distance between the beneficiary (Italian or Immigrant) and the donor (Italian) seems to play no role in donations decisions (thus contradicting Hypothesis A), identifiability of the beneficiary seems instead to play a role, but in the opposite direction with respect to Hypothesis C, since identified beneficiaries receive *less*, and not more, donations than unidentified beneficiaries. Concerning the absence of a bias in favor of the in-group, we reckon that the null result could be due to a lack of statistical power, given the small sample sizes (between 40 and 45) of the four treatments. Since, in line with Hypothesis A, the out-group recipients get lower donations than the in-group, we provide a post hoc power analysis.¹⁵ At the usual statistical significance levels ($\alpha = 0.05$, $1 - \beta = 0.8$), the null result concerning T1 versus T2 has a onside power of 0.055; in order to detect as significant the observed effect size, the required sample size is

¹³ Obviously, the same remarks apply to the observation that the sample of participants includes only university students, who are not representative of the general population. Note, however, that the meta-analysis by Lane (2016) finds that students and non-students appear to discriminate equally.

¹⁴ Across treatments, the average donation is €6.38, a value within the range (between 20% and 80% of the endowment) reported in the meta-analysis of dictator games by Umer et al. (2022, Figure 2) for the case in which the endowment is unearned and the recipient is a charity.

¹⁵ While we recognize that power analysis is useful and recommended in prospective terms when pre-registering the experiment, in the absence of pre-registration we cautiously provide a post hoc power analysis. We perform power analysis with the Stata command *power twomeans*.

7522 units per treatment. We note, however, that the observed effect size, equal to $(7.04 - 6.93)/2.14 = 0.046$, is small and well below the standard benchmark value of 0.2 separating 'low' from 'medium' effect sizes. In other words, even if it were found to be statistically significant under a more powered study, such an effect size should not be considered, in our opinion, an economically relevant signal of discrimination against the out-group recipients. Similar considerations apply to the null result regarding T3 versus T4 (oneside power level of 0.062, required sample size 3228 units per treatment, effect size equal to 0.070).¹⁶

The above results are confirmed by pooling observations along one dimension at a time. By pooling T2 and T4, and T1 and T3, the left graph in Fig. 3 shows that out-group and in-group beneficiaries (no matter whether identified or unidentified) received, on average, the same donations, €6.30 and €6.45, respectively (the difference is not significant, $p = 0.724$). By pooling T1 and T2, and T3 and T4, the right graph shows that unidentified beneficiaries (no matter whether in- or out-group) received on average more donations than identified beneficiaries, €6.99 and €5.78, respectively (the difference is significant, $p = 0.004$).¹⁷

Gender also plays a role, with an average donation of €6.65 by female donors and of €5.76 by males (the difference is significant, $p = 0.048$). Average donations by gender (and by the other control variables) and treatment groups are reported in Table A.8.

On the basis of this descriptive analysis, in order to highlight the determinants of giving, we estimate the following model:

$$\text{Donation}_i = \alpha_0 + \alpha_1 \text{Ident}_i + \alpha_2 \text{IdentOut}_i + \alpha_3 \text{UnIdentOut}_i + \beta \text{Gender}_i + \gamma \mathbf{x}_i + \varepsilon_i, \quad (1)$$

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 reported in Table A.7, and ε_i is the error term.

In Eq. (1), the baseline treatment (the constant term α_0) is T1: unidentified and in-group beneficiary. The coefficient α_1 then estimates the marginal impact of identifiability of the beneficiary, no matter whether in- or out-group (i.e., Andrea or 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., an immigrant family) is accounted for by α_3 .

The estimates of the basic model, without controlling for gender and the other demographics, are shown in Table 1, column (1) under OLS and column (2)

¹⁶ As for the non-null results, for T1 versus T3 the oneside power level is 0.484, the required sample size is 94 per treatment, the effect size is 0.412 (close to the 'medium' size benchmark of 0.5); for T2 versus T4 the oneside power level is 0.575, the required sample size is 68 per treatment, the effect size is 0.486.

¹⁷ As for the null result, T1 & T3 versus T2 & T4, the oneside power level is 0.098, the required sample size is 4129 per treatment, the effect size is 0.055. As for the non-null result, T1 & T2 versus T3 & T4, the oneside power level is 0.892, the required sample size is 63 per treatment, the effect size is 0.445.

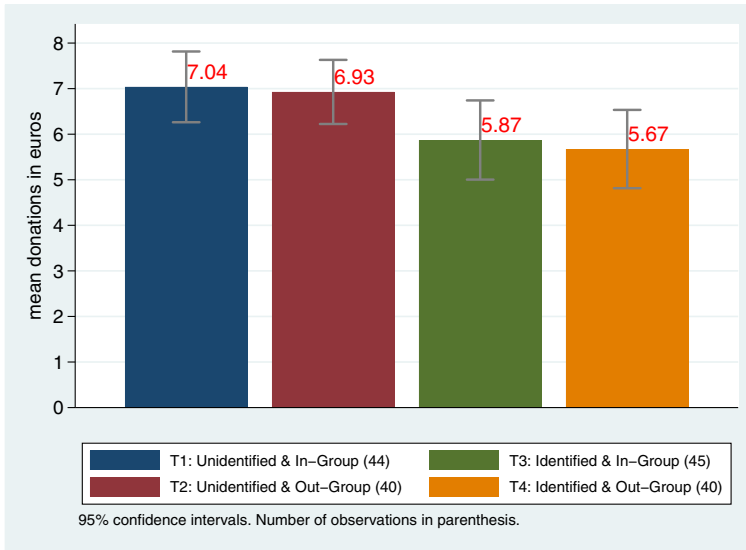


Fig. 2 Mean donations by treatment groups

under Tobit estimations (with Tobit, censoring of the dependent variable is €0 and €10). The estimates show a significant negative impact (OLS: $p = 0.040$; Tobit: $p = 0.032$) on donations of identifiability of the beneficiary (minus €1.17 under OLS, amounting to -16.6% with respect to the baseline €7.04 donation). On the contrary, belonging to an out-group has no significant impact.

The negative impact of identifiability is reinforced when controlling for gender of the donors, as columns (3) and (4) show. Under OLS, identifiability of the beneficiary marginally impacts for minus €1.23 ($p = 0.029$), while donations by male donors are significantly lower by almost €1 than those of female donors ($p = 0.046$). Finally, columns (5) and (6) show that the main result is robust to the introduction of the demographics variables and session-group-size. In fact, the marginal negative impact of identifiability is confirmed, being equal to minus €1.21 under OLS ($p = 0.033$). Notice, however, that with the inclusion of these control variables the gender of donors becomes statistically non significant. As reported in Table A.10, the reason is that there are two demographic variables—*Foreign Languages* and *Second Year* students—that positively impact on donations ($p = 0.032$ and $p = 0.026$, respectively). Since these categories include an higher-than-average share of female students (90.62% and 75.56%, respectively), they end up capturing the gender effect rather than a specific effect of the field or the year of study. Another demographic variable that significantly affects donations is age, with older students giving, on average, more than younger ones. The number of participants in the experimental session turns out to significantly reduce donations, but only in sessions of intermediate size, with a number of participants between 11 and 20.

The analysis of average donations by treatment groups is summarized in the following results.

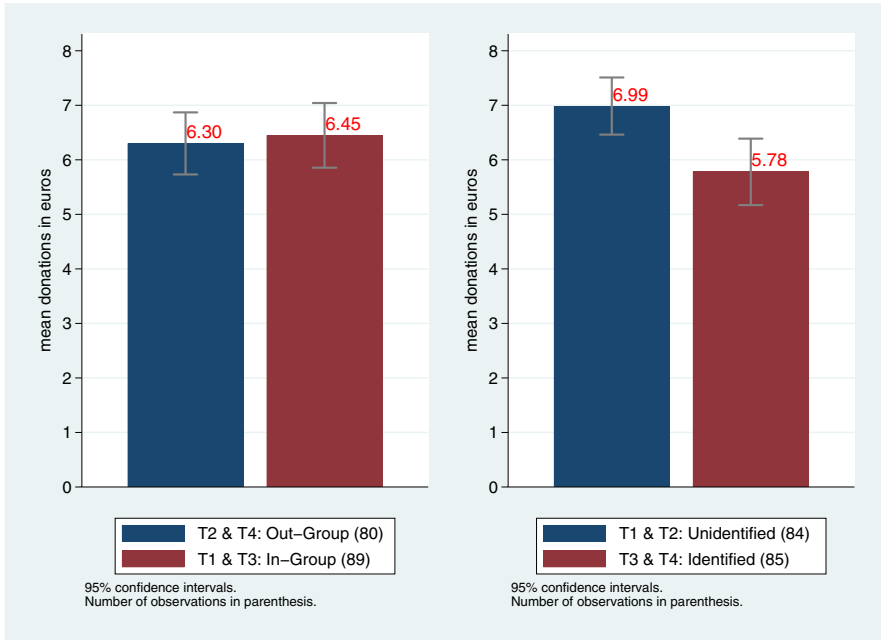


Fig. 3 Mean donations and group belongingness

Table 1 Analysis of average donations based on Eq. (1) model

Model	(1)	(2)	(3)	(4)	(5)	(6)
Method	OLS	Tobit	OLS	Tobit	OLS	Tobit
<i>Dependent variable in all models: Donation to the charity (euro)</i>						
Ident	-1.166** (0.564)	-1.497** (0.690)	-1.232** (0.560)	-1.563** (0.683)	-1.210** (0.561)	-1.529** (0.653)
IdentOut	-0.198 (0.578)	-0.371 (0.696)	-0.040 (0.579)	-0.184 (0.694)	-0.088 (0.588)	-0.210 (0.674)
UnIdentOut	-0.111 (0.582)	-0.363 (0.710)	-0.085 (0.577)	-0.320 (0.702)	0.134 (0.574)	-0.027 (0.663)
Gender			-0.891** (0.444)	-1.067** (0.535)	-0.467 (0.469)	-0.611 (0.538)
Constant	7.038*** (0.401)	7.551*** (0.497)	7.302*** (0.419)	7.857*** (0.516)	5.995*** (0.924)	6.321*** (1.07)
Controls	No	No	No	No	Yes	Yes
Obs.	169	169	169	169	168	168
R ²	0.0335	0.0121	0.0510	0.0171	0.1176	0.0536

* $p \leq .1$, ** $p \leq .05$, *** $p \leq .01$. S.E. in parentheses

Tobit: Lower censoring = 0, Upper censoring = 10

Adjusted R² (OLS), Pseudo R² (Tobit)

Models (5) and (6) missing data on two control variables for one participant

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

Result 2 Contrary to Hypothesis A, an in-group beneficiary does not receive, *on average*, larger donations than an out-group beneficiary.

4.3 DIFI measures

Figure 4 shows the scatter plot of the degrees of affinity elicited through the DIFI with respect to ‘Italy’ (on the horizontal axis) and the ‘Multicultural World’ (on the vertical axis). As described in Sect. 3.3.1, the initial—default—position of the ‘I’ circle (see Fig. 1) was set at -50 . The participant could then move the ‘I’ circle representing themselves to express their degree of affinity with either ‘Italy’ or the ‘Multicultural World’. The chosen position resulted in values between 0 and 100 of the variable represented in Fig. 4 if the two circles partially overlapped, with more overlapping the greater the value. For values greater than 100, there is full overlapping. For values lower than 0, there is no overlapping.

Of the 169 participants, 53.85% expressed full affinity (i.e., complete overlapping) with ‘Italy’, while 30.77% expressed full affinity with the ‘Multicultural World’. Using Fig. 4, we divide the participants into four main categories: those who expressed ‘full’ affinity both to ‘Italy’ and to the ‘Multicultural World’ (34 individuals, labeled fI/fW); those who expressed ‘partial’ affinity both to ‘Italy’ and to the ‘Multicultural World’ (57, pI/pW); those who expressed ‘full’ affinity to ‘Italy’ and ‘partial’ affinity to the ‘Multicultural World’ (53, fI/pW); finally, those who expressed ‘partial’ affinity to ‘Italy’ and ‘full’ affinity to the ‘Multicultural World’ (18, pI/fW). The remaining 7 participants expressed no affinity whatsoever either to ‘Italy’ or to the ‘Multicultural World’, (4 fI/nW, 2 pI/nW, 1 nI/pW). When employing DIFI data, we exclude the latter 7 individuals from the analysis, since in terms of expressed DIFI they can be considered as outliers. For the sample of 162 individuals expressing either full or partial affinity to ‘Italy’ and the ‘Multicultural World’, the McNemar’s test for paired binary variables shows that the number of individuals expressing full affinity to ‘Italy’ and partial affinity to the ‘Multicultural World’ is significantly higher than those expressing partial affinity to ‘Italy’ and full affinity to the ‘Multicultural World’ (53 versus 18, McNemar’s $\chi^2(1) = 17.25$, $p = 0.00004$), an outcome in line with Hypothesis D spelled out in Sect. 1.

Result 3 In accordance with Hypothesis D, a larger proportion of (Italian) participants expressed full affinity with ‘Italy’ than with the ‘Multicultural World’. The number of participants expressing full affinity to ‘Italy’ and partial affinity to the ‘Multicultural World’ is significantly higher than that of participants expressing partial affinity to ‘Italy’ and full affinity to the ‘Multicultural World’.

4.4 DIFI and donation behavior

In order to assess the link between DIFI measures and donation behavior, in Section A.6 of the Online Appendix we conduct some preliminary analysis based on pairwise mean-comparison *t*-tests along the DIFI categories defined above, by comparing in-group versus out-group, and identified versus unidentified, beneficiaries.

Three are the results emerging from this analysis: (i) individuals feeling full affinity with the 'Multicultural World' (fW) tend to donate more than individuals feeling only partial affinity (pW); (ii) individuals feeling partial affinity with 'Italy' and full affinity with the 'Multicultural World' (pI/fW) tend to donate less to in-group beneficiaries; (iii) individuals feeling partial affinity with the 'Multicultural World' (pW) tend to donate more to unidentified than to identified beneficiaries. Based on this evidence, we specify the following model:

$$\text{Donation}_i = c_0 + c_1 \text{fW}_i + c_2 \text{pI/fW-In}_i + c_3 \text{pW-Un}_i + \beta \text{Gender}_i + \varepsilon_i, \quad (2)$$

where fW_i is a dummy variable equal to one for full affinity with the 'Multicultural World', zero for partial affinity; pI/fW-In_i is equal to one for partial affinity with 'Italy', full affinity with the 'Multicultural World', in-group beneficiary, and zero otherwise; pW-Un_i is equal to one for partial affinity with the 'Multicultural World', unidentified beneficiary, and zero otherwise. In this model, if gender is not included, the baseline estimated donation, c_0 , equals the average donation of individuals feeling partial affinity with the 'Multicultural World' and assigned an identified beneficiary (either in-or out-Group). With respect to this baseline, the coefficient c_3 captures the impact of unidentified beneficiaries on the same types feeling partial affinity with the 'Multicultural World', whereas coefficient c_1 captures the impact of full affinity with the 'Multicultural World', both for in- and for out-group, and for identified and unidentified beneficiaries. Finally, the coefficient c_2 captures the additional impact, with respect to that already captured by c_1 , of having types pI/fW individuals asked to donate for an in-group beneficiary.

The results are in Table 2. We start from models (7)–(8), replicating models (3)–(4) of Table 1, for the reduced sample of 162 individuals and without including the non-significant variables IdentOut_i and UnIdentOut_i . We then progressively arrive, in four steps, at the estimation of Eq. (2) in models (15)–(16). With OLS model (9) we see that individuals feeling full affinity with the 'Multicultural World' donate, on average, €1.75 more than individuals feeling only partial affinity ($p = 0.0002$), irrespective of treatment condition, with the exception of types pI/fW individuals, who donate on average €1.59 less to in-group than to out-group beneficiaries ($p = 0.089$). In models (11)–(12) we see that the introduction of the variable pW-Un_i , related to unidentified beneficiaries, creates a conflict with the variable Ident_i , with the result that they turn out to be both non-significant. By suppressing the variable Ident_i in models (13)–(14) we then see that the variable pW-Un_i becomes significant ($p = 0.002$ under OLS, $p = 0.004$ under Tobit), with an average of extra €1.51 directed at unidentified beneficiaries with respect to identified ones under OLS. Finally, models (15)–(16) include all variables shown in Eq. (2). The OLS estimation—model (15)—shows that (i) individuals feeling full affinity with

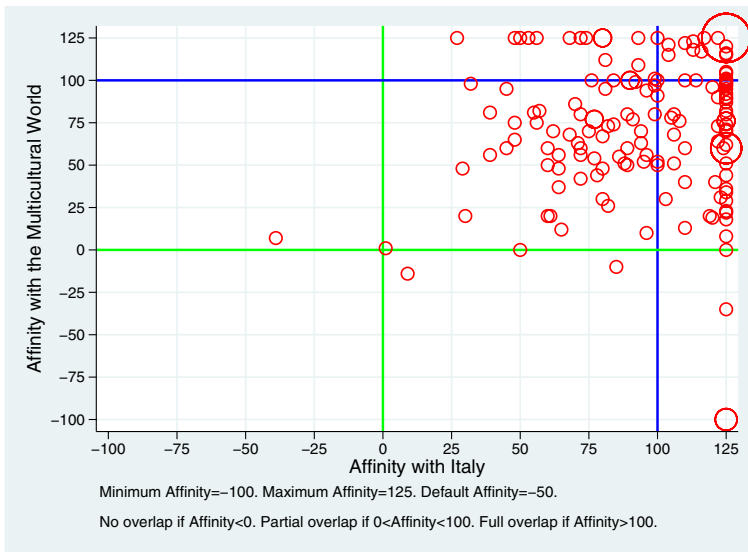


Fig. 4 Scatter plot of affinity measures elicited with the DIFI

the ‘Multicultural World’ donate, on average, €2.49 more than individuals feeling only partial affinity ($p = 0.000003$), (ii) type pl/fW individuals donate on average €1.77 less to in-group than to out-group beneficiaries ($p = 0.057$), (iii) individuals feeling partial affinity with the ‘Multicultural World’ donate, on average, €1.51 more to unidentified than to identified beneficiaries ($p = 0.002$).

In summary, the results in this section partially reject Hypothesis C, by which a lower degree of affinity with the ‘Multicultural World’ is expected to moderate in a negative way the donations toward out-group beneficiaries. The results show instead that full affinity with the ‘Multicultural World’ is associated to larger donations per se, irrespective of whether the beneficiaries are in- or out-group.

Result 4.1 Full affinity with the ‘Multicultural World’, with respect to partial affinity, is associated, on average, to more generous donations, irrespective of treatment conditions, unless full affinity with the ‘Multicultural World’ is combined with partial affinity with ‘Italy’ and the beneficiary is in-group.

Result 4.2 Partial affinity with the ‘Multicultural World’ is associated, on average, to more generous donations to unidentified than to identified beneficiaries.

4.5 Second-order effects: distributions of donations

Result 2 in Sect. 4.2 shows that in-group and out-group beneficiaries received, on average, the same donations. However, by looking at the *distributions of donations* (rounded at the closest integer value, from €0 to €10)—see Fig. 5—one

Table 2 Analysis of average donations based on DIFI categories

Model	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)	(16)
Method	OLS	Tobit	OLS	Tobit	OLS	Tobit	OLS	Tobit	OLS	Tobit
<i>Dependent variable in all models: Donation to the charity (euro)</i>										
Ident	-1.216*** (0.410)	-1.497*** (0.500)	-1.230*** (0.395)	-1.507*** (0.479)	-0.777 (0.703)	-1.214 (0.863)				
Gender	-0.976** (0.443)	-1.218** (0.539)	-0.715* (0.433)	-0.919* (0.519)	-0.817* (0.433)	-1.024* (0.521)	-0.829* (0.433)	-1.042** (0.523)	-0.729* (0.432)	-0.931* (0.520)
fW			1.755*** (0.456)	2.073*** (0.557)	1.821*** (0.589)	1.953*** (0.710)	2.178*** (0.493)	2.498*** (0.599)	2.495*** (0.516)	2.894*** (0.627)
pI/fW-In			-1.587* (0.928)	-1.972* (1.121)					-1.774* (0.925)	-2.194* (1.117)
pW-Un					0.733 (0.852)	0.509 (1.040)	1.510*** (0.482)	1.725*** (0.583)	1.508*** (0.478)	1.719*** (0.576)
Constant	7.296*** (0.323)	7.756*** (0.399)	6.747*** (0.343)	7.109*** (0.416)	6.187*** (0.792)	6.745*** (0.969)	5.414*** (0.373)	5.537*** (0.450)	5.381*** (0.370)	5.499*** (0.444)
Obs.	162	162	162	162	162	162	162	162	162	162
R ²	0.0669	0.0181	0.1370	0.0362	0.1250	0.0324	0.1238	0.0298	0.1384	0.0349

* $p \leq .1$, ** $p \leq .05$, *** $p \leq .01$. S.E. in parentheses. Tobit: Lower censoring = 0, Upper censoring = 10Adjusted R² (OLS), Pseudo R² (Tobit). In all models, control variables are not included

notices some differences. In-group beneficiaries (treatments T1 and T3), compared to out-group (treatments T2 and T4), received a larger fraction of €10 donations (the entire endowment), whereas the latter received a larger fraction of high-but-not-top donations, between €6 and €9. Figure 5 also helps in qualifying Result 1, by which identified beneficiaries received, on average, lower donations than unidentified ones. Comparing T1 with T3, and T2 with T4, the graphs show that, compared to unidentified beneficiaries, identified ones received less top donations and more donations below €5.

Additional insights about the differences in the distributions of donations can be gained by looking at cumulative distributions. Consistently with what previously observed, Figure A.1 in the Online Appendix shows that in the quantile range 0.7–0.8 in-group recipients obtain donations between €8 and €10 whereas out-group obtain €8; moreover, in the quantile range 0.8–0.9 in-group recipients obtain top donations of €10 whereas out-group obtain donations between €8 and €10. Figure A.2 shows that, because of the significant difference in mean donations, the cumulative distribution of unidentified recipients dominates that of identified ones. Hence, the differences in the two distributions can be appreciated by comparing, in Figure A.3, the distributions of standardized donations. We then see that, in standardized terms, identified beneficiaries obtain lower donations than unidentified ones at the bottom of the distribution (below quantile 0.2) and near the top (between quantiles 0.75 and 0.85).

Although the Kolmogorov–Smirnov test for equality of the distribution functions does not reject the null hypothesis (the comparison between the distributions of the in-group and the out-group results in a combined K-S p value equal to 0.529, while that between the distributions of the identified and the unidentified is equal to 0.127), we employ quantile regression to test whether the differences noted above are significant.

The results are reported in Table 3. The first part of the table (Model 1) shows how the binary variables *Ident* (identified recipients) and *Out* (out-group recipients) impact on the donations at the bottom of the distribution (quantiles 0.05, 0.1, 0.15 and 0.2, where donations are below €4), at the middle of the distribution (quantiles 0.45 and 0.5, where donations are between €5 and €6), and near the top of the distribution (quantiles 0.80 and 0.85, where donations are around €9).¹⁸ The estimated coefficients show that beneficiaries at the bottom of the distribution receive lower donations of about €2–3, while those at the middle and top of the distribution receive about €1–2 less. This indicates that the lower average donations received by identified beneficiaries (the first-order effect) are more pronounced at the bottom of the distribution than at the top (the second-order effect). For in-group versus out-group beneficiaries, where there is no first-order effect, the regressions uncover a second-order effect concentrated near the top of the distribution (quantiles 0.8 and 0.85).

¹⁸ The choice of the quantiles shown in Table 3 is made as follows. Using Stata, we first run 17 separate quantile regressions (using first *qreg* and then *bsqreg* with 100 replications) from quantile 0.05 to quantile 0.85 (there is no variation at quantiles 0.9 and 0.95, since donations are €10 for all treatment groups). We then select the quantiles for which at least one regressor is significant at 10% level and run simultaneous estimation of quantile regressions on the selected quantiles (*sqreg*, 100 replications). The results reported in Table 3 are those of the latter regression.

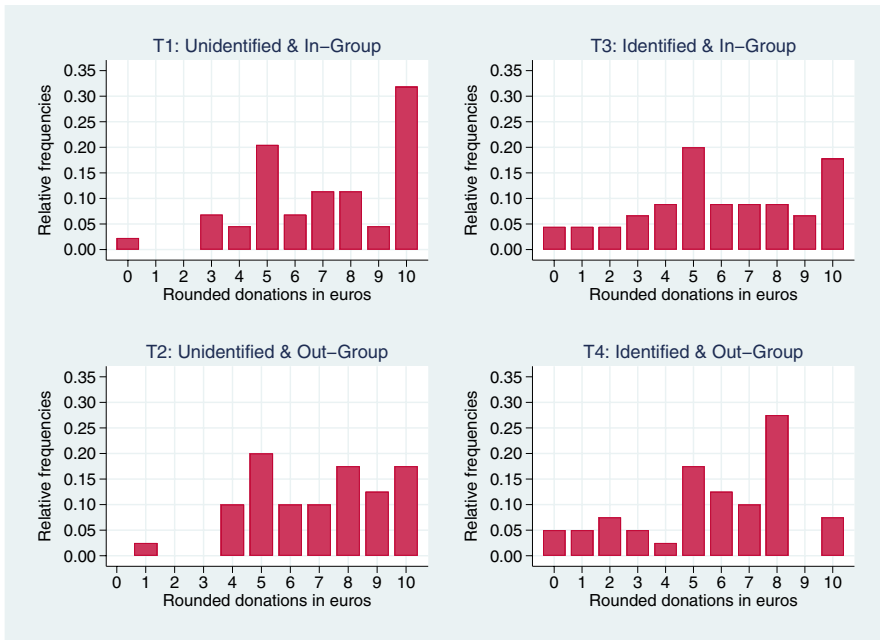


Fig. 5 Distributions of rounded donations by treatments

At these quantiles, unidentified in-group recipients receive €10, while unidentified out-group recipients receive €9. Identified recipients receive €9 and €8, respectively. Finally, note that social distance (out-group or in-group) does not play a role at the bottom and middle of the distribution; only identifiability matters in these segments.

The second part of Table 3 (Model 2) shows that the impacts of identifiability and social distance are more pronounced among individuals expressing only partial affinity with the 'Multicultural World'. Specifically, the coefficients of identifiability ($pW\text{-Ident}$) are larger in absolute value at the bottom of the distribution, similar in the middle, and no longer significant at the top. Conversely, the coefficients for the out-group ($pW\text{-Out}$) are larger in absolute value at the top of the distribution.

We summarize the analysis of second-order effects in the following results.

Result 5 Although in- and out-group beneficiaries receive, on average, the same donations (Result 2), their distributions differ at the top, with the in-group receiving more top donations than the out-group, and the out-group receiving more next-to-the-top donations than the in-group. The result is mainly due to individuals showing partial affinity with the 'Multicultural World'.

Result 6 Identified beneficiaries receive, on average, less donations than unidentified ones (Result 1), mainly because the former receive lower donations than the

latter at the bottom of the distribution. Again, the result is mainly due to individuals showing partial affinity with the ‘Multicultural World’.

4.6 Decision time

The last result concerns the time spent by participants to submit their donation decision. The average decision time (in seconds) by treatments is shown in Fig. 6 (data in Table A.11). After excluding 4 anomalous observations with zero decision time, and 4 observations with time exceeding the threshold of 3 standard deviations above the mean, the sample considered consists of 161 observations.

From Fig. 6, it is evident that it took on average more time to make the donation decision for out-group than for in-group beneficiaries, whereas the time is similar for identified and unidentified beneficiaries. Pooling T1 and T3 (In-Group), the mean decision time is 66 s (S.E. = 3.96), while pooling T2 and T4 (Out-Group) it is 84 s (S.E. = 5.25), with a difference—about 18 s—that is significant (S.E. = 6.48, $p = 0.006$).¹⁹ Pooling T1 and T2 (Unidentified), the mean decision time is 74 s (S.E. = 4.86), while pooling T3 and T4 (Identified) it is 76 s (S.E. = 4.50), with a difference that is not significant (S.E. = 6.62, $p = 0.758$).

Result 7 On average, it took more time to make the donation decision for out-group than for in-group beneficiaries. The decision time is about the same for identified and for unidentified beneficiaries.

5 Discussion

The evidence reported in the previous section can be summarized in three main results.

- A. Italian participants expressed, on average, more affinity to ‘Italy’ than to the ‘Multicultural World’, with a significant difference between the number of those expressing full affinity to ‘Italy’ and partial affinity to the ‘Multicultural World’ and the number of those expressing partial affinity to ‘Italy’ and full affinity to the ‘Multicultural World’ (Result 3). However, only the degree of affinity with the ‘Multicultural World’ shows some association with observed donation patterns: full affinity is associated to more generous donations in all treatment conditions (Result 4.1)²⁰; partial affinity is associated to different donation behaviors across treatment conditions, as detailed in B and C below.

¹⁹ The 18 s of difference cannot be due to the different lengths of the donation appeals that are specific to treatments. In the Italian text (see Section A.4 of the Online Appendix), the text common to all treatments counts 81 words. As for texts specific to treatments, we have T1: 14 words; T2: 15 words; T3: 18 words; T4: 21 words.

²⁰ The only exception is the small group of 18 subjects who expressed full affinity with the ‘Multicultural World’ and partial affinity with ‘Italy’, who consistently resulted less generous with in- than with out-group beneficiaries (variable *pl/fW-In* in Table 2).

Table 3 Second-order effects: quantile regressions

Quantiles	0.05	0.10	0.15	0.20	0.45	0.55	0.80	0.85
<i>Dependent variable: Donation to the charity (euro)</i>								
<i>Model 1</i>								
Ident	-2.50*** (0.744)	-2.50*** (0.692)	-3.00*** (0.740)	-2.00*** (0.729)	-2.00*** (0.605)	-1.50** (0.677)	-1.00** (0.441)	-1.00* (0.576)
Out	0.50 (0.824)	0.50 (0.818)	0.00 (0.769)	0.00 (0.672)	0.00 (0.625)	0.00 (0.647)	-1.00** (0.458)	-1.00* (0.540)
Constant	3.00*** (0.724)	3.50*** (0.736)	5.00*** (0.593)	5.00*** (0.464)	7.00*** (0.628)	7.50*** (0.571)	10.00*** (0.230)	10.00*** (0.000)
Obs	169	169	169	169	169	169	169	169
Pseudo R^2	0.1035	0.0869	0.0627	0.0464	0.0231	0.0164	0.0812	0.0474
<i>Model 2</i>								
pW-Ident	-3.00*** (0.629)	-3.00*** (0.772)	-3.00*** (0.659)	-3.00*** (0.704)	-2.00*** (0.708)	-2.00*** (0.694)	-0.50 (0.949)	-0.25 (0.786)
pW-Out	0.50 (0.810)	0.00 (0.815)	-0.50 (0.687)	0.00 (0.560)	0.00 (0.739)	-1.00 (0.687)	-1.50** (0.744)	-1.75** (0.681)
Constant	3.00*** (0.676)	4.00*** (0.708)	5.00*** (0.411)	5.00*** (0.200)	7.00*** (0.503)	8.00*** (0.399)	10.00*** (0.314)	10.00*** (0.010)
Obs.	162	162	162	162	162	162	162	162
Pseudo R^2	0.1620	0.1543	0.1412	0.1157	0.0535	0.0565	0.0945	0.0904

* $p \leq .1$, ** $p \leq .05$, *** $p \leq .01$. S.E. in parentheses

- B. In-group and out-group beneficiaries received, on average, the same donations (Result 2). However, especially individuals showing partial affinity with the ‘Multicultural World’ were more likely to give top donations to in- than to out-group beneficiaries (Result 5), and it took longer, on average, to make the donation decision for out- than for in-group beneficiaries (Result 7).
- C. Identified beneficiaries received, on average, less donations than unidentified ones (Result 1), in particular from participants exhibiting partial affinity with the ‘Multicultural World’ (Result 4.2), who were more likely to give lower donations to identified than to unidentified beneficiaries at the bottom of the donations distribution (Result 6).

Regarding Result A, note that although the participants—all Italian—displayed more affinity with ‘Italy’ than with the ‘Multicultural World’, this disposition did not result in *parochialistic* attitudes (Schwartz-Shea and Simmons 1991; Choi et al. 2019). If present, such attitudes would have led to more generous donations to in- than to out-group beneficiaries. This is a peculiar outcome of the experiment, given that national parochialism—i.e., greater cooperation among members of the same nation—is, according to the literature, an ubiquitous phenomenon (Romano et al. 2021; Bernhard et al. 2006). Note also, as documented in Sect. 4.3, that only 32.72% of the individuals expressed at the same time full affinity with ‘Italy’ and partial affinity with the ‘Multicultural World’, an evidence which is in line with the thesis

advanced by Allport (1954) and Brewer (1999, 2007), according to which attachment to in-group values does not necessarily imply detachment to out-group ones. In fact, 20.99% of our participants exhibited full affinity both to ‘Italy’ and to the ‘Multicultural World’. Based on the data collected during the experiment, we are not able to offer an ultimate interpretation of the evidence that the individuals expressing full affinity with the ‘Multicultural World’ tend to be more generous than those feeling only partial affinity, irrespective of the social distance between themselves and the beneficiaries, and irrespective of their degree of affinity with ‘Italy’, apart from the possibility that a self-declared affinity with a multicultural society is a sort of proxy of unconditional altruism, that goes beyond any other feature of both the donor and the recipient.

A speculative interpretation²¹ of Result B—equal average donations, but different distributions, for in- and for out-group recipients—can be based on the three main drivers of donors’ behavior, extensively studied in charitable giving research: *altruism* (i.e., the concern for the welfare of the beneficiaries), *warm-glow* (i.e., the ‘selfish’ joy of giving in itself), and *social pressure* (i.e., giving motivated by the desire to maintain self-image, to obtain social approval, to avoid regret or shame). While giving motivated by altruism and warm glow (the so-called *impure altruism* framework; Andreoni 1989, 1990) increases donors’ welfare, giving motivated by social pressure can reduce donors’ welfare (Bodner and Prelec 2003; Bénabou and Tirole 2006; Della Vigna et al. 2012; Andreoni et al. 2017).

Suppose that a solicitation for an in-group beneficiary makes more salient the altruistic and the warm-glow motivations relative to social pressure, and vice versa for an out-group beneficiary. That is, because of psychological distance, the donors feel less affinity toward an out-group beneficiary, and therefore their altruistic and warm glow motivations suffer a downward bias with respect to an in-group beneficiary. At the same time, the ‘bad signal’ (either in terms of self, or social, image) ensuing from a small donation can be more salient in the case of an out- than for an in-group beneficiary, since parsimony for an in-group can be simply interpreted as evidence of greediness, whereas parsimony for an out-group can be interpreted also in terms of discrimination (Becker 2010), racism or intolerance. Under these conditions, an appeal for an in-group beneficiary is likely to harvest top donations from the more generous altruists and the more enthusiastic warm-glowers, and only small donations from the less generous and the less enthusiastic, since social pressure is not a relevant factor. On the contrary, an appeal for an out-group beneficiary is likely to secure high-but-not-top donations from the more generous (but restrained) altruists and the more enthusiastic (but, again, restrained) warm-glowers, and low-but-not-bottom donations from the less generous (but socially pressured) and the less enthusiastic (but, again, socially pressured) types. The evidence that donors took more time to give to out- than to in-group also supports the considerations about the salience of social pressure. All in all, the given interpretation can explain why,

²¹ We are aware that most of the interpretations advanced in this section are of purely speculative nature. Still we believe they can be useful to suggest directions for further research.

absent a first-order effect on average donations for in- and out-group beneficiaries, we observed a second-order effect on the respective distributions.

In a recent paper, Linos et al. (2021) present evidence from a field experiment that hints at an alternative interpretation of our Result B. In their text-to-give campaign conducted in Greece, they find that donations do not increase with an explicit appeal to an in-group beneficiary, relative to a non-ethnically identified control beneficiary; however, donations halve with reference to a stigmatized out-group beneficiary. In other words, an 'out-group stigmatization effect' is at work and clearly visible (but not an 'in-group effect') which in our experiment is hidden in the donation distributions as a second-order phenomenon. It should however be emphasized that our out-group does not necessarily include stigmatized ethnic minorities. In this case, the *contact hypothesis* advanced by Allport (1954) may apply, 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 (see also Pettigrew and Tropp 2005, for a discussion). Indeed, this is likely to be the case for a relevant portion of our participants: being young university students, they are likely to have links with friends and fellows belonging to immigrant families; a situation that, according to the contact hypothesis, can determine unbiased attitudes toward immigrants.

Also Result C can be backed by a speculative interpretation by looking at the second-order effects on donations distributions, as the outcome of two concurrent factors, paradoxically reflecting two opposite views of the society. On the one hand, conservative individuals (to the extent that partial affinity with the 'Multicultural world' reflects conservatives views) may give less to an identified than to an unidentified beneficiary because identification strengthens negative considerations hindering generosity, for example perceiving the recipient responsible for their own unlucky condition (it is the so called attribution theory; see, e.g., Weiner et al. 2011). Hence, these donors turn out to be less willing to help a special-needs student, even more when they are more neatly identified. On the other hand, individuals of liberal views, who are less inclined to perceive unlucky people responsible for their own plights, might not be particularly moved by identification, since the type of recipient used in our experiment is not a victim in life-threatening danger but simply a boy in need of help at school, which is a situation bearing low emotional content. The two different behaviours concur, in fact, to lower donations to identified beneficiaries.

Moreover, recall that the most important driver of the victim's identifiability effect is, according to Jenni and Loewenstein (1997), the higher proportion of those at risk that can be saved when the beneficiary is identified. Of course, this is particularly true when the unidentified recipient is defined as a social group or category, and this is actually not the case in our experiment, where the identification is limited to giving the name and age of the potential recipient versus simply indicating him as a teenager. As a consequence, we may presume a limited incidence of the identification effect.

Finally, we acknowledge that the results could be partially driven by some of the design features of the experiment, which was purposely framed in a specific context to provide a realistic experience to participants (a generic Italian teenager vs a generic teenager belonging to a family of regular immigrants; Andrea vs Ibrahim, both 15 years old and affected by SLD). This relatively rich context may complicate

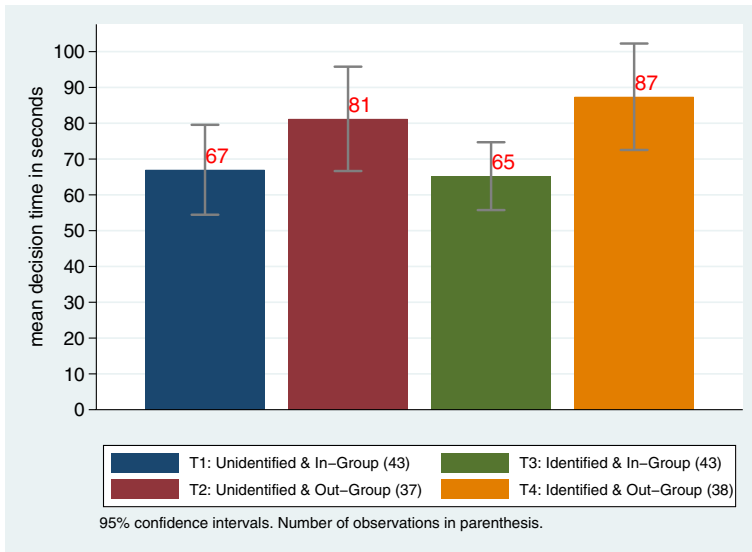


Fig. 6 Mean decision time by treatment groups

the interpretation of the results. For instance, the null result in the comparison between the in- and out-group treatments could be due to the context of the chosen charity (teaching disadvantaged kids), as an Italian participant might be more inclined to help another Italian, but at the same time recognizing that an immigrant could be in higher need for support in education, likely because his parents might not be fluent in Italian. These two effects might then cancel each other, leading to a zero result.²²

6 Concluding remarks

The results of the experiment presented in this paper show that when examining the effects of treatment conditions on donation decisions it is important to look not only at first-order effects—i.e., the comparison of average donations by treatments—but also at second-order effects—i.e., the comparison of donations distributions by treatments.

Regarding the issue of social categorization of the beneficiary, the results show that although there are no first-order effects, as in-group and out-group recipients receive, on average, the same donations, second-order effects are present, as in-group beneficiaries are more likely to receive very high donations, whereas out-group ones are more likely to be given intermediate donations. Regarding victim's identifiability, the results show that there are both a first-order effect, as identified

²² We thank a reviewer for bringing to our attention this point.

recipients are given, on average, lower donations than unidentified ones, and a second-order effect, as the distribution for identified beneficiaries is not simply a scaled down version of the distribution for unidentified ones. Namely, identified beneficiaries, compared to unidentified ones, receive lower donations especially at the bottom of the donations distribution. Some of the—largely speculative—explanations provided to interpret the results could be taken to laboratory testing in future research.

As has been noted, due to increasing migration rates—both regular and irregular—Italy is experiencing a higher presence of immigrants compared to previous decades. This phenomenon interacts with the increasing inequality in wealth and income distribution in the Italian society: in fact, among families close to the poverty threshold, immigrants are over-represented and charity organizations often called to cope with the needs of foreign families. Without going beyond the scope of the research, we think that these results may contribute to the knowledge of the attitude of potential donors towards people in need who come from different countries and cultural contexts.

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Author contributions Wubeshet Regasa conceived the research question and examined the related literature. The three authors designed and conducted the experiment, analyzed the data collected, made the empirical analysis, prepared tables and figures and wrote the manuscript.

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Data availability Stata.dta file containing the full dataset and Stata.do file used to run regressions and to create figures are available at Mendeley repository at <https://data.mendeley.com/datasets/wh9m9fbt4r/1>.

Declarations

Conflict of interest The authors declare no conflict of interest.

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