

# Prosociality beyond in-group boundaries: A lab-in-the-field experiment on intergroup contact in a multiethnic European metropolis \*

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## Abstract

How does prosocial behavior extend beyond in-group boundaries in multiethnic societies? Building on Durkheim's intuition that solidarity in complex societies derives from interdependence and division of labor rather than cultural similarity and mutual acquaintanceship, we develop a 3-steps model of out-group exposure to capture the tension between the human tendency to favor the ingroup and societal pressures that force people outside the comfort zones of their familiar networks to constructively interact with unknown, diverse others. Using a large-scale lab-in-the-field experiment with a representative sample of Italian natives and immigrants from the metropolitan city of Milan, we study behavior toward coethnics and non-coethnics in strategic and non-strategic interactions. We find that when given the opportunity to select their interaction partners, Italians favor coethnics over immigrants. However, when forced to interact with non-coethnics, as it happens in many economic transactions, Italians generally treat them similarly to how they treat coethnics and value signs of social and market integration. Taken together, these results confirm contact theory intuition that interaction with outgroup members, especially when individuals have common goals, is likely to foster prosociality, despite the persistence of discriminatory behavior toward minorities in selection processes.

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## Introduction

Recent waves of immigration and the increased ethnic diversity of North American and Western European societies have drawn scholarly attention to the effects of ethnic differentiation on prosocial behavior. Despite the less-than-ideal quality of the empirical evidence at their disposal, scholars and pundits came to quickly embrace the idea that ethnic diversity has a negative effect on a host of social outcomes, including trust and public goods provision (Putnam 2007; Alesina and La Ferrara 2000*b*; Delhey and Newton 2005; Anderson and Paskeviciute 2006; Gustavsson and Jordahl 2008; Costa and Kahn 2003; Alesina and La Ferrara 2000*a*; Alesina, Baqir and Easterly 1999; Easterly and Levine 1997). Ingroup favoritism (Tajfel and Turner 1979) or group threat (Blalock 1967; Olzak 1992) are often used to explain why outgroup exposure leads to negative social outcomes. This preoccupation with the negative effects of diversity is understandable: mainstream conceptions of prosociality are (implicitly) based on homogeneous communities, where close-knit networks facilitate the emergence of shared norms of reciprocity, cooperation, and sanctioning (Coleman 1988). In this framework, it makes sense to believe that heterogeneity has negative effects for the collectivity, by undermining the dense network of reciprocity and social control upon which traditional societies rely.

However, sociologists have long ago acknowledged that solidarity and cooperation in complex societies may not derive from the type of mechanical solidarity that makes homogeneous communities thrive. As Durkheim powerfully theorized more than a century ago, solidarity in complex societies derives from interdependence and division of labor, rather than cultural similarity and mutual acquaintanceship (Portes and Vickstrom 2011; Durkheim 1984 [1893]). In this paper, we build on this core intuition, and different strands of research on intergroup contact and prosocial behavior, to provide a deeper understanding of the processes through which prosociality extends beyond close-knit networks and spans across group boundaries (Baldassarri and Abascal 2020). To do so, we depart from scholarship adjudicating whether ethnic diversity undermines solidarity and refrain from comparing heterogeneous to homogeneous communities. Rather, we develop a 3-steps model of outgroup exposure to better understand how does prosocial behavior extend across ethnic boundaries in complex, ethnically diverse social settings.

First, we consider the largely exogenous *macro-structural factors* that create opportunities for encounters across ethnic boundaries. People in modern societies are often pushed outside the comfort zones of their familiar networks to constructively interact with unknown others (Yamagishi 2011; Ermisch and Gambetta 2010). In particular, economic interdependence, by fostering purpo-

sive interactions in economic settings, likely constitutes a primary source of exposure to out-group members (Henrich et al. 2001; Baldassarri 2020). In turn, the social and market integration of minorities and immigrants often contributes to reduce bias toward them (Alba and Nee 2005; Portes, Parker and Cobas 1980; Hainmueller and Hangartner 2013; Zhang et al. 2019).

We do not assume, however, that humans would seamlessly cross intergroup boundaries or that they would treat non-coethnics in the same way they would treat coethnics. Following social identity theory (Tajfel and Turner 1979; Balliet, Wu and De Dreu 2014), we recognize that people have an innate tendency to play it safe, and favor members of their in-group. However, the interdependence and division of labor of life in contemporary urban settings have made constructive interactions with outgroup members, and non-coethnics in particular, an everyday necessity, because individuals' material needs cannot be satisfied within their immediate social networks. To understand prosociality in complex societies we therefore need to capture the tension between the basic tendency toward homophily and ingroup favoritism and societal pressures to move beyond ingroup boundaries in purposive social settings. Accordingly, in addition to the macro-structural factors that push people to interact with outgroup members, our 3-steps model of outgroup exposure identifies two micro-level components that affect intergroup contact. Namely, step 2 considers network dynamics of *self-selection* into homogeneous vs diverse interaction settings, capturing the active role people play in selecting their interaction partners, the consequent formation of social networks, and the role of previous exposure and diverse social networks in affecting future opportunities of contact. Finally, our third and last step concerns the actual experience of *contact* with out-group members, which in turns affects attitudes toward non-coethnics, and the likelihood of future interactions with them.

Overall, in our model generalized prosociality develops from a multiplicity of micro-interactions in everyday settings. We posit that the enhanced frequency of interactions with outgroup members typical of complex societies is likely to contribute to the 'normalization' of experiences, and, overall, be conducive to greater generalized prosociality. However, the overall societal effect of social differentiation cannot be understood separate from dynamics of ingroup favoritism and outgroup discrimination that operate by systematically limiting opportunities of outgroup exposure and social integration.

We apply this model to the study of interaction dynamics between natives and immigrants in a multicultural European metropolis, Milan (Italy). We go beyond generic assessments of trust to measure actual behavior toward coethnics and non-coethnics in a series of behavioral games and

other experimental activities with a representative sample of Milan residents, including both Italian natives and immigrants of different national origins in our sample ( $N = 890$ ). We consider both non-strategic interactions, measuring general levels of altruism toward coethnics and non-coethnics, and strategic interactions, in which participants' behavior is affected by expectations about alters' behavior, based on their perceived trustworthiness and competence/skills. Moreover, available information about interaction partners is not limited to their ethnicity: it also encompasses their embeddedness in the social and economic life of the metropolis, thus favoring a conceptualization of alters that would not exclusively rely on stereotypical views of natives and immigrants.

While most research on ethnic diversity and intergroup contact has either relied on proxies of contact (such as geographic proximity) or zoomed in on actual contact without considering the selection process that leads to it, our operationalization of intergroup contact includes both the process of selection of interaction partners, as well as what do people actually do when paired with coethnics and non-coethnics in specific interaction settings. Finally, combining behavior in our experimental setting with detailed information about our participants' social network composition and political attitudes provides suggestive evidence of the role past experiences may play in informing people's behavior toward non-coethnics. Thanks to our comprehensive conceptualization of outgroup exposure, we help reconcile classical findings concerning the positive effects of intergroup contact with evidence documenting the persistence of in-group favoritism, outgroup discrimination, and the alleged negative effects of ethnic differentiation.

We find that Italians display similar levels of altruism toward coethnic and non-coethnic members, and they do not discriminate in strategic interactions involving trust, and competence. They also value signs of integration in the economic and civil life of the city. However, when given the opportunity to select their interaction partners, Italians prefer to interact with coethnics rather than immigrants. Taken together, these results are in line with the tenets of our theory of prosocial behavior: while in-group preference persists and drives the selection of interaction partners, when pushed out of their comfort zone and forced to interact with non-coethnics, Italians generally treat them similarly to how they treat coethnics in both strategic and non-strategic interaction dynamics. Moreover, choice of non-coethnics as well as their treatment is strongly related to the extent to which individuals have immigrants in their friendship networks. While we cannot fully assess the causal relationship between these variables, we determine that previous exposure, as measured by the presence of non-coethnics in one's social network, is likely to lead to further exposure and positive interactions, reducing the in-group bias and fostering generalized altruism.

Taken together, these results contribute to make sense of the persistence of discriminatory behavior toward minorities and immigrants in selection processes, as well as confirm the century old contact theory intuition that interaction with outgroup members, especially when it occurs among individuals sharing common goals, is likely to foster prosociality. Several market transactions, we speculate, are likely to satisfy these conditions, for their very nature of being exchanges where people bring complementary goods, skills and capabilities.

## **Economic interdependence and Prosocial behavior**

How does prosocial behavior extent beyond close-knit, homogeneous social groups? Insights from various strains of research suggest that the economic and social interdependence of complex societies might favor the development of generalized prosocial behavior (Baldassarri and Abascal 2020). Studies of cross-cultural variation in prosocial behavior have shown that societies in which people extensively rely on market exchange in their daily lives display greater fairness and cooperative behavior (Henrich et al. 2001, 2010). Market integration – and in particular the experience of mutually satisfying transactions among strangers – is theorized to be beneficial for the development of "abstract sharing principles concerning behaviors toward strangers" (Henrich et al. 2001: p. 76). Further research has also shown that greater market integration is not only related to altruism toward generic strangers, but it specifically extends to immigrants, thus crossing ethnic boundaries (Baldassarri 2020).

Similar efforts to understanding generalized prosociality support the idea that trust in strangers is enhanced by structural conditions that push individuals beyond the confort zone of their most proximate social circles (e.g., family, religion, ethnicity) to interact with unknown, dissimilar others. For instance, Yamagishi's emancipatory theory of trust is built on the observation that individualistic societies, such as the US, display higher levels of generalized trust than collectivist societies, such as Japan. The intense group ties typical of the Japanese society are a guarantee of security, but prevent trust from developing beyond group boundaries. In contrast, the greater mobility and uncertainty that US individuals generally face forces them to trust unknown others more often (Yamagishi 2011; Yamagishi, Cook and Watabe 1998). Experimentally testing the basic tenets of this theory at the individual level, Ermisch and Gambetta show that strong group and family ties inhibit generalized trust. In contrast loose family connections and, moreover, having experienced uprooting events, such as a divorce, is associated with greater likelihood to trust strangers (Ermisch and Gambetta 2010).

Taken together, these contributions point to the importance of exogeneous forces, and market interdependence in particular, in understanding how prosocial behavior may extend beyond the boundaries of the ingroup in multiethnic, urban environments. Indeed, when individual needs cannot be satisfied within small social circles, constructive interactions with outgroup members become an everyday necessity. And economic transactions, more than cultural or leisure activities, may constitute a primary setting for mutually satisfactory interactions with dissimilar others for their very nature of being an exchange between individuals who have different skills / goods to trade (Baldassarri 2020). It follows that the type of prosociality that holds complex societies together likely derives from positive experiences in strategic interaction settings, and differ from the mechanic solidarity based on collective identification that glues homogenous societies together (Portes and Vickstrom 2011). Relevant, thus, becomes the distinction between commonality-based solidarity that derives from shared identities (Cummins and Barnett 2021) and prosocial behavior that derives from generalized exchange (Bearman 1997; Molm, Collett and Schaefer 2007).

Accordingly, empirical research should not simply rely on generic measures of prejudice or trust. It needs, instead, to deploy data-collection strategies that capture the interdependence of human behavior and encompass the variety of interaction dynamics that populate everyday experiences. If economic interdependence and market exchanges are playing a major role in determining not only the material outcomes of immigrants, but also their inclusion in the broader polity, in studying natives-immigrants interactions we should go beyond the study of empathic manifestations of solidarity – think of clothes donations or other forms of charity, for instance –, and consider more instrumental patterns of relationships, such as the decision of subletting to, or hiring somebody.

Seminal, in this regard, is Habyarimana et al. (2009)’s study of ethnic diversity and its effects on public goods provision, in which behavioral games were used to dissect interactions between coethnics and non-coethnics in highly diverse neighborhoods of Kampala, Uganda. Interestingly, they do not find evidence of ingroup favoritism (also referred to as animus-based or taste-based discrimination): in an anonymous dictator game, participants are equally generous toward coethnics and non-coethnics. Instead, their findings suggest that stronger norms dictate cooperation with coethnics than non-coethnics in interactions that entail risk. Moreover, difficulties in communication across ethnic lines, due to few social network connections with outgroup members, maybe constitute an additional obstacle to intergroup cooperation. This opened the door to other studies that go beyond arguments based on prejudice and dislike of others to investigate the various mechanisms that might affect collective outcomes in interactions between natives and immigrants

(Adida, Laitin and Valfort 2016; Choi, Poertner and Sambanis 2019), or different ethnic groups. We follow this approach in our research, relying on behavioral games to understand natives-immigrant relationships in both non-strategic and strategic interaction settings.

## **Selection, Exposure, and Inter-group contact**

The idea that economic and social interdependence might foster generalized prosociality by pushing people to interact with unknown, different others is based on the assumption that outgroup exposure would generally lead to positive outcomes. This is, indeed, the main tenet of contact theory, according to which sustained, positive interactions with outgroup members reduce prejudice, especially under optimal circumstances, including common goals, equal status among groups, and a supportive institutional environment (Allport 1954; Pettigrew and Tropp 2006). However, despite a large volume of research showing that intergroup contact reduces prejudice and hostility (Paluck, Green and Green 2019), this is not yet considered a settled dispute in the social psychology literature. This position is often challenged by other research suggesting that contact, especially in the context of competition over scarce resources, might exacerbate group threat and conflict (Olzak 1992; Blalock 1967). These alternative accounts have been revived by scholars that read in the negative association between ethnoracial diversity and trust proof of the fact that outgroup exposure has a negative effect on prosocial behavior (Putnam 2007; Alesina and La Ferrara 2000*b*). Notably, however, there are substantial differences in the way in which outgroup exposure is conceived and measured: while studies on the effects of ethnic diversity rely on proxies of contact, such as residential proximity, the social psychology literature generally studies actual contact in lab-experimental or field-experimental settings.

Rather than rehearsing this endless debate in its own traditional terms, here we dissect the process of outgroup exposure in its constituent components: as already discussed, there are exogenous factors that favor intergroup contact. Second, we should consider individual's willingness to interact with non-coethnics and the network dynamics that lead to self-selection into relationships with coethnics or non-coethnics, and, finally, the actual behavior in purposeful interaction settings and the consequences of this social contact on further interactions. In the following paragraphs we review empirical research that speaks to these latter two aspects, and systematize these various contributions in a framework that reconciles instances of discrimination / ingroup favoritism with the basic tenets of contact theory. While it is hard to address all three aspects in a single research study, organizing them in a comprehensive analytical framework helps set the stage for a research

design that is sensitive to the entire process that leads to out-group exposure, and better inform the conclusions that one can draw from single studies, and their scope conditions.

Experimental tests of the contact hypothesis have been mainly focusing on the latter of the three stages – they studied the effects of actual contact between individuals. In fact, the random assignment of individuals to mixed vs. homogeneous settings is used in order to assess the effects of contact net of self-selection and other factors that might affect behavior. In line with this tradition, a recent wave of natural and field-experiments have studied the effects of interaction across ethnic boundaries in a variety of social and occupational settings. Soldiers that were randomly assigned to share rooms with ethnic minorities later show greater trust toward a generic immigrant (Finseraas 2019). U.S. Air Force students that were randomly assigned to peer groups with more students of color were later more accepting of Blacks in general and more likely to match with Black roommates in the future (Carrell 2015). Similarly, university students that were assigned to African American roommates showed greater appreciation of diversity, and were more comfortable around minorities (Boisjoly and Eccles 2006). Even in settings with a recent history of violence between ethnic / religious groups, interpersonal contact can alter behavior in positive ways (Scacco 2018; Mousa 2020). Overall, these studies that took place in real-life social settings add solid empirical evidence in support of contact theory: the effects of intergroup contact are often positive, leading to more favorable attitudes and greater likelihood of future interactions with non-coethnics, and never enhance hostility toward non-coethnics.

However, equally solid research documents the persistence of discrimination in hiring, housing and other markets in most western societies, even toward second or third generation immigrants. Dozens of audit and correspondence studies have been carried out, overall showing that when it comes to selecting employees, subletters, romantic partners etc. native majorities tend to favor coethnics over equally, or even better qualified immigrants and minorities (Auspurg, Schneck and Hinz 2019; Quillian et al. 2019; Zschirnt and Ruedin 2016; Zschirnt 2019).

The apparent contrast between these two sets of findings can be explained considering that they capture two different aspects of interaction dynamics: the first tells us what people do when they are forced (randomly assigned) into specific interactions in organized social settings, while the second points to what people do when they have the opportunity to choose who they are going to interact with. While prejudice and discrimination are often presented as clear-cut attitudes that either inform human behavior or not, this empirical evidence alerts us to the possibility that multiple forces might be affecting human behavior in interaction dynamics, and considerations



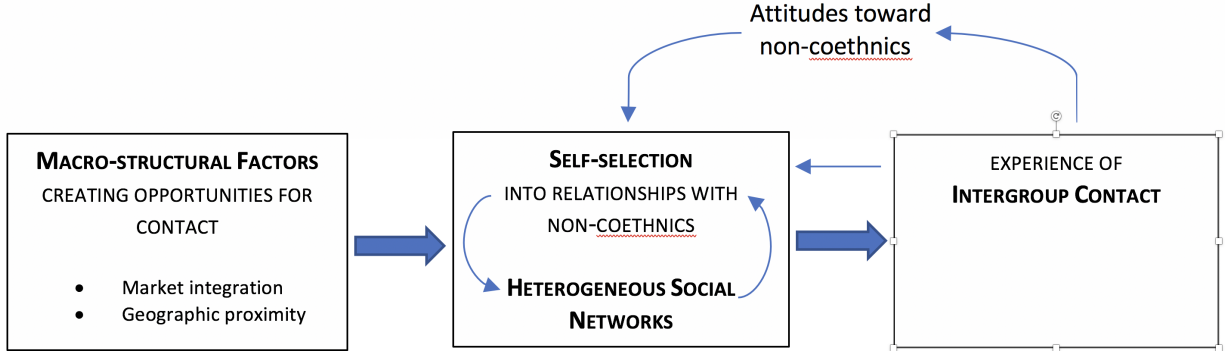
based on co-ethnicity could persist guiding our choices in the formation of social relations even when other considerations might trump ethnicity in informing actual behavior in interactions.

This process of self-selection has ramifications that go beyond single encounters: patterns of interactions often crystallize in social networks, and the composition of social networks then affects opportunities for future interactions. Not surprisingly, social networks composition and, although to a lesser extent, the process of social selection into homogeneous vs heterogeneous groups, have achieved prominence in the scholarship exploring the effects of ethnic diversity on trust and social capital, with network heterogeneity being related to greater trust and solidarity (Stolle, Soroka and Johnston 2008; Koopmans and Veit 2014; Gundelach and Freitag 2014). In fact, people who live in diverse communities and have a diverse network of friends and acquaintances report high levels of prosociality. In contrast, a low level of trust is found among natives who, despite living in ethnically diverse neighborhoods, have maintained homogeneous social networks (Uslaner 2012; Laurence 2017). Importantly, this research shows that the heterogeneity of people’s networks does not simply resemble the level of diversity of the places they inhabit: self-selection, and a relative inertia, makes it possible for people who live in diverse neighborhoods to isolate in relatively homogeneous social networks. Additionally, individual attitudes also influence the decision of moving to diverse communities in the first place (Maxwell 2019).

Taken together, these findings depict a scenario in which intergroup contact does have a positive effect on attitudes and behavior toward the out-group, but the overall societal effect of social differentiation cannot be understood separate from network dynamics of ingroup selection that operate by systematically limiting opportunities of outgroup exposure. Thus, to properly understand the extent to which prosocial behavior extends beyond ingroup boundaries in diverse societies it is vital to monitor the different steps through which intergroup contact takes place. In our 3-steps model of outgroup exposure we should first consider external, partially exogenous factors: for instance, neighborhood diversity as well as market integration increase the chances of outgroup exposure. Second, and often overlooked by studies on the effects of social contact, we should consider the active role people have in selecting their interaction partners, the consequent formation of heterogeneous social networks, and the role of previous exposure and network diversity in affecting future opportunities of exposure. Finally, we should focus on actual behavior in interactions, and the effects that the contact experience has on attitudes toward outgroup members and future opportunities of interaction. Figure 1 summarizes this process, and its iterative nature, highlighting the most relevant feedback loops. Our study is a novel attempt at studying the combination of

these factors in a lab-in-the-field experimental setting. Namely, *our research design encompasses all three stages: we keep exogenous factors constant by selecting our study participants exclusively from ethnically diverse neighborhoods, while we experimentally vary conditions for both selection and contact.*

Figure 1: 3-Steps Iterative Model of Out-group Exposure



## Research Design

### Sampling and recruitment

Given our general interest in understanding cooperation in diverse societies, we recruited Italians and immigrants (men and women) from diverse neighborhoods in Milan, a large European metropolis and Italy’s economic capital. On average, 14% of the Milanese (legal) population is foreigner. We sampled our subjects from all the neighborhoods in which immigrants make up 14% or more of the population. In addition, we excluded the poorest neighborhoods and those in the city periphery in order to minimize economic and ecological differences across neighborhoods. Our intent was in fact to recruit a representative sample of Milan residents who live in ‘average’ diverse neighborhoods: meaning neighborhoods in which there are some foreigners, to assure that our respondents have everyday exposure to them, but not too many, to avoid recruiting respondents that have had extreme experiences with immigration. In total, our neighborhood sample is made up of 55 out of 88 neighborhoods of Milan (NIL) with 5-28% foreigners, no extreme poverty, unemployment or wealth, and urban rather than suburban structure in terms of population density. As Figure 2 shows, we have included a wide range of localities, from the most central neighborhoods, to several peripheral ones (for additional information, see appendix).



liable) and they are generally Muslim. Finally, migration to Italy is a relatively recent phenomenon, thus we restricted our subjects pool to only first-generation immigrants. We admitted only subjects with basic Italian language proficiency.

We relied on a marketing company for the recruitment of both Italians (N=557) and foreigners (N=141 for Filipinos and N=192 for Moroccans). Our sample was balanced in terms of gender and socio-economic status. We held 149 sessions, with about 6 people per session, in the same location in Milan. The location was easily reachable through public transportation. All our subjects were paid a participation fee of 10 Euros and a variable amount (between 15 and 25 Euros) depending on their individual and group performance on various behavioral tasks. On average, our subjects made 20 Euros.<sup>2</sup>

## Behavioral Games

We capture the interdependence of social action through behavioral games, and we distinguish different interaction dynamics. Conceptually, we are interested in both non-strategic, altruistic behavior (e.g., donating clothes, volunteering) and in strategic, cooperative behavior (e.g., hiring someone, sending kids to the same school) toward alters. Distinguishing between these two types of actions and measuring both is important because even in the absence of prosocial bias (taste-based discrimination) toward out-group members, we might be observing lower levels of cooperation in diverse groups because of different expectations, norms etc. We use Dictator games to capture non-strategic pro-social behavior, and Trust and Competence Games to study strategic interactions.

By experimentally manipulating the ethnic identity of alter in a series of behavioral tasks we study the effect of alter’s ethnicity in different interaction settings. To capture non-strategic, altruistic behavior toward both coethnics and non-coethnics our subjects participated twice in the role of deciders in a dictator game. In a dictator game, deciders have to split an amount of money, in our case 10 Euros, between themselves and another person. Whatever amount they decide to keep is theirs, while the other person will take home whatever they decided to give (if anything). Since the identity of the participants will remain anonymous, the contribution in this game is usually considered a measure of altruism or other-regarding preferences. Italians were paired with another Italian and an immigrant, described as someone who lives in Milan, and was born in Morocco, the Philippines, Romania, China, or Peru. Immigrants were similarly paired with a coethnic, or an Italian. We randomized the order in which coethnics and non-coethnics appear.

Next, we test Italians and immigrant behavior in two types of strategic interactions. The first,

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<sup>2</sup>Moroccans made, on average, 21 Euros, while Italians and Filipinos made 20 Euros.

a trust game, involves considerations concerning alter’s trustworthiness. The second, instead, is exclusively based on evaluations of alter’s competence. In both cases, we are interested in evaluating the extent to which alter’s nationality affects decisions. In this second set of activities, alter’s profile was enriched with additional information concerning alter’s age, and a professional /recreational/ voluntary activity. In strategic interactions, behavior is informed by expectations of what alter will do, and these expectations are likely formed on the basis of alter’s profile. If presented exclusively with a name and nationality, people would tend to infer other characteristics of the person, such as their economic status and level of education, from their ethnicity. Given the importance of these characteristics in guiding strategic interactions, we consider fundamental in these tasks to provide a more composite image of the person.

In the trust game two people are allocated 10 Euros each. The first player is given the possibility to give some of his/her resources to the other player. The amount is tripled and given to the second player, who then decides how much, if anything, to give back to the first player. We focus on the behavior of the first player, which is commonly interpreted as a measure of trust. (Namely, the first player has to assess whether alter could be trusted to share the gains in a fair manner.)<sup>3</sup> For half of the participants, the interaction partner was assigned. The other half of the sample was instead asked to choose between two possible partners, whose identities were randomized, before making their decision in the game. This treatment allows us to decouple the effect of selection from that of actual contact by studying not only whether coethnics elicit better treatment in strategic interactions, but also whether they are preferred over non-coethnics as interaction partners.

In practice, after having received a thorough explanation of the activity, participants were either introduced to their interaction partner or asked to choose between two alternatives. For instance, participants who were assigned a partner read: “You have been paired with [Farida], who lives in Milan, was born in [Morocco], is [52] years old and [works in elderly care]”. In brackets, we highlight the aspects that varied (brackets were obviously not used in the script seen by our subjects). In addition to gender, age, country of origin, we provide information about alter’s professional, voluntary, or recreational activity: namely, alter can hold a factory job or work in elderly care, be a parent representative in her/his son’s school or volunteer in the local Church (or Mosque in case of Moroccans), and like to watch TV or go on walks. We expect that the active involvement in the economic and civic life of their community may help convey trustworthiness, especially for immigrants.

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<sup>3</sup>There is also a component of risk, but given our focus on comparing contributions to coethnic and non-coethnic, this is irrelevant.

In the competence task, participants are paired with another person and both individuals are asked to solve the same logic puzzle shown in Figure 3 (a simple task, that most of our respondents were able to answer correctly). If they both provide the correct answer, they would receive 5 Euros each. Both immigrants and Italians participated in this task, and they were all given the possibility to choose between two different alters. In this task, the only aspect that is relevant concerns alter's competence. In this case, our focus is on nationality and competence, with alters being either an elementary school teacher, someone who works in a supermarket, or someone who likes to watch TV. Given the nature of the task, we expect people to privilege teachers as partners, while nationality should not factor into their consideration.

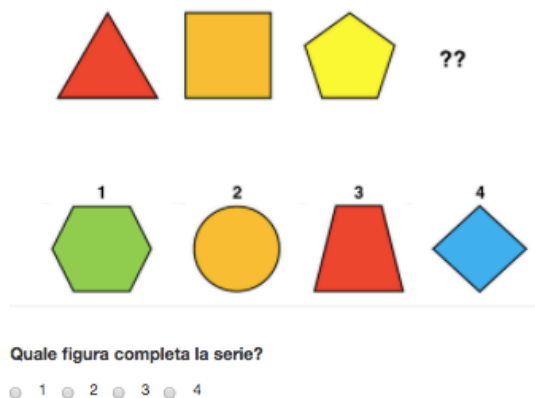
Figure 3: Screenshot of the Competence Task Activity. Participants were asked to chose a partner who could solve this logic puzzle.

### Attività 5

In questa attività sia tu che un'altra persona dovete fare l'esercizio di logica che vedi qui sotto.

Se entrambi date la risposta giusta, guadagnate 6€ ciascuno. Se invece uno di voi sbaglia la risposta, nessuno di voi guadagna nulla.

Nella prossima pagina potrai scegliere con quale persona partecipare a questa attività tra due che hanno precedentemente partecipato alla nostra ricerca. Ora fai l'esercizio:



Taken together, these activities cover a wide spectrum of interaction dynamics, from solidarity gestures to strategic interactions involving evaluations of alters' trustworthiness and competence, that are likely to affect individual and group outcomes in real life.

## Social Networks

We posit that generalized prosociality develops from a multiplicity of micro-interactions, and individuals' orientation toward non-coethnics likely depends on both past experiences and beliefs and attitudes toward them. We therefore explore variation in prosocial behavior in relationship to social networks composition . Less than 5% of our Italian participants declare never or rarely seeing im-

migrants on the streets, and almost 80% of them see immigrants often or almost always. This is not surprising, since we recruited them from multiethnic neighborhoods. However, work environments remain very homogeneous, with half of our respondents reporting not working with any immigrant, and 12% just one immigrant, while the remaining 40% report 2 or more. A third of respondents have friendship networks with none or only one immigrant, while the remaining 70% report 2 or more immigrant friends. As expected, acquaintance networks are a bit more heterogeneous, with 80% of participants knowing 2 or more immigrants. Finally, 46% of our Italian participants employ an immigrant.

## Results

### Prosociality in non-strategic interactions

Our first set of results report on levels of prosociality toward coethnics and non-coethnics for Italians, Filipinos and Moroccans. Figure 4 shows that all groups have similar levels of prosociality – they give around 4 out of 10 Euros to the other person – and there are no differences in levels of prosocial behavior toward coethnics and non-coethnics. Zooming in on the behavior of Italians toward immigrants of specific nationalities we also get similar results: prosociality toward non-coethnics does not seem to be driven by the specific nationality of the recipient (Figure 5). In line with previous findings, individual level characteristics, such as age, socioeconomic status, education, and gender do not predict contributions in dictator games (Camerer 2003; Henrich et al. 2001).

Figure 4: Average contribution to co-ethnics (in-group) and non-coethnics (out-group) in the Dictator Game by nationality of the participant

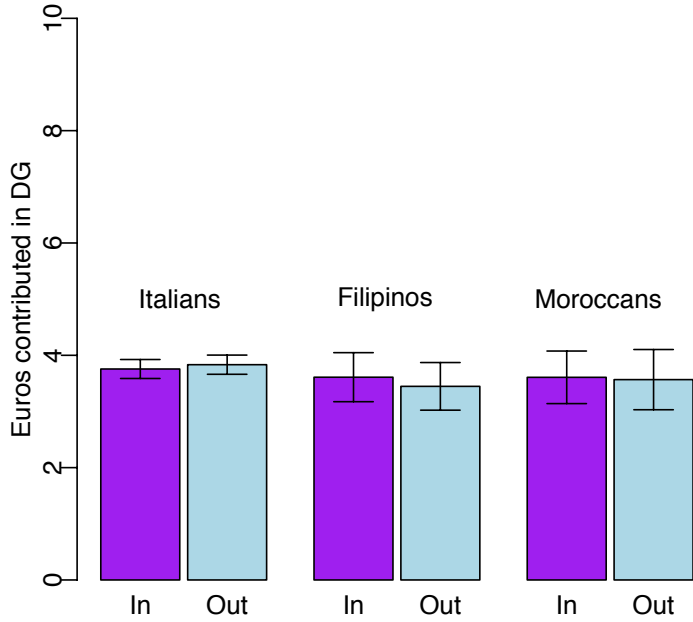
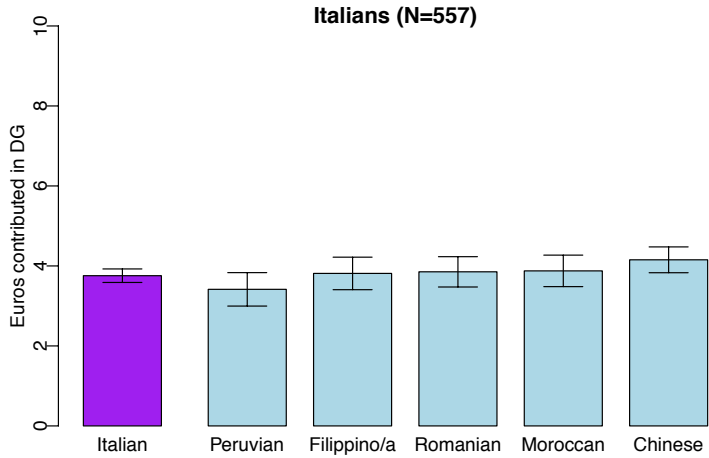


Figure 5: Italians average contributions in a Dictator Game by nationality of the recipient



Around 60% of all participants (and 57% of Italians) contribute the same amount to coethnics and non-coethnics. Among Italians, the remaining 2/5 are distributed almost evenly between a 20% of participants that favor coethnics over non-coethnics and another 20% that, instead, gives more to non-coethnics. As expected, these differences map into political preferences, with native Italians harboring anti-immigrant sentiments giving more to other Italians, while progressive views on immigration often lead to greater generosity toward immigrants. Friendship with immigrants is



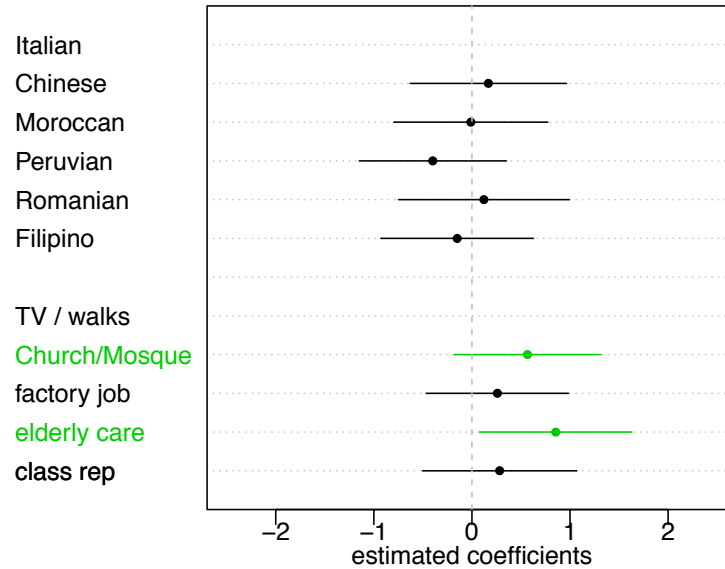
substantially and significantly correlated with greater contribution for non-coethnics than coethnics. On average, Italians who report having 2 or more immigrant friends tend to give .5 Euros more to an immigrant than a coethnic participant.

In line with previous scholarship, we find that Italians, on average, show similar levels of altruism toward immigrants and coethnics, hinting to a limited role of ingroup favoritism (or taste-based discrimination) in non-strategic interactions. Next, we turn to strategic interactions in which expectations about alter’s competence and trustworthiness should inform behavior. We explore whether considerations about both alters’ ethnicity and economic and civic integration inform actual behavior in the interaction setting as well as the choice of interaction partners.

### **Strategic interactions: trustworthiness and competence**

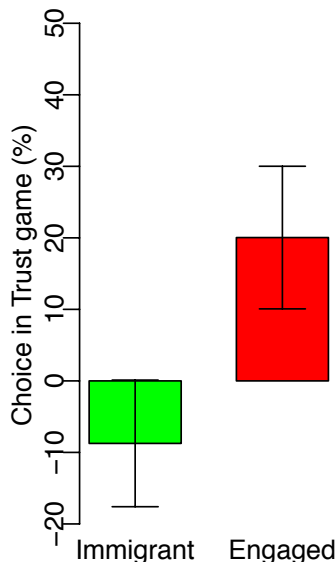
First, we consider strategic decisions in the context of a trust game. Namely, we focus on the behavior of Italians in the role of first movers in the setting in which participants were assigned to an interaction partner, whose profile was described in terms of nationality, economic or social engagement, as well as gender and age. In Figure 6 we plot results from a linear regression that models the amount shared with alter as a function of alter’s nationality (Italian is the baseline) and economic/recreational/voluntary activity (the model includes basic sociodemographics as controls). Results clearly show that recipient’s place of origin does not matter, while his/her economic and civic engagement, especially volunteering in a religious organization and working in elderly care, is effectively signaling trustworthiness (for immigrants and natives alike).

Figure 6: Model estimates for contributions in Trust Game by nationality and activity of the recipient (only Italians)



While ethnicity does not seem to drive trusting behavior in the interaction, it is nonetheless possible that Italians would favor a coethnic if given the opportunity to choose whom to interact with. In fact, this is what we find in the group of participants that were asked, after learning about the activity, to pick the person they would like to interact with. In particular, all of them had to choose between a default option, an Italian who loves to watch tv or go on walks, and an Italian or immigrant who is involved in one of four forms of civic and economic engagement. To summarize our results, Figure 7 reports the likelihood of choosing an immigrant over an Italian and someone with some form of civic engagement over the two recreational activities. Immigrants are 10% less likely to be chosen, while on average, holding a job or volunteering increases by 20% the chances of being selected. Thus, when given the opportunity to choose whom to trust, Italians favor coethnics, but also value signs of economic and civic integration.

Figure 7: Model estimates for the likelihood of choosing an immigrant and someone who is economically or socially engaged as partner in a Trust Game (only Italians)

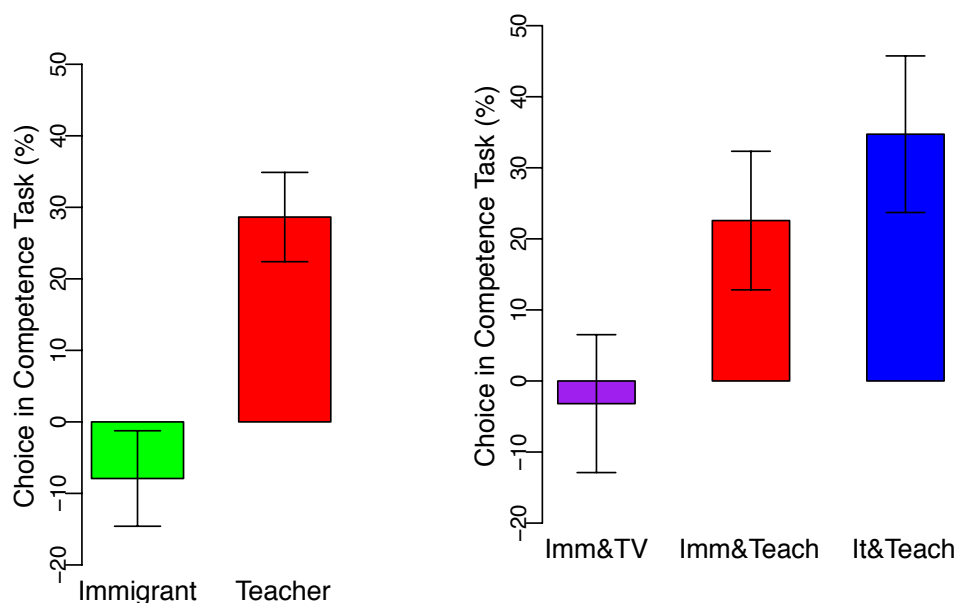


Finally, we explore differences in game behavior between participants who were given the opportunity to choose their partners and those that were, instead, randomly assigned one. Analyzing behavior in each condition separately, we do not detect any evidence that participants discriminate on the basis of nationality. However, contributions in the trust game are slightly higher (.3 Euros), on average, when people are given a chance to choose their interaction partner, and this difference is accounted for by the fact that participants tend to give more when they choose to interact with an Italian. Namely, contributions toward immigrants are the same as in the non-choice treatment (where contribution is the same toward Italians and immigrants), while contributions to Italians are higher. The size of the estimate is robust across different model specifications, while its statistical significance varies a bit around the  $p .05$  value (see Appendix). Given the uncertainty around the significance of this effect, we do not read too much into it. However, we consider it generative of an interesting hypothesis: namely, that the opportunity to select an interaction partner has some consequences on the successive behavior only among Italians who select a coethnic. In this case, opting for a coethnic brings with it greater willingness to trust. This finding is consistent with the idea that people, if given the opportunity, would play it safe and stick to the option that provides more certainty.

In our last game, we test whether this preference for coethnics remains in a task that is purely based on alter's competence. Both Italians and immigrants participated in this game, and they

choose between a default option, an Italian who works in a supermarket, and a second option with an [Italian or immigrant] who [likes to watch TV or is an elementary-school teacher]. Figure 8 shows that immigrants are less likely to be chosen over Italians, and that, as expected, teachers are much more likely to be chosen, almost 30% more. Interestingly, when we consider these aspects in combination (right panel), we find that immigrant teachers are chosen over anyone (Italian or immigrant) who likes to watch TV. However, Italian teachers seem to enjoy a greater professional advantage than immigrant teachers: namely, the effect is 10% stronger for Italian teachers (this difference is statistically significant, as reported in the Appendix, Table [TBD]). Note that the CI in the right panel of Figure 8 does not refer to the comparison between these two categories, but to the comparison with the baseline category of an Italian who works in a supermarket).

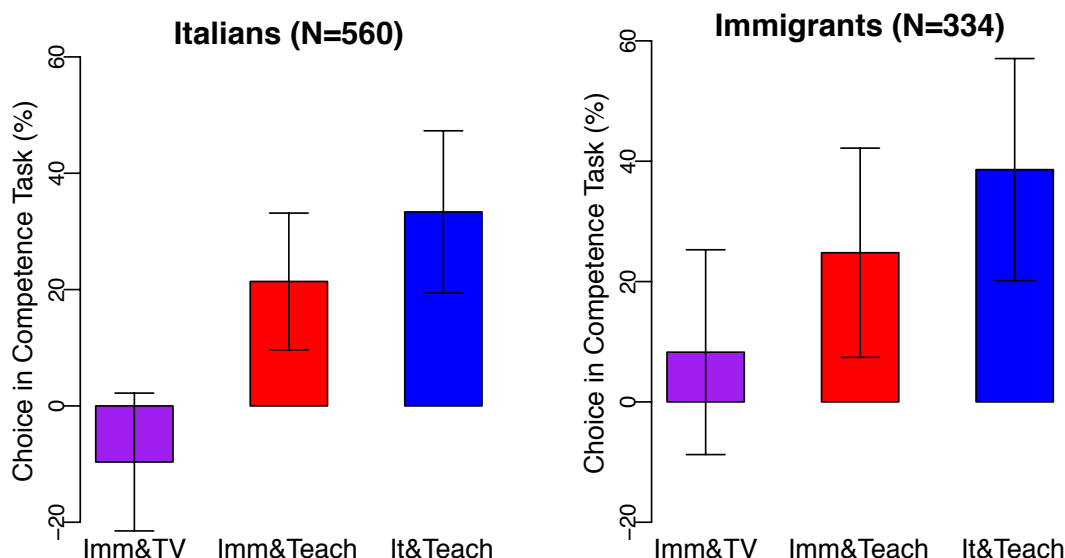
Figure 8: Model estimates for the likelihood of choosing an immigrant or a teacher in a Competence Task (left panel) and related interaction effects (right panel)



Very similar results are obtained when breaking down the analysis by the country of origin of our respondents (Figure 9). Namely, both Italians and immigrants value teachers, and both of them value Italian teachers more than immigrant ones. That immigrants do not favor ingroup members and instead prefer outgroup members is a findings that counters expectations based on social identity theories. We interpret this finding as support for status construction theories, according to which everybody has a vested interest in associating with high status (i.e., natives)

individuals. Our design, which included both natives and immigrants, made it possible to discern between in-group vs out-group discrimination, and discrimination driven by status.

Figure 9: Model estimates for choice in the Competence Task for Italians (left panel) and immigrants (right panel)

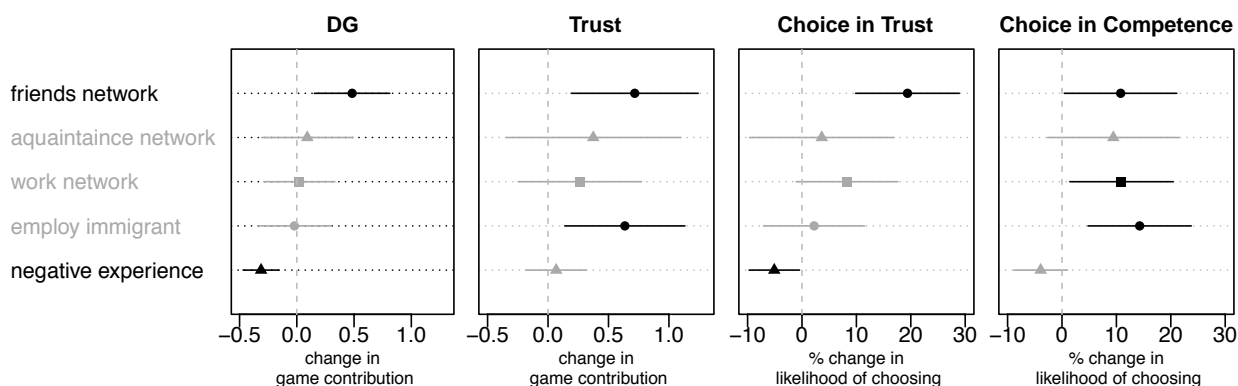


## Social networks and feed-back loops

Our experimental design revealed discriminatory patterns at the point of entry in social relationships: the choice of partners. Namely both Italians and immigrants prefer Italians in strategic interactions that involve trust and competence. As we know, repeated interactions tend to crystallize into social networks and, in turn, future interaction patterns. As observational analysis shows, ethnically diverse social networks are then correlated to positive attitudes and behaviors toward the outgroup, and great generalized altruism. However, we do not know whether this is due to the effect of exposure or to pre-existing positive predisposition toward immigrants. Very likely, both processes are at work, in a feedback loop in which individual attitudes and social network composition affect the likelihood of intergroup contact, and the experience of intergroup contact affects both attitudes change and social network composition, which in turn, again, affect the likelihood of intergroup contact (cfr. Figure 1). If the latter is the case, we should observe that people who report more heterogeneous social contacts are also more likely to choose to interact with noncoethnics, as well as treat them better in interactions.

Although we cannot meaningfully randomize the network of social relationships in which people are embedded, we can however test whether at a specific point in time, people who display more diverse networks are more likely to favor non-coethnics in interaction settings. Figure 10 report results from different regression models, estimating the change in contributions in the Dictator Game and Trust Game (first 2 panels) and the likelihood of choosing an immigrant in the Trust Game and Competence Task (last 2 panels) as a function of having heterogeneous friendship, acquaintance, and workplace networks, employing an immigrant, and having had negative experiences with immigrants.

Figure 10: Social Network composition and behavior in games



Overall, we find that people who report 2 or more non-coethnic friends are around 10% and 20% more likely to select an immigrant as partner in the Competence task and Trust Game respectively. They are also more generous and trusting in the Dictator Game and Trust Game. Heterogeneous work networks and employing an immigrant also positively affect the likelihood of partnering with an immigrant in the competence task. And employment of an immigrant is positively correlated with greater trusting behavior. In turn, having had negative experiences with immigrants affects both generosity and willingness to interact with them. This additional, explorative analysis thus provides support to the idea that a feedback loop exists between network heterogeneity, likelihood to enter relationships with non-coethnics, and their favorable treatment in interaction settings.

## Discussion and conclusions

In our research we treat the ongoing process of differentiation of Western Societies as an opportunity to better understand how does prosociality extend beyond ingroup boundaries. Our 3-steps model of outgroup exposure help trace the process that leads individuals to experience contact with

outgroup members. Starting from Durkheim’s intuition that the type of solidarity that makes heterogeneous societies function is different from the ingroup solidarity that glues homogeneous communities together, we identified economic interdependence as a primary macro-structural factor that is likely to create opportunities for outgroup encounters. We therefore focused our empirical study on a sample of natives and immigrants living in multiethnic neighborhoods of Milan, a prosperous European metropolis, to study how individuals who are generally exposed to this type of macro-structural pressure behave toward coethnics and non-coethnics in various interaction settings, including strategic interactions that resemble common market exchange dynamics.

We further dissect the process that leads to outgroup contact in two components: the self-selection into interactions with coethnics vs non-coethnics, which overtime determines the heterogeneity of social networks, and the actual experience of outgroup contact. Distinguishing between selection and contact allows to make sense of the persistence of immigrant discrimination even in contexts where constructive interactions with outgroup members are well established. In fact, we find that Italian natives show similar levels of altruism toward coethnics and non-coethnic members, do not discriminate in strategic interactions involving trust, and value the market and civic integration and competence of immigrants. However, when given the opportunity to chose their interaction partners, Italians tend to prefer other natives over immigrants. While most research on interethnic relationships has treated prejudice and discrimination as clear-cut attitudes that either inform human behavior or not, our research points to a certain plasticity with which individuals approach intergroup relationships. Namely, coethnicity may persist guiding natives choice of interaction partners even though, when they find themselves in interaction with outgroup members, they treat them similarly to how they would treat coethnics. Likely, in organized interaction settings, people may follow scripts that are appropriate to the situation (strategic interaction, exchange, logic task) partially ignoring information about alters’ ethnicity when deemed irrelevant.

### **About Contact Theory**

Overall, the observed behavior in interaction setting shows that contact with non coethnics unfolds as positively as with non-coethnics. This is in line with results from contact theory showing that engagement in purposeful interactions alongside with non-coethnics, from military training to soccer leagues, does not lead to lower performance and greater animosity. If anything, this has a chance to foster more future interactions. However, we also show that discriminatory behavior might persist in selection dynamics, an aspect that is, by design, ignored in most studies of interpersonal contact. To fully understand the consequences of social differentiation we cannot therefore

ignore network dynamics of ingroup vs outgroup selection, and their role in systematically limiting outgroup exposure.

### **About the negative effects of ethnic diversity**

We differentiated our study from the research on the effects of ethnic diversity, switching our attention to what happens in a multicultural setting, rather than comparing people living in homogeneous vs. heterogeneous communities. However, our findings provides some hints for this literature: while outgroup contact per se does not seem to hinder prosociality – if anything, it helps it–, ethnic differentiation might trigger outgroup avoidance and network segregation in a subset of the population that is less inclined to experience diversity. This partial withdrawal could then have an effect on overall trust and public goods provision. However, only differentiating selection from contact and understanding their combined effects could explain these dynamics. The current practice of using geographic proximity and a proxy of contact has instead the deleterious effect of conflating these two dynamics.

### **In-group preference or reproduction of status hierarchies**

Although spanning disciplinary boundaries, most of the research on interethnic relationships has tended to frame its results in terms of in-group versus out-group dynamics, with arguments ranging from ingroup familiarity and favoritism, to outgroup hostility, cultural differences in norms, and weak social networks across group boundaries. Outgroup members, usually ethnic minorities and immigrants, are penalized compared to coethnics (whites) because within group solidarity is stronger, or because coethnics are perceived as being more reliable and trustworthy, or more susceptible to sanctioning.

Less attention has been devoted to a complementary approach, which relies on status hierarchies as an organizing principle. Ethnic minorities and immigrants are often at the bottom of the social hierarchy, and are perceived as lower status groups. In the perspective of status construction theory (Ridgeway 2014), people strive to associate with high status individuals, and attribute great virtues to them. Discrimination of minorities and immigrants may thus derive from a generic disregard of lower status groups, rather than the fact that they are not coethnics. Distinctive of this second explanation is that all members of society would favor members of the dominant group over non-members, independent of their own identity. (For instance, in many consequential settings both men and women tend to discriminate against women.) Since most existing studies, both experimental and observational, do primarily focus on the beliefs and behavior of the dominant group (native



whites) and do not document the behavior of minorities and immigrants toward their own in-group, this latter explanation has rarely surfaced. In contrast, our experimental design, which includes both members of the dominant (natives) and the lower status group (immigrants) offers some hints in order to decouple whether status construction, rather than coethnic bias, is at the basis of discrimination.

Our analysis of the behavior of immigrants in the competence task shows that immigrants prefer to interact with Italians when given the opportunity to choose. While we have characterized the behavior of Italians in terms of ingroup favoritism, an alternative interpretation is that both Italians and immigrants engage in a process of reproduction of status hierarchies: they both prefer to interact with the dominant group. From the point of view of individual experiences, whether Italians operate on the basis of ethnic discrimination or whether they reproduce status hierarchies, and, de-facto, privilege other Italians, does not make a lot of difference: in both cases immigrants are penalized at the point of selection into social relations. However, a better understanding of what are the underlying mechanisms is commendable not only for theoretical, but also practical and political reasons. In fact, if ethnic discrimination is at work, the most likely way to address it has to do with the beliefs and stereotypes of Italian citizens. If, instead, immigrants are penalized for their lower status, it means dealing with differences that are ingrained in the social structure, rather than being individual predispositions. Likely, the latter are harder to modify, especially in societies with little social mobility, in which not only first generation immigrants, but also second generation, thus Italian born and raised non-whites, face unfavorable employment opportunities. Status-based discrimination, thus, is no less problematic in terms of the difficulties immigrants (and minorities) face and it might have even a bigger effect on the reproduction of inequalities than ethnic based discrimination.

## **Policy implications**

From a policy perspective, one could conclude that forcing contact between groups could help overcome the problem of self-selection into homogeneous social relationship. This is indeed the rationale that informs many of these initiatives, for instance in military and educational settings. However, it is important to acknowledge that we do not have good insights into what people with strong negative attitudes toward non-coethnics will do in such settings. While solid empirical evidence suggests that, on average, people become more tolerant and inclusive in their behavior, we cannot rule out that forced intergroup contact might not work for everyone, and could even exacerbate intergroup hatred in some contexts. Moreover, in democratic regimes, citizens do have

options for exit, and they are likely to exert them, as the history of 'white flight' reminds us.

### **Generalization**

To what extent can we generalize the findings from a multiethnic European metropolis? Obviously, we cannot generalize these observations to non-urban settings. Moreover, there are several institutional and political factors that we have not discussed yet, which are likely to reduce opportunities of outgroup exposure, or turn contact into conflict. However, we close by noticing that for many centuries, urban settlements/cities/metropolis have anticipated what Western societies were about to become. New modes of production, lifestyles, norms, fads, (and pandemics) all generated from the density of life in urban environments, and then spread to most corners of society.

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# 1 Appendix

## 1.1 Additional Details on the Sampling of Study Participants

Three criteria were used to select Milanese neighborhoods to sample from: ethnic diversity, wealth, and urbanity. For ethnic diversity, we examined the distribution of the percentage of foreigners in NILs and selected a reasonable interval around the mean (i.e. 25-75 percentile). We excluded 11 neighborhoods with low diversity between 0 -5% and 4 neighborhoods with high diversity levels 28-55%.

Second, we wanted to select participants from neighborhoods with relatively similar levels of wealth. The best proxy is the local price of real estate (cost per m2). Again, we looked at the average size (mean= 85m2, min=71m2, max, 126m2) and cost for private usage of property in diverse neighborhoods (as selected above). In addition, we took into account unemployment as another indicator of wealth. The mean unemployment rate across the 83 NILs was 6.9 % with a min of 4.1% and a max of 11.8%. For each of the wealth indicators we cut the tails at 5%. Lastly, we considered population density as we aimed to include neighborhoods with an urban landscape. We thus excluded those with very small population density (unless this is due to a park, train station etc).

We hired a well-known survey company in Milan to conduct the recruitment of participants from these neighborhoods. For Italian participants, they could also sample from their existing access panel. The recruitment of our immigrant participants was more difficult and also relied in the end on contacting ethnic community centers (e.g. Filipino churches) and a snowball sampling technique. However, we tried to ensure that participants within the same session did not know each other and also included additional questions of whether participants knew anyone who had previously participated in the study in our post-experimental survey at the end of each session (see full summary statistics).

## 1.2 Models

Will add soon