Exposure to diversity, social proximity and ingroup bias

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Abstract

As society becomes increasingly diverse, will changes in an individual's exposure to diversity influence their interactions with others? I study prosocial behavior in a large-scale U.S. sample, where participants are exogenously exposed to social contexts with varying levels of nationality diversity. I find that diverse contexts amplify participants' ingroup bias—the tendency to favor one's own group—driven by increased allocations towards fellow nationals and decreased allocations to foreigners, relative to giving in homogeneous contexts where such bias is not present. A change in perceptions of social proximity corresponds to a driver of the effect of diversity in allocations. The findings are consistent across subgroups of the population, which suggests that the study identifies a general heuristic through which individuals identify with groups, where social context—and not only individual characteristics—is key for the emergence of ingroup bias.

Keywords: social context, diversity, prosocial behavior, ingroup bias, social proximity

JEL classification: D91, D64

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1 Introduction

Globalization, conflict, and climate change are leading to unprecedented movement of people across and within countries. As a consequence, individuals' social surroundings, including the neighborhoods they live in, and the classrooms and workplaces they attend, are becoming increasingly diverse (Boustan, 2013; Hellerstein and Neumark, 2008). The increased exposure to diversity raises a crucial question: do changes in our social context, characterized by the individuals to whom we are exposed, influence the way we interact with each other? This paper studies whether exposure to a diverse social context has a causal effect on prosocial behavior, an important determinant of social cohesion and cooperation (Fehr and Fischbacher, 2003; Alan et al., 2021).

Studying the effects of changes in a social context on behavior faces two main empirical challenges. First, observed changes in a social context are often intertwined with other significant economic and social shifts, making it complex to pinpoint specific causality. Second, it is often not possible to distinguish in a social context whether an individual is merely exposed—without direct interaction—or has genuine contact with others in their society, making it challenging to identify mechanisms and specify the direction of the effect of an increase in diversity.[1] This paper overcomes these challenges using an experiment that is characterized by two main features. First, it isolates mere exposure, an overlooked yet important channel, as it is a predominant situation and always a first stage before contact.[2] Second, it is a controlled setting where social context is exogenously manipulated.

In a preregistered large-scale experiment on a U.S. sample ($N \approx 2,800$), participants decide how much to allocate towards a receiver, who is either a fellow national or a foreigner. To mimic the varying exposure to diversity in society, the decision-maker is exposed to one of two social contexts: (i) a *homogeneous* context, where she observes only peers from a single country—e.g., she observes only fellow nationals or only foreigners, and (ii) a *diverse* context, where she observes both a fellow national and a foreigner simultaneously. By comparing allocations across the two social contexts, I show that the social context a participant is exposed to has a substantial impact on prosocial behavior.

[1] In the context of immigration, recent work has investigated the effects of exposure to diversity on attitudes and behavior towards migrants, showing mixed effects. For a recent review, see Nathan and Sands (2023). Most work has focused on situations where individuals in a society have genuine contact with others, with the aim of understanding which type of contact increases/reduces cohesion.

[2] Despite an increase in diversity, segregation persists (Boustan, 2013), causing many to experience mere exposure without genuine contact with a diverse set of groups.

Facing a diverse context increases ingroup bias in favor of fellow nationals, driven by both increased allocations towards fellow nationals and decreased allocations towards foreigners, relative to a homogeneous context, where such bias is not present. I provide evidence that a change in perceived social proximity towards the receiver is a mechanism of the effects of social context on allocations. The effects are present across subgroups of the population, suggesting that the study identifies a heuristic through which individuals identify with groups, where social context—and not only characteristics of the receiver—is key for the emergence of ingroup bias.

The experimental design introduces a novel exogenous manipulation of social context. A decision-maker is exposed to a social context composed of two other matched individuals, each having an initial endowment. The two matched individuals are randomly assigned the role of a receiver and a non-receiver, where the decision-maker can decide how much to redistribute from her initial endowment towards the receiver only. The non-receiver's pay-off is fixed; however, his presence is key for the manipulation of social context. A decision-maker is in a homogeneous context when the receiver and non-receiver come from the same country (both fellow nationals or both foreigners); and in a diverse context when the receiver and non-receiver come from different countries (one fellow national and one foreigner). Thus, the experiment implements a between-subject 2x2 design, meaning where a decision-maker makes one allocation decision which is either in a homogeneous or a diverse context, and is directed towards a fellow national or a foreigner. The design allows me to study the effects of a change in social context on allocations towards both fellow nationals and foreigners.

The experiment establishes that social context is key for the emergence of ingroup bias. In a diverse context, individuals allocate 12% more to fellow nationals and 16% less to foreigners, relative to the respective allocations in a homogeneous context. This implies the presence of an ingroup bias in the diverse context, where the decision-maker gives to a fellow national 28% more than what she gives to a foreigner. Notably, in homogeneous contexts, allocations towards the fellow nationals and to foreigners are the same, meaning that there is no ingroup bias.

To shed light on the mechanisms behind the main findings, I examine the relationship between the allocation decisions and perceived social proximity towards the receiver. The analysis follows a formal framework, based on two assumptions emerging from the literature. First, drawing from social psychology and economic studies on identity, a decision-maker places greater weight on the receiver's pay-offs when the

receiver's identity is perceived as closer to their own (Tajfel et al., 1979; Chen and Li, 2009; Leider et al., 2009; Robson, 2021). Second, this perception of social proximity can be influenced by the prevailing social context (Gold, 2014; Bordalo et al., 2013, 2016; Esponda et al., 2023). Being exposed to diversity modifies the decision-maker's comparison group, through the non-receiver. By contrasting the receiver's group with the new and distinct comparison group, perceptions of social proximity shift in a manner that magnifies group differences, enhancing social proximity to fellow nationals. Therefore, if the two assumptions are satisfied, my framework predicts that diversity increases ingroup favoritism in both social proximity and, as a consequence, in allocations relative to a homogeneous society.

In the experiment, perceived social proximity is measured with the Inclusion of the Other in the Self (IOS) scale developed by Aron et al. (1992) and used in recent work in economics (Goette and Tripodi, 2021; Bicchieri et al., 2022; Gächter et al., 2022). Using this measure, I provide support for the two assumptions of the framework. First, allocation decisions and perceived social proximity towards the receiver exhibit a strong positive correlation. Second, in diverse contexts, decision-makers feel closer to fellow nationals relative to homogeneous contexts. Finally, I relate the results on social proximity with allocations, where I provide evidence suggesting that the effects of exposure to diversity on allocations are substantially driven by the individuals whose perception of proximity was affected by the change in the social context. Taken together, this evidence suggests that the effect of social context on allocations works through a change in perceived social proximity.

I analyze the effects of exposure to diversity on allocations and social proximity separately for each of two different nationalities of the foreigners used in the experiment: China and Canada. I find that the results persist regardless of the foreign country used, which suggests that the effects are not driven by country-specific beliefs or attitudes. Furthermore, taking advantage of the large-scale U.S. sample, I study heterogeneity in the effects of exposure to diversity on ingroup bias on allocations and perceived social proximity, by exploiting a set of sociodemographic characteristics. I find no heterogeneity across education, age, sex, political affiliation, or race, and the results are consistent across these dimensions. The consistency of my findings across subgroups of the population and across foreign countries suggests that the study identifies a general heuristic through which individuals identify with groups: individuals would not only care about the characteristics of the receiver, but also their social surroundings. Thus, social con-

text is key for the emergence of ingroup bias.

Finally, as the experiment introduces trade-offs between self-interest motivations and a fair distribution of outcomes, it can inform the debate on the effect of increasing diversity on redistribution and voting behavior.[3] Recent work indicates that ethnic diversity shocks often lead to reduced support for redistribution and increased support for far-right political parties (Alesina and Tabellini, 2024). A proposed, yet untested, explanation for this phenomenon is that diversity triggers the presence of welfare chauvinism, the belief that natives should have full welfare access, while restrictions should be placed on immigrants' eligibility (Cappelen and Midtbø, 2016; Achard and Suetens, 2023). Thus, increased diversity might not necessarily reduce individuals' overall preferences for redistribution, but rather shift them from general to targeted redistribution that benefits only natives. I find that the average giving is the same in either the homogeneous or the diverse context—when averaging allocations towards both ingroup and outgroup—suggesting that diversity does not impact overall redistribution. Instead, it redirects preferences for redistribution in favor of fellow natives. The move from a homogeneous to a diverse context generates a reduction in the willingness to redistribute to outgroup members, paralleled by an increase in the willingness to redistribute towards ingroup members, a pattern that aligns with the welfare chauvinist hypothesis.

This paper contributes to our knowledge in several strands of literature. First, it enriches the interdisciplinary research that explores the implications of diversity and context on intergroup relations (Allport, 1954; Rao, 2019; Mousa, 2020; Lowe, 2021; Nathan and Sands, 2023). Recent studies have quantified both positive effects (e.g., Achard et al., 2022) and negative effects (e.g., Dustmann et al., 2019) of diversity on intergroup relations, with mixed results potentially emerging from differences in the nature of the interactions—e.g., mere exposure or contact. This paper advances this literature in two directions. First, it isolates the underexplored mere exposure channel, fixing the nature of interactions. Second, while previous studies have predominantly focused on intergroup interactions, e.g., how natives interact with foreigners; this paper shows that diversity also affects intragroup interactions, e.g., how natives interact with each other.

In a recent paper, Anderberg et al. (2024) study natives' decisions in a trust game towards other natives and immigrants in a classroom context, using survey data in Germany. Similar to my findings, they show that classroom levels of diversity affect ingroup

[3]Previous literature has used these types of decisions to study redistribution preferences (Achard and Suetens, 2023; Fehr et al., 2024).

bias. My paper differs from their approach by using an experiment that allows me to additionally assess three additional insights. First, how mere exposure to diversity affects behavior, using a controlled setting that isolates this channel. Second, the role of perceived social proximity as a driver of the effects of social context. Finally, I find that the increase in ingroup bias results from both positive discrimination towards natives (increased giving) and negative discrimination towards foreigners (decreased giving).

Relatedly, this paper enriches the literature on discrimination (Bertrand and Mullainathan, 2004; Lane, 2016; Achard and Suetens, 2023) and ingroup bias in social preferences (Luttmer, 2001; Chen and Li, 2009; Charness and Chen, 2020; Shayo, 2020; Kranton et al., 2020). Although extensive studies have documented the presence of ingroup biases or discrimination across various dimensions, the phenomenon is not universally observed (Fershtman and Gneezy, 2001; List, 2004; Berge et al., 2020). Moreover, little attention has been directed to the question of when this bias is present or what determines its strength (Hett et al., 2020). My findings move forward in this direction by highlighting the role of social context for the emergence and strength of group identity considerations.

Finally, this research is grounded in theoretical work from economics and psychology on how group identity is affected by contextual factors and plays a role in economic decisions (Tajfel et al., 1979; Turner et al., 1987; Heidhues et al., 2020; Grossman and Helpman, 2018; Bonomi et al., 2021). I contribute to this work by providing empirical evidence of the mechanism through which context affects prosocial behavior, which is changes in perceived social proximity. This mechanism finds support in theoretical research on the effects of context on beliefs and perceptions (Bordalo et al., 2013, 2016; Esponda et al., 2023). Moreover, the findings complement recent research that highlights the importance of perceived social proximity or similarity on discrimination (Fouka and Tabellini, 2022) and empathy (Andries et al., 2024) in the context of immigration.

The remainder of the paper is structured as follows. In Section 2, I describe the conceptual framework that guides the experimental design and interpretation of the results. In Section 3, I outline the experimental setup that allows me to identify social context effects on prosocial behavior. Section 4 defines the empirical strategy. In Section 5, the main results are presented, as well as evidence of the mechanism and a discussion of the implications of the main findings. Finally, Section 6 concludes and indicates future directions.

2 Conceptual framework

I outline a simple conceptual framework that determines how exposure to diversity in a social context affects prosocial behavior. I combine insights from work on the role of perceived similarity or social proximity on prosocial behavior with research on how reference groups and contrast affect perceptions. The purpose of the framework is illustrative, to guide the design of the experiment as well as the interpretation of the results.

Consider a situation where individual i, a U.S. national, has two neighbors. Both neighbors have just arrived in the neighborhood or residential building and each can be either a fellow national or a foreigner. Together, they represent i's social context. A situation gives i the chance to help only one of the neighbors (e.g., that neighbors' house was damaged in a storm). Is i's prosocial behavior towards the neighbor going to depend on the diversity of her social context, given by both neighbors?

The decision-maker i derives utility from her own consumption, x_i, and the consumption of the individual she can help, which we refer to as the receiver r:

$$u_i(x_i, x_r) = u(x_i) + \alpha_{i,r,n} u(x_r)$$

where $u(\cdot)$ is concave on consumption and $\alpha_{i,r,n}$ is an altruism weight that depends on the identity of r and the social context, determined by the neighbors: r and the non-receiver n.[4] The relationship between social context and giving is defined by two assumptions established in the literature.

Assumption 1. A decision-maker places a greater weight on the receiver's pay-offs when the receiver is perceived as closer to their own. This premise draws from research in social psychology and economics on how individuals behave more altruistically to people who are perceived as part of their ingroup or perceived as socially closer (Tajfel et al., 1979; Chen and Li, 2009; Leider et al., 2009; Andries et al., 2024; Robson, 2021). From these findings, I formalize as follows:

$$\alpha_{i,r,n} = \alpha\left(\hat{P}_i(r|n)\right) \quad \text{and} \quad \alpha_{\hat{P}} > 0$$

where $\hat{P}_i(r|n)$ is the perceived social proximity of i towards r given n.

[4]The decision-maker might care as well about the pay-offs of n, which is often assumed separable. However, the decision-maker's actions cannot alter x_n. Therefore, given separability, in i's utility function, only the pay-offs of r are relevant. The model's standard assumptions on separability, concavity and homogeneity in the utility of consumption $u(\cdot)$ across individuals follow standard assumptions in the literature. (Cappelen et al., 2024; Andries et al., 2024)

Assumption 2. Perceived social proximity can be influenced by changes in the social context, which provides a comparison group. This insight stems from extensive research in psychology and recent research in economics, which suggests that context significantly influences perception, through salience and contrast effects (Gold, 2014; Bordalo et al., 2013, 2016; Esponda et al., 2023). The way perceived proximity is affected is defined as follows:

$$\hat{P}_i(r|n) = P_i^o(r) + \beta[P_i^o(r) - P_i^o(n)] \quad \text{and} \quad \beta > 0$$

where $P_i^o(j)$ denotes the observable similarities between i and an individual j, and $\beta > 0$ if perceptions are biased.[5] The comparison between the receiver and non-receiver generates a bias in perceived social proximity, due to contrast, in a way that exacerbates group differences. The bias is captured by β and is expected to be positive following evidence from Esponda et al. (2023).[6] Therefore, moving from a homogeneous to a diverse context makes an individual feel closer to a fellow national.

This framework provides us with the following predictions. If Assumption 1 and Assumption 2 hold:

P1. An individual is more (less) prosocial towards a fellow national (foreign) neighbor in a diverse relative to a homogeneous context.

P2. The ingroup bias, defined as the difference between allocations towards an ingroup and towards an outgroup, is higher in a diverse relative to a homogeneous context.

P3. The mechanism behind the effect a change in perceived social proximity, as the change in the social context affects perceptions of social proximity (Assumption 2), and the change in perceptions translates into effects in allocations (Assumption 1).

Note that in this model, I focus on the effects of mere exposure to diverse contexts on prosocial behavior. An extension of this framework might reconcile the mixed evidence of the effects of diversity on intergroup relationships if contact has a direct effect on perceived social proximity. However, the question is left for future work.

[5]The term $P_i^o(j)$ can be interpreted as the objective social proximity between individuals i and j given by their observable characteristics, and assuming the absence of context effects.

[6]In Appendix A3, an expanded formalization of the framework using the model in Esponda et al. (2023) to describe the contextual effects on perception, and Cappelen et al. (2007) to describe prosocial behavior, which reaches the same conclusion.

3 Experimental Design

The experiment builds on the conceptual framework presented before, adapted to an online survey setting. In this section, I first describe how social context is defined in my experimental design. Subsequently, I explain the main task of the decision maker (DM): the allocation decision. Then, I illustrate the manipulation of social context. I proceed to provide an overview of the secondary outcomes collected in the experiment. Finally, I describe the treatment conditions and summarize the sample and procedures.

Social context. In the experiment, the group membership that characterizes social context is given by nationality, where the DM is always from the U.S.[7] The DM faces either fellow U.S. nationals, with whom she shares the same group membership, or foreigners, who differ from the DM in group membership. The study focuses on two types of social contexts a DM can be exposed to. First, a *homogeneous* context, where the DM is exposed to a set of peers from a single country, i.e., the DM observes only fellow nationals or only foreigners. Second, a *diverse* context, where the DM is exposed to a heterogeneous set of peers, where different countries contrast with each other, e.g., the DM observes both a fellow national and a foreigner simultaneously. The foreign countries used in the experiment correspond to China and Canada.

Allocation decision. I measure prosocial behavior using a redistributive allocation decision, which corresponds to an important determinant of social cohesion and cooperation (Fehr and Fischbacher, 2003; Alan et al., 2021). Each DM is matched with two other participants of the study (A and B) and informed about their group membership. All three, together, share a total of 50 USD, initially distributed between the three as follows: 40 USD for the respondent, and 5 USD for each of the matched participants.[8] After providing the information about the initial distribution to the DM, one of the two matched participants is randomly selected with equal probability, who I refer to as the *receiver*. The DM is informed about the selection process. To determine the final pay-offs, the DM must decide how much of her initial endowment of 40 USD she would allocate only towards the receiver. Note that final pay-offs of the DM and the receiver depend on the allocation choice of the DM, whereas the final pay-off of the unselected partici-

[7]The exact definition of the group membership would be the country where the participant of the study was sampled from. However, for simplification in exposition, I refer to it as nationality. In section 3.1 we expand on the reasoning behind choosing nationalities, and not ethnicity or other groups, as well as the specific nationalities selected.

[8]All participants are asked to perform the task, however, they are informed that only a randomly selected subset of the participants will actually receive the total amount.

pant, which I refer to as the *non-receiver*, is 5 USD regardless of the choice of the DM. Nonetheless, the presence of the non-receiver is key for manipulating social context.

Importantly, the respondent is informed that she is the only participant in her group that is able to change the initial distribution of the pay-offs, and that the decision is anonymous. This is done in order to prevent potential signaling and social image concerns in determining the allocation decision (Andreoni and Bernheim, 2009).

Figure 1 shows a screen capture of two potential situations a DM may be subject to. In each panel, the DM is matched with two participants and is informed about the country of each participant. In red, it is indicated which participant was randomly selected as a receiver. In the first situation (Figure 1a), the DM (U.S.) is matched to participants A and B, who are both fellow nationals. Participant B was selected, and therefore the DM must decide how much to allocate towards a fellow national. In the second situation (Figure 1b), the DM is matched with participant A, who is a foreigner, and participant B, who is a fellow national. Participant B was selected, and therefore the DM must decide how much to allocate towards a fellow national. This example highlights the two key features of the design. First, in both situations the decision and choice set are the same, corresponding to an allocation towards a fellow national. Second, across situations the only aspect that differs is social context: the first situation corresponds to a homogeneous context (A and B are both fellow nationals), whereas the second situation corresponds to a diverse context (A is a foreigner and B is a fellow national). Note that social context is manipulated by only modifying the non-receiver.

Social proximity elicitation. Based on the conceptual framework, I study the role of perceptions of social proximity as a mechanism behind the effects of exposure to diversity on giving. With this aim, I elicit a proxy measure of social proximity between individuals using the Inclusion of Other in the Self (IOS) scale developed by Aron et al. (1992). I ask respondents to indicate *how close they feel* towards the receiver using two overlapping circles, where no overlap indicates not close at all, and the greater the overlap between the circles, the closer the respondent feels. This measure is unincentivized; however, it has been validated as a reliable measure for social proximity in comparison to other more sophisticated survey methods (Gächter et al., 2015) and has seen increased use in recent experiments in psychology and economics (Goette and Tripodi, 2021; Bicchieri et al., 2022; Gächter et al., 2022).[9]

Other outcomes. In the survey, key demographic information such as education,

[9]The order of presentation of the allocation task and the social proximity elicitation is randomized.

political affiliation, age, ethnicity, and gender are collected. I obtain two additional measures that are used in the analysis. First, I collect a self-assessed measure of general altruism following Falk et al. (2018). Second, based on the work of Enke et al. (2023) and Cappelen et al. (2024), I elicit preferences over policy views, where respondents indicate their support towards a redistributive policy. The participants are asked to indicate their agreement on a 5-point scale from "Strongly Disagree" to "Strongly Agree" (-2 to 2), towards the following statement: *"The government should redistribute local tax revenues as welfare payments across all communities nationwide, rather than only within the local communities they were raised."*

3.1 Treatment conditions

Figure 2 provides an overview of the experimental design. I use a 2x2 between-subject design, where subjects are randomized across two dimensions. First, whether the receiver is a fellow national (U.S.) or a foreigner (either China or Canada). Second, whether the allocation takes place in a homogeneous context, where both matched participants come from the same country (e.g., A and B are both from China) or a diverse context, where one matched participant is a fellow national and the other is from a foreign country.[10] The randomization procedure defines the following four treatments: Homogeneous - Fellow National, Homogeneous - Foreigner, Diverse - Fellow National, and Diverse - Foreigner.

Choice of foreign countries. The decision of using nationalities instead of ethnicity comes from the interest of having a homogeneous identity group across all of the participants. Moreover, recent research shows that the use of nationality or ethnicity shows no significant differences in ingroup bias and discriminatory behavior (Lane, 2016; Morehouse et al., 2023).[11] The decision of selecting China and Canada as the foreign countries to focus on in the study emerged from the interest in analyzing the context effects from two different types of outgroups, defined in the preregistration. First, the *strong outgroup* (China), which corresponds to a foreign group that is dissimilar in observable characteristics to the USA group. Second, I define the *weak outgroup* (Canada), which

[10]This setting considers societies with members only from the U.S. and/or Canada, or societies with members only from the U.S. and/or China. Other situations that combine both of the foreigners together (Canada and China) are outside the scope of this paper.

[11]In particular, in the case of Asian participants, Morehouse et al. (2023) suggests that the definition of Asian as national/cultural (rather than racial/ethnic) entities does not affect ingroup biases in, for example, associating own or other groups as "Human".

corresponds to a foreign group that is more similar to the USA group. I expected, accordingly, that the perceived social proximity towards participants from China and Canada, in the absence of contrast effects, would be different. Nonetheless, Figure A1 shows that there is no difference in social proximity towards the two selected groups of foreigners, in the homogeneous context. I interpret this finding as indicating that both Canada and China are equally perceived as outgroups. As a result, I focus on the analysis of the pooled sample, using both countries together as foreigners.

3.2 Experimental procedures

The survey was conducted online by survey provider Dynata. The company recruited a large sample of the U.S. population, between October 14th-31st, 2022. There was a total of 2808 valid participants who passed an initial mandatory attention check. Respondents were stratified to match the adult population by age, sex, and geography. The average response duration was around 5 minutes. The final research design was approved in September 22nd, 2022 by NHH IRB (reference: NHH-IRB 44/22). The experimental design and the hypotheses were preregistered at the AEA RCT Registry (AEARCTR-0010179). The full instructions are made available in Appendix A5.

The sample consists of around 60% women, around a third identifying as Republican, a mean age of 50, mostly white (87%), and a majority college-educated (66%). I observe a successful randomization, where individual characteristics are balanced across treatments (see Table A1 for a summary of the outcomes collected in the experiment).

4 Empirical strategy

Following the 2×2 experimental design, here I outline the main specification for the analysis, which has as the baseline group the Homogeneous - Fellow National treatment:

$$y_i = \beta_0 + \beta_1 Diverse_i + \beta_2 Foreigner_i + \beta_3 Diverse_i \times Foreigner_i + X_i + \varepsilon_i \quad (1)$$

where y_i corresponds to the allocation decision, $Diverse_i$ corresponds to an indicator variable with value 1 if the allocation decision is in the diverse context, $Foreigner_i$ is an indicator variable with value 1 if the allocation is towards a foreigner, and X_i is a set of collected covariates at the individual level.

First, I am interested in estimating the effect of a change in social context on the

allocation towards fellow nationals, which is captured by β_1. Second, I aim to quantify the difference across social contexts of the ingroup bias, defined as the difference in the mean allocation towards a fellow national relative to a foreigner. The 2x2 experimental design allows for a difference-in-difference approach to estimate the effect of a change in social context on the ingroup bias, which is captured by β_3. Note that a negative β_3 corresponds to an increase in ingroup bias. Additionally, β_2 provides the estimated difference between the allocations towards a fellow national and a foreigner (ingroup bias) in the homogeneous treatment alone.

To study the role of perceived social proximity as a mechanism, we estimate the same specification described above and incorporate social proximity as a control variable. Furthermore, to study the effect of a change in social context on social proximity, we estimate equation (1) using social proximity as the dependent variable.

4.1 Hypotheses

Building on the conceptual framework in Section 2, which is based on two established assumptions in the literature, I determine the following preregistered hypotheses:[12]

Hypothesis 4.1. *Allocations towards fellow nationals (foreigners) are higher (lower) in a diverse context with respect to a homogeneous context ($\beta_1 > 0$).*

Hypothesis 4.2. *The ingroup bias in allocations is higher in a diverse context with respect to a homogeneous context ($-\beta_3 > 0$).*

Hypothesis 4.3. *A mechanism behind the effects in hypotheses 4.1 and 4.2, corresponds to a change in perceived social proximity as a consequence of changing from a homogeneous to a diverse context.*

5 Results

First, I assess the impact of exposure to diversity on the incentivized allocation decision. Subsequently, I provide evidence pointing to perceived social proximity as a mechanism of the effect of a change in social context on allocations. Finally, leveraging the large-scale sample, I explore variations in the effects across population subgroups and show the effects documented are consistent across demographic groups.

[12]The hypotheses were preregistered in the AEA RCT Registry (AEARCTR-0010179).

5.1 Exposure to diversity and prosocial behavior

A significant majority, over 80% of participants, assigned a positive amount to the receiver (see Figure A2). Participants gave on average around 30% of their endowment (12 out of 40 USD), aligning with previous studies on giving (Engel, 2011). Participants amass evenly across round numbers up to giving 50% of their endowment (20 USD). Around 16% of participants select allocations that are close to equalizing final pay-offs.[13]

Figure 3 summarizes the mean allocations of the decision-makers, separated along two dimensions: first, whether the receiver is a fellow national (orange circle) or a foreigner (blue triangle); and second, whether the allocation took place in a homogeneous context (left) or a diverse context (right). In a diverse setting, the mean allocation to a fellow national surpasses that in a homogeneous context. In contrast, allocations to foreigners decrease in diverse contexts. Thus, the ingroup bias in allocations is higher in a diverse context compared to a homogeneous context. Notably, the bias is negligible in a homogeneous setting.

In Table 1, I report the corresponding regression analysis. I estimate equation (1) with allocations in USD as the dependent variable. The estimated coefficients in column 1 provide the following causal effects on allocations of moving from a homogeneous context to a diverse context. First, the average allocation to fellow nationals increases by 12%. Second, the average allocation towards foreigners, given by the sum of the estimated coefficients "Diverse" and "Diverse × Foreigner," decreases by 16%. Third, the increase in allocations to the ingroup and the decrease in allocations to the outgroup, after exposure to diversity, imply an increase in ingroup bias. The negative estimated coefficient of the interaction term "Diverse × Foreigner" indicates a widening of the ingroup bias, resulting in an ingroup bias where allocations towards fellow nationals are 28% higher than towards foreigners. Finally, I analyze the ingroup bias in the homogeneous context. The estimated coefficient "Foreigner" shows the difference between the allocation to a fellow national and to a foreigner in the homogeneous context alone. Notably, there is no ingroup bias in the homogeneous context. The results on allocations are robust to controlling for demographic characteristics and state fixed effects, presented in column 2.

In columns 3 and 5 of Table 1, I report the regression analysis separately for each

[13]Note that the receiver had already an initial endowment of 5 USD. Therefore, equalizing final pay-offs was not possible, but the closest allocation levels to equalizing correspond to giving 17 or 18 USD.

of the foreign countries: China and Canada, confirming the consistency of these results across both countries. The effects are robust to controlling for characteristics of the respondent (columns 4 and 6). The analysis provides evidence that the main results are robust to the characteristics of the foreigner. Thus, country-specific beliefs or attitudes—e.g., beliefs about income or attitudes towards specific nationalities—are not the drivers of the results.

To address the concern of whether the effects on the mean allocation are driven by extreme outcomes, I analyze the outcomes using non-parametric Mann-Whitney tests where I find that the distribution of allocations towards both fellow nationals and foreigners are different across contexts (see Figure A3 for the histogram of allocations by treatment). Moreover, we estimate (1) on a subsample of the population after excluding the individuals that allocated all their pot (40 USD) and the results persist (see columns 1 and 2 of Table A2).

Taken together, these findings suggest that the move from a homogeneous to a diverse context increases giving towards fellow nationals and decreases giving towards foreigners. Thus, social context is key to the emergence of ingroup bias.

Result 1. *Exposure to diversity increases ingroup bias in allocations, where individuals allocate more to fellow nationals and less to foreigners, compared to a homogeneous context. Notably, decision-makers in homogeneous contexts do not exhibit such bias.*

5.2 Mechanism: perceived social proximity

I study whether a change in perceived social proximity is a mechanism driving the observed effect of diversity on giving. Figure 4 shows the distribution of the responses to the IOS scale. Above 40% of the participants indicated the lowest level of perceived social proximity. The low perception of social proximity is not surprising since the matched participants are unfamiliar to the decision-makers.

As posited in the conceptual framework in Section 2, two assumptions stemming from the literature define how changes in social context affect giving through changes in perceived social proximity. I provide evidence of both assumptions being supported by the data. The first assumption indicates that the closer a respondent feels towards a receiver, the more the respondent cares about the receiver. Figure 4 displays the distribution and mean allocation of a respondent towards a receiver with a fixed level i in the IOS scale. The figure shows a clear positive correlation, significant at a 1% level. The

second assumption suggests that changes in the social context affect perceived social proximity, implying a higher proximity towards a fellow national in a diverse than in a homogeneous context. Figure 5 shows that perceived social proximity exhibits a similar pattern as allocation decisions (Figure 3). The perceived social proximity towards fellow nationals increases in a diverse context (orange circle), widening the ingroup bias in proximity. However, the proximity towards foreigners seems to be unaffected (blue triangle).

Table 2 reports the estimated coefficients from the regression of equation (1) where social proximity is used as the dependent variable (columns 1 and 2). First, the estimated coefficient for "Diverse" shows an increase of 28% in perceived proximity towards fellow nationals in diverse contexts relative to a homogeneous context. Second, the average proximity towards foreigners is the same across contexts, given by the sum of the estimated coefficients "Diverse" and "Diverse × Foreigner". Finally, a negative coefficient in the interaction term between "Diverse × Foreigner" demonstrates that showcasing diverse identities increases the ingroup bias in social proximity. Therefore, the treatment triggers the same effect for the fellow nationals in both outcomes, allocation and social proximity, yet not for the decisions towards the foreigner. A country-wise breakdown of the treatment effects shows the same pattern, regardless of the choice of foreign country (see Table A3).

In the experiment, it was randomized whether the respondent would face first the allocation decision or the social proximity elicitation. We find that there are no order effects. Furthermore, the effects are present in the preregistered direction for both outcomes when they are presented first, bringing robustness for the treatment effect in both measures (see Table A5).

I now turn my attention to the role of perceived social proximity as a mediator of the treatment effect in the allocation decision. Columns 3 and 4 in Table 2 report the regression estimates of equation 1, with allocation serving as the dependent variable. Notably, when perceived social proximity is included as a control variable, the effect of diversity on allocations towards fellow nationals vanishes. The magnitude of the estimated interaction coefficient is also reduced considerably. The explanatory power of the linear regression is higher, which aligns with the strong positive relationship between perceived social proximity and allocation. Therefore, the effect of diversity on allocations seems to be driven by the individuals whose social proximity towards the receiver

is also influenced by changes in the social context.[14] Table A4 presents a mediation analysis following Imai et al. (2010) and Heckman and Pinto (2015), aimed to determine if social proximity can account for a portion of the treatment effect on allocation towards the ingroup. Both the indirect and direct effects of the treatment remain significantly positive after introducing social proximity as a mediator.

Complementary evidence of mechanism: policy views. An exploratory analysis evaluates the role of social proximity in shaping other-regarding preferences along the policy domain. A policy preferences measure was collected in the survey. The question asks participants their agreement with a statement prioritizing nationwide over local redistribution of a tax that was collected locally, in the form of welfare payments.

We analyze the effect of diversity on policy views, highlighting the role of social proximity. Two patterns are observed which are consistent with the conceptual framework in Section 2. First, the closer the DM feels to an unknown fellow national, the more they would support the nationwide over the local policy (column 1 of Table A7), similar to the positive relationship between proximity and allocations. Second, as the treatment manipulation increases proximity towards an unknown fellow national, I test whether the manipulation also affects policy views. I find that being exposed to international diversity (with foreigners living abroad) makes the participant more likely to agree with prioritizing nationwide over local policy, carrying over from the effect on social proximity. This shift suggests that international diversity may expand ingroup boundaries from local to national levels. Such a finding resonates with Fouka and Tabellini (2022)'s result that diversity shocks can redefine ingroup boundaries among white and black Americans in response to the influx of Mexicans.[15]

Result 2. *A mechanism behind the increase in ingroup bias in allocations after exposure to diversity corresponds to a change in perceived social proximity.*

[14] Although the analysis in Table 2 is correlational in nature, as it includes an independent variable that is affected by treatment, it corresponds to suggestive evidence of the underlying mechanism behind the treatment effect, following our conceptual framework and preregistered hypotheses. In addition, I will next provide complementary evidence of the mechanism playing a role in an alternative other-regarding preferences outcome. Finally, in Section 5.4, I discuss alternative mechanisms.

[15] Other policy measures were collected regarding Foreign Aid, Child Poverty, and Health Insurance, and the effect of diversity is presented in Table A6. However, there is no effect of diversity, and the relationship of support for these policies with social proximity is unclear, as well as its interpretation, therefore, they are omitted from the main analysis.

5.3 Heterogeneity analysis

Leveraging the large-scale sample in this study, I conduct an analysis to examine whether the effects of social context on ingroup biases vary across different population subgroups.[16] The survey collects sociodemographic characteristics such as educational attainment, ethnicity, age, political affiliation, and gender. For each characteristic, the sample is partitioned into two subsamples.[17]

Figures 6a and 6b show, for each population subsample, the effect of moving from a homogeneous to a diverse context on ingroup bias in allocations and perceived social proximity, respectively. The estimate is represented by the interaction effect "Diverse × Foreigner" as defined in equation (1), where a negative coefficient indicates an increase in ingroup bias. Additionally, Figure 6c shows, for each population subsample, the ingroup bias in the homogeneous context alone, given by the estimated coefficient for "Foreigner" as defined in equation (1).

The analysis reports no significant differences in the estimated coefficients across partitions of any demographic characteristics. Furthermore, the results are systematically consistent with the hypotheses in direction across all subgroups of the covariates.[18] This indicates a universal increase in ingroup bias in both allocations and social proximity when participants are exposed to diversity, compared to a homogeneous context. Moreover, none of the partitions of the collected demographic characteristics show ingroup bias in the homogeneous context. The robustness and consistency of the main results suggest that this study identifies a general heuristic in how individuals identify with groups, as suggested by Tajfel et al. (1979). Through such a heuristic, social context, rather than the individual's characteristics alone, drives ingroup bias.

Result 3. *The effects of diversity on ingroup bias in allocations and perceived social proximity are consistent and robust, irrespective of population subgroups. Moreover, the ingroup bias in the homogeneous context does not emerge for any population subgroup.*

[16] The pre-analysis plan (AEARCTR-0010179) pre-specified a heterogeneity analysis for the following characteristics: gender (male and female), education (college or not) and political affiliation (Republican and Democrat). However, no hypothesis was pre-specified.

[17] The distribution of demographic characteristics is represented in Table A1. The only partitioning that resulted in a relatively small subsample (less than 30% of the full sample) corresponds to the separation of white and non-white participants, with non-white participants representing around 15% of the sample.

[18] The exception is the demographic dimension of ethnicity, where the ingroup bias in social proximity shows a significant difference at the 10% level between white and non-white participants. Given that the setting separates groups by nationality, a difference is expected. However, the small sample size of non-white participants limits the power to draw strong conclusions.

5.4 Discussion: implications and alternative mechanisms

5.4.1 Implication: diversity and redistribution

In the experiment, decision-makers grapple with trade-offs between self-interest motivations and a fair distribution of outcomes. Previous literature has used these decisions to study redistribution preferences (Achard and Suetens, 2023; Fehr et al., 2024). Thus, the findings of this study can inform the debate on the role of diversity in preferences for redistribution.

Recent work indicates that ethnic diversity shocks often lead to reduced support for redistribution and increased support for far-right populist political parties (Alesina and Tabellini, 2024). A proposed explanation for this phenomenon is that diversity triggers *welfare chauvinism*, the belief that natives should have full welfare access, while immigrants' eligibility should be restricted (Cappelen and Midtbø, 2016; Achard and Suetens, 2023). The policies or political parties individuals support after a diversity shock may depend on how the shock affects their preferences for redistribution (Alesina and Tabellini, 2024; Enke et al., 2023). Therefore, it is important to determine whether diversity makes individuals less supportive of redistribution overall, or whether their overall support for redistribution is not affected, but rather shifts its focus from general to targeted redistribution towards their ingroup.

When comparing allocations across social contexts—by averaging giving towards both ingroup and outgroup members in each social context—the analysis reveals no significant difference in the average amount given in the diverse or homogeneous context (Table A8, column 1). Additionally, employing a general altruism measure (Falk et al., 2018), we observe that altruism levels remain steady across all treatments (Table A8, columns 2 and 3). These findings imply that exposure to diversity does not decrease the overall level of giving. Instead, what changes is how individuals distribute the same level of giving. Specifically, in a diverse society, there is a reduction in the willingness to redistribute to outgroup members, paralleled by an increased willingness to redistribute towards ingroup members.

This pattern aligns with the welfare chauvinist hypothesis, suggesting that diversity does not lower overall redistribution preferences but rather redirects them in favor of natives. Therefore, the increase in support for far-right parties triggered by an increase in diversity (e.g., Steinmayr, 2021), might not be exclusively derived from the parties' attachment to low redistribution policies but rather from their use of identity consider-

ations and the focus of benefits of redistribution within the native population (Achard and Suetens, 2023).

5.4.2 Alternative mechanisms

While this paper presents evidence for social proximity influencing ingroup allocations, it is vital to consider other possible drivers. In the experimental framework, every dollar allocated to the receiver creates a disparity between the receiver and the non-receiver. It is plausible that individuals display increased aversion to inequality when faced with two members of the same country (homogeneous context) compared to when they are distinct (diverse context). Although Figure 5 and Table 2 reveal a trend in line with this hypothesis when the allocation is towards fellow nationals, this is not the case for allocations towards foreigners, where a decision-maker appears more tolerant of inequality in homogeneous contexts than in diverse ones.

Furthermore, I provide suggestive evidence that inequality aversion is not the main driver in the increase in allocations towards fellow nationals. First, if inequality aversion were solely responsible for this effect, a positive and significant residual of the treatment effect in the coefficient "Diverse" in Table 2 would persist, after controlling for perceived social proximity, which does not hold. Second, if decisions were influenced by concerns of inequality aversion, a change in behavior on the extensive margin of giving would be expected, as in the experimental setup, any action of positive giving generates advantageous inequality for the receiver. However, there is no significant difference in the extensive margin across contexts, and the increase in giving is entirely driven by changes on the intensive margin of giving, consistent with an increase in perceived social proximity (see columns 3 and 4 of Table A2).

As depicted in Figure 5, social context has no influence on social proximity towards foreigners. Figure A4 highlights that most participants indicated the lowest level of perceived social proximity, 1, towards foreigners in the homogeneous context. This suggests that a potential explanation for the null effect of context on social proximity might be associated with reaching the lower bound in the choice set. Regardless of the explanation for the negligible effect, changes in social proximity cannot account for the observed effects on allocations towards foreigners. This leaves a segment of the ingroup bias in allocations unexplained.

6 Conclusion

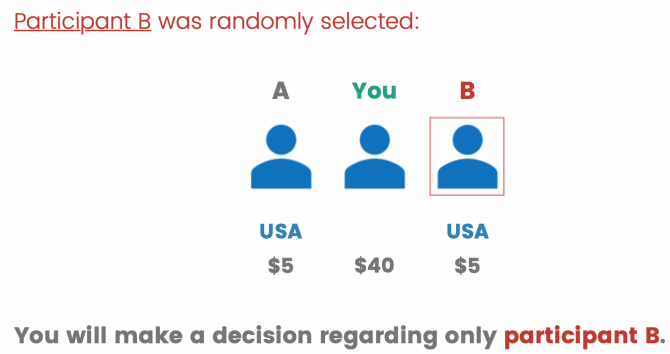
In a world increasingly marked by diversity, understanding the effects of exposure to diversity on behavior becomes crucial. This paper explores how changes in social context influence perceptions of social proximity and consequent prosocial behavior. Using a novel experimental approach, I highlight the role of social context on the emergence of ingroup bias. Three main findings emerge. First, the exposure to a diverse context increases ingroup bias in allocations, favoring fellow nationals, relative to a homogeneous context. Second, shifts in perceived social proximity—caused by changes in the social context—correspond to a mechanism in the effects on allocations. Finally, the effects of changes in social context on ingroup biases are robust and consistent across subgroups of the population. As discussed, these findings have implications that guide us in understanding the effects of diversity on welfare chauvinism and preferences for redistribution.

The fact that mere exposure to diversity can increase ingroup bias in prosocial behavior highlights that if a social planner's goal is to increase social cohesion or intergroup cooperation, it is important to avoid situations in which social contexts correspond to mere exposure to diversity, as my findings suggest biases might emerge. The social planner should generate conditions such that the proposed perceptual mechanism has a diminished role in exacerbating differences in behavior towards ingroup or outgroup members.

Further explorations that attempt to generalize the effects are highlighted as well. In this study, the experimental design focuses on immediate and short-term exposure. Future work should address how the mechanism proposed evolves when the exposure is long-term. Moreover, even though we find robust effects in two different nationalities, it is important to study whether the effects persist across other types of identities: e.g., ethnicity, religion, etc. Finally, another direction is to extend the scope of the study and evaluate the effects of social context on other types of prosocial behavior, such as trust and cooperation. Implications of a more complete set of choices can speak to a wider set of real-life settings and give a better understanding of the relevance of social context on prosocial behavior.

7 Main Figures

Figure 1: Example of a change in social context from homogeneous (above) to "Diverse" (below) in the allocation towards fellow nationals.



(a) Treatment **Homogeneous - Fellow National**

(b) Treatment: **Diverse - Fellow National**

Figure 2: Overview of the randomization procedure in the experiment.

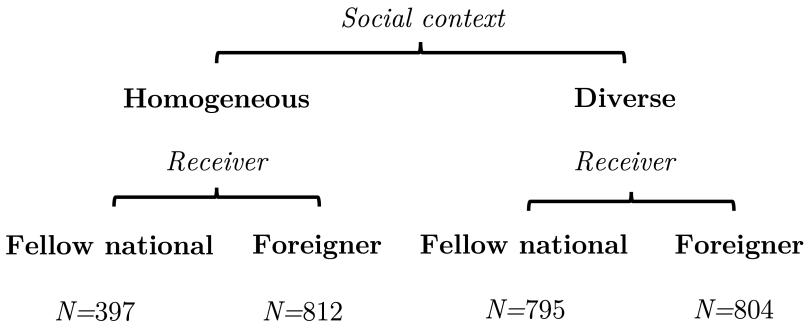
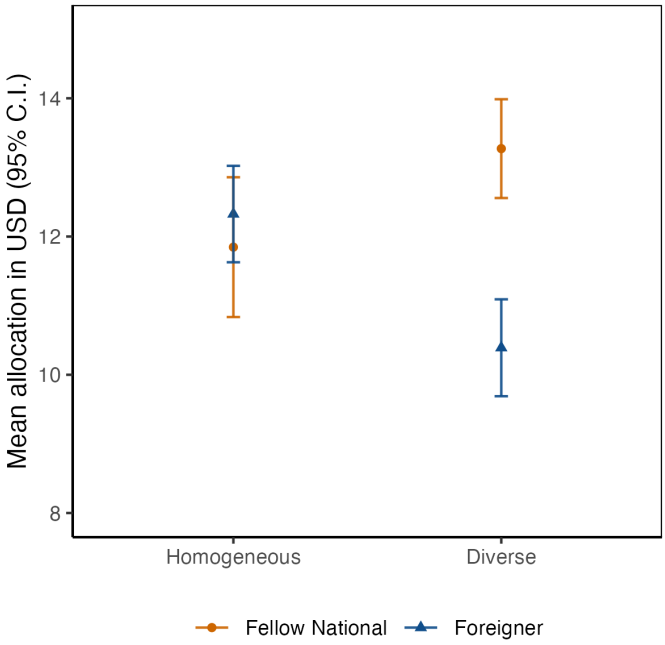
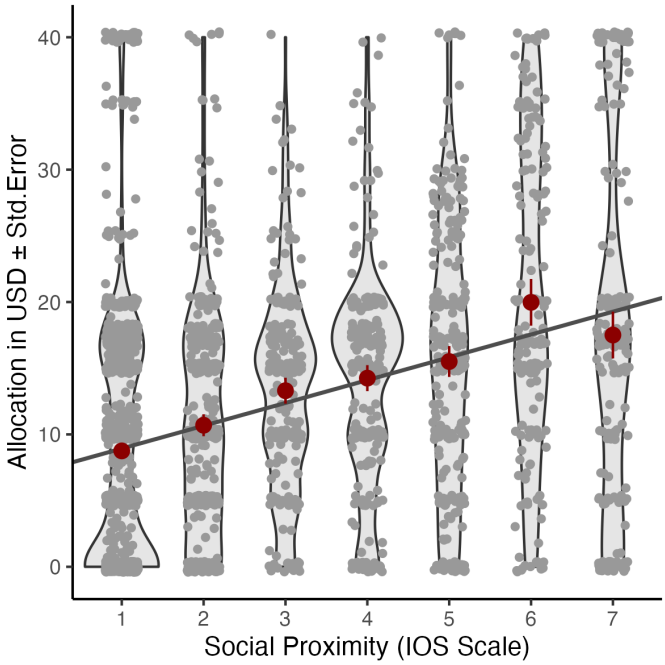


Figure 3: Mean allocations in USD towards fellow nationals and foreigners in the homogeneous and "Diverse" contexts.



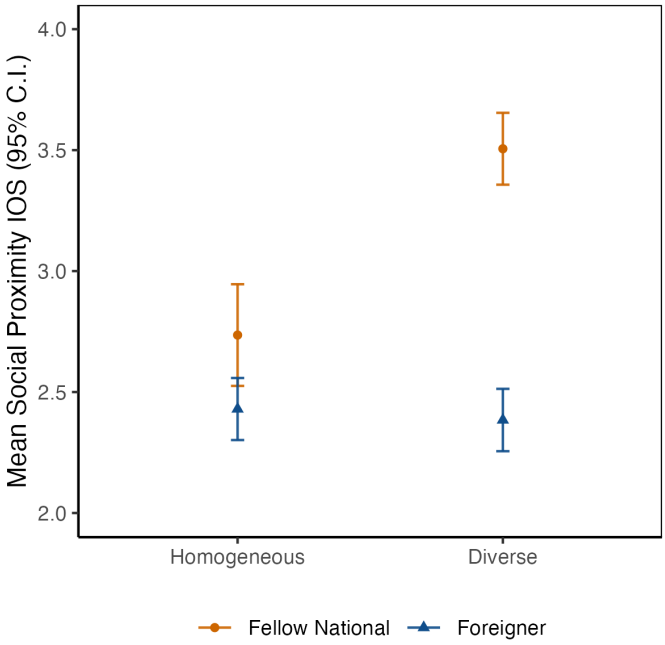
Notes: This figure shows the mean allocation in USD (values 0 to 40) and 95% confidence intervals computed with robust S.E. for each treatment in the 2x2 design: an allocation in either a homogeneous or "Diverse" context, directed towards either a fellow national or a foreigner.

Figure 4: Distribution and mean allocations for each level of social proximity using the IOS Scale (from 1-7).



Notes: This figure shows the distribution of the allocation in USD, for each level of social proximity (scale from 1 to 7). I provide the mean allocation for each level of social proximity ± robust standard error, and a fitted line representing the correlation between social proximity and allocations. The estimated coefficient of the correlation is significant at the 1% level.

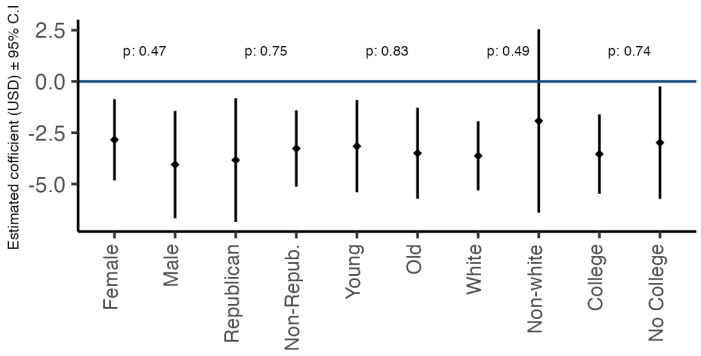
Figure 5: Mean perceived social proximity (IOS Scale) towards fellow nationals and foreigners in the homogeneous and "Diverse" contexts.



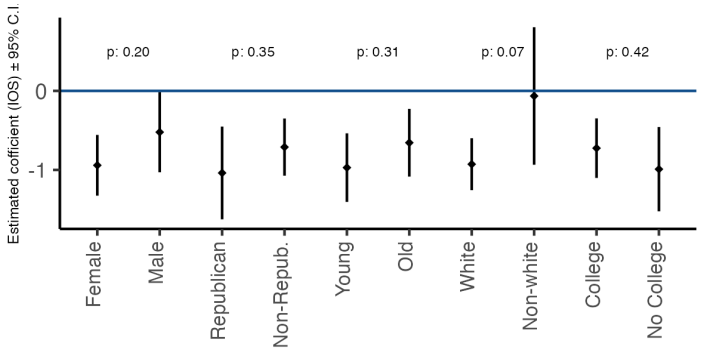
Notes: This figure shows the mean perceived social proximity (IOS Scale, values 1 to 7) and 95% confidence intervals computed with robust S.E. for each treatment in the 2x2 design: an allocation in either a homogeneous or "Diverse" context, directed towards either a fellow national or a foreigner.

Figure 6: Heterogeneity in ingroup biases by subgroup of the population.

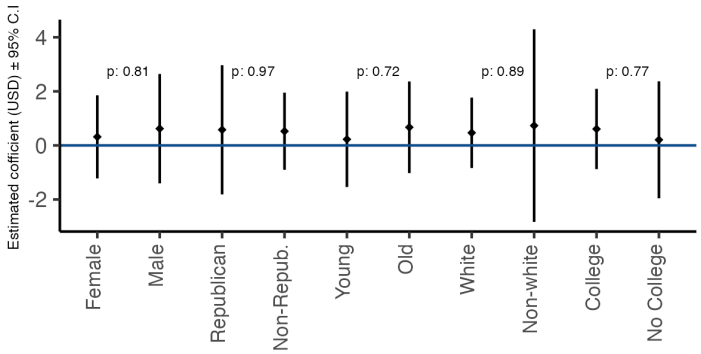
(a) Effect of moving from a homogeneous to a diverse context on the ingroup bias in allocations (negative coefficient means increase in ingroup bias).



(b) Effect of moving from a homogeneous to a diverse context on the ingroup bias in social proximity (negative coefficient means increase in ingroup bias).



(c) Ingroup bias in allocations in the Homogeneous context alone.



Notes: Figures (a) and (b) show the estimated coefficient β_3 from an OLS regression of equation (1), with robust S.E., with allocations in USD and perceived proximity in IOS Scale, respectively, as the dependent variable. Figure (c) shows the estimated coefficient β_2 from an OLS regression of equation (1), with robust S.E., with allocations in USD as the dependent variable. I present, for each demographic dimension pairs, the p-value of the interaction of the the variables "Diverse × Foreigner" and "Foreigner"—for (a)/(b) and (c) respectively—with an indicator variable reflecting the demographic dimension of interest, which tests whether the estimated coefficients are significantly different across partitions. The subsample of covariates is described in Table A1.

8 Main Tables

Table 1: OLS estimates of the regression on the allocation.

Sample:	Full sample		Allocation in USD Foreigner: China		Foreigner: Canada	
	(1)	(2)	(3)	(4)	(5)	(6)
β_1: Diverse	1.425**	1.960***	1.223*	1.559**	1.631**	2.007***
	(0.613)	(0.630)	(0.725)	(0.757)	(0.711)	(0.754)
β_2: Foreigner	0.479	0.757	-0.122	0.216	1.059	1.094
	(0.608)	(0.615)	(0.723)	(0.756)	(0.697)	(0.714)
β_3: Diverse × Foreigner	-3.360***	-3.714***	-3.992***	-4.103***	-2.675***	-2.794***
	(0.793)	(0.806)	(1.026)	(1.072)	(0.992)	(1.018)
Mean Baseline	11.85	11.85	11.85	11.85	11.85	11.85
H_0: $\beta_1 + \beta_3 = 0$ (p-value)	0.000	0.001	0.000	0.001	0.131	0.267
Controls	No	Yes	No	Yes	No	Yes
Observations	2,808	2,808	1,604	1,604	1,601	1,601
R^2	0.01	0.07	0.02	0.12	0.005	0.10

Notes: This table presents the results from an OLS regression estimating equation (1) with robust S.E. with Allocation in USD as the dependent variable (values from 0 to 40 USD). The variable "Diverse" takes value 1 when the participant is in the diverse context and 0 otherwise, and the variable Foreigner takes value 1 when the allocation is towards a foreigner or 0 otherwise. Columns 1 and 2 show the estimated regression using the full sample. Columns 3 and 4 estimate the coefficients using the subsample where the foreign country was specifically China, and columns 5 and 6 when the foreign country was Canada. The even columns show specifications that control for the covariates measured. Mean baseline shows the average of the dependent variable for the baseline group, which is "Homogeneous - Fellow National" treatment. The controls include: gender, age, political party, education, race, and state fixed effects. $* \ p < 0.10$, $** \ p < 0.05$, $*** \ p < 0.01$.

Table 2: OLS estimates of the regression on the social proximity and analysis of mechanism of effects on allocation.

	Proximity (IOS)		Allocation in USD	
	(1)	(2)	(3)	(4)
β_1: Diverse	0.770***	0.803***	1.425**	0.102
	(0.126)	(0.127)	(0.613)	(0.586)
β_2: Foreigner	-0.306***	-0.286**	0.479	1.004*
	(0.118)	(0.119)	(0.608)	(0.571)
β_3: Diverse × Foreigner	-0.816***	-0.835***	-3.360***	-1.958***
	(0.156)	(0.157)	(0.793)	(0.752)
Proximity (IOS)				1.719***
				(0.107)
Mean Baseline	2.74	2.74	11.85	11.85
H_0: $\beta_1 + \beta_3 = 0$ (p-value)	0.624	0.732	0.000	0.000
Controls	No	Yes	No	No
Observations	2,808	2,808	2,808	2,808
R^2	0.06	0.14	0.01	0.12

Notes: This table presents the results from an OLS regression estimating equation (1) with robust S.E., with dependent variables: perceived social proximity, which takes values from 1 to 7 (columns 1 and 2), and allocation in USD, which takes values from 0 to 40 (columns 3 and 4). The variable "Diverse" takes value 1 when the participant is in the "Diverse" context and 0 otherwise, and the variable Foreigner takes value 1 when the allocation is towards a foreigner or 0 otherwise. Column 4 includes as a control variables our elicited social proximity measure (values 1 to 7 in the IOS Scale), to study the role of proximity as a mediator in the treatment effects in allocations. Mean baseline shows the average of the dependent variable for the baseline group, which is "Homogeneous - Fellow National" treatment. The controls in column 2 include: gender, age, political party, education, race, and state fixed effects. $* p < 0.10$, $** p < 0.05$, $*** p < 0.01$.

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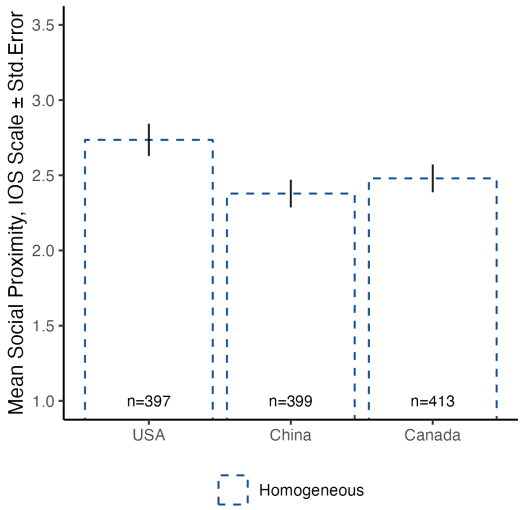
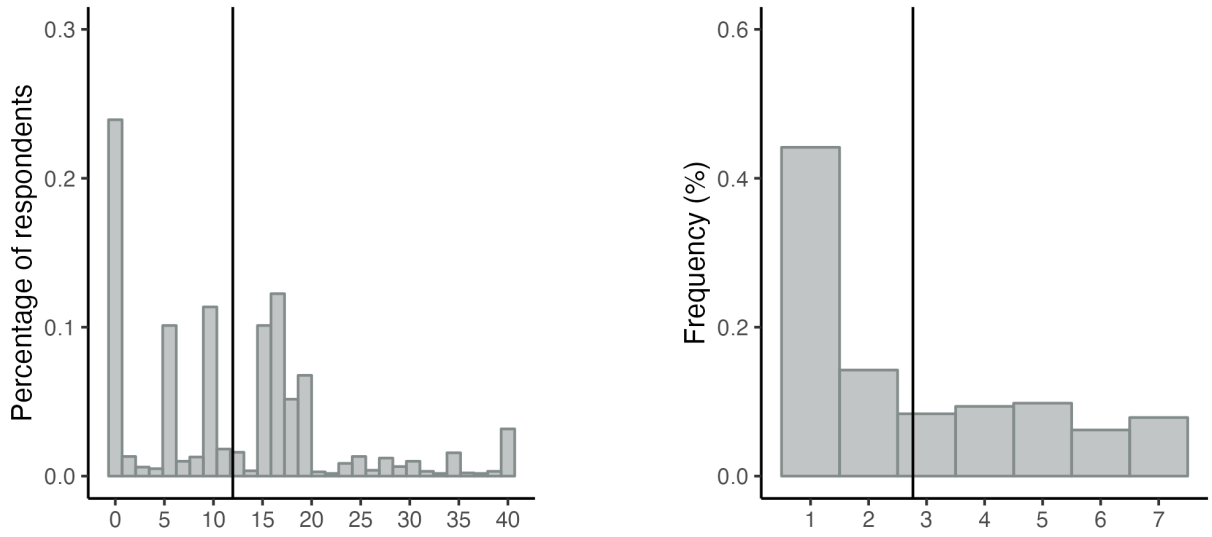
A1 Additional Figures

Figure A1: Mean level of perceived social proximity towards a person from the USA, from China and from Canada in the homogeneous context.



Notes: In this figure we show the mean perceived social proximity (values 1 to 7) ± Robust S.E., for each nationality in the homogeneous context.

Figure A2: Histograms of the allocation task (left) and the social proximity elicitation (right).

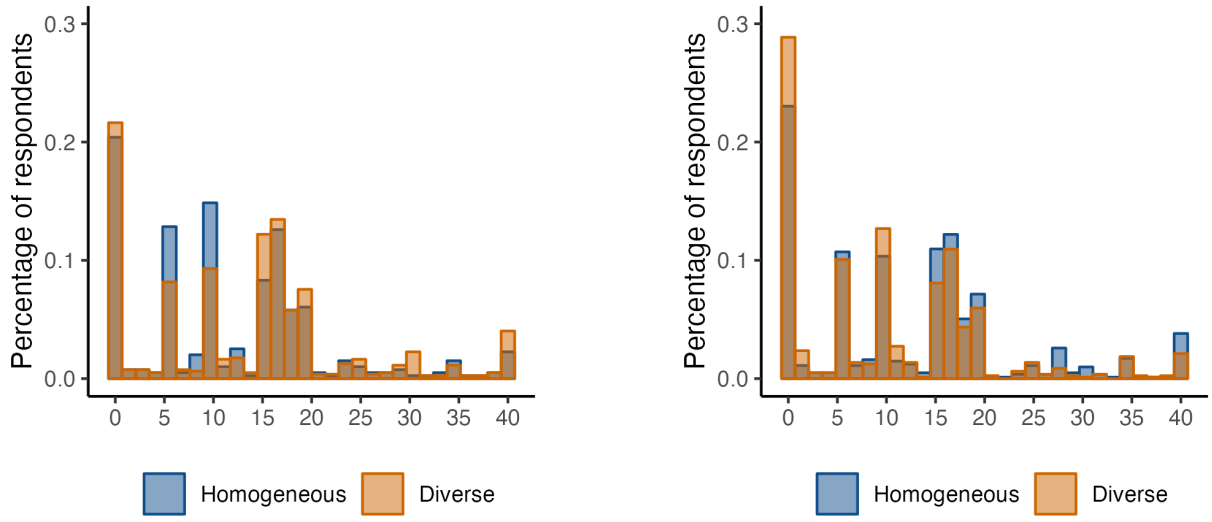


(a) Allocation in USD

(b) Social Proximity (IOS Scale)

Notes: In this histogram we show the distribution of answers for (a) the allocation decision, measured in USD with values from 0 to 40, and (b) the perceived social proximity, measured using the IOS scale, with values from 1 to 7.

Figure A3: Histogram of the allocations towards fellow nationals and foreigners in each social context: homogeneous and diverse.

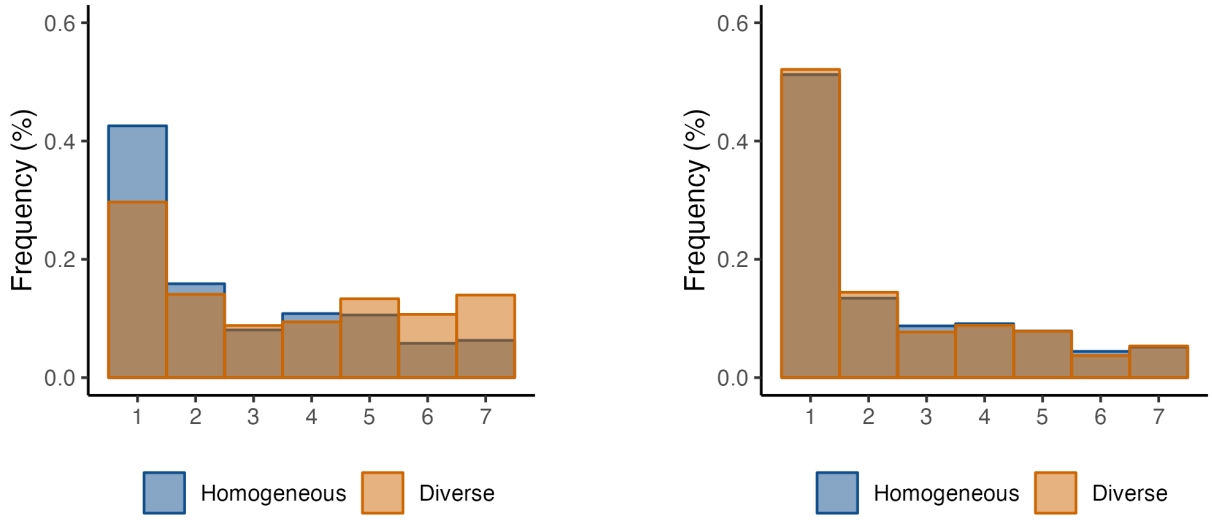


(a) Fellow nationals

(b) Foreigners

Notes: In this histogram we show the distribution of allocation decisions (values 0 to 40), by social context (diverse/homogeneous) towards (a) fellow nationals and (b) foreigners. In each graph, the bars of a single color add up to 100%. A Mann-Whitney-Wilcoxon non-parametric test compares the independent distributions of allocations across contexts in the between-subject design, towards Fellow Nationals and Foreigners separately. The test shows that the distribution of allocations is different towards both Fellow Nationals (p-value = 0.032), and Foreigners (p-value < 0.001).

Figure A4: Histogram of the social proximity towards fellow nationals and foreigners in each social context: homogeneous and diverse.



(a) Fellow nationals

(b) Foreigners

Notes: In this histogram we show the distribution of perceived social proximity (values 1 to 7), by social context (diverse/homogeneous) towards (a) fellow nationals and (b) foreigners. In each graph, the bars of a single color add up to 100%. A Mann-Whitney-Wilcoxon non-parametric test compares the independent distributions of proximity across contexts in the between-subject design, towards Fellow Nationals and Foreigners separately. The test shows that the distribution of proximity is different towards Fellow Nationals (p-value < 0.001), but not towards Foreigners (p-value $= 0.629$).

A2 Additional tables

Table A1: Descriptive statistics: number of observations and means across collected outcomes.

		Outgroup: China			Outgroup: Canada		
	Hom.U.S.	Div.U.S.	Div.For	Hom.For.	Div.U.S.	Div.For	Hom.For.
Age	51.65	49.84	50.77	51.05	49.86	50.98	51.34
	(0.757)	(0.772)	(0.751)	(0.728)	(0.767)	(0.757)	(0.735)
Female	0.65	0.62	0.65	0.60	0.63	0.65	0.61
	(0.024)	(0.024)	(0.024)	(0.025)	(0.024)	(0.024)	(0.024)
College	0.68	0.64	0.64	0.66	0.66	0.65	0.69
	(0.023)	(0.024)	(0.024)	(0.024)	(0.024)	(0.024)	(0.023)
White	0.89	0.86	0.86	0.88	0.86	0.87	0.86
	(0.016)	(0.017)	(0.017)	(0.016)	(0.018)	(0.017)	(0.017)
Repub.	0.25	0.26	0.32	0.30	0.29	0.32	0.29
	(0.022)	(0.022)	(0.023)	(0.023)	(0.023)	(0.023)	(0.022)
Altruism	7.81	7.75	7.75	7.54	7.87	7.77	7.79
	(0.125)	(0.116)	(0.123)	(0.128)	(0.118)	(0.127)	(0.116)
N	397	401	407	399	394	397	413

Notes: The table shows the mean value and standard errors of each collected variable for each treatment group. Age is measured in years. Female, College, White, and Republican are indicator variables. Female takes value 1 if the participants sex is Female, and 0 otherwise. College is based on question "What is the highest level of school you have completed or the highest degree you have received?" The variable takes value 1 if the participant selected any choice except for: "High school graduate or less," and 0 otherwise. Republican is based on question "Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else?" The variable takes value 1 if the participant answered "Republican." White is based on question "Which race or ethnicity best describes you?" The variable takes value 1 if the participant selected "White or Caucasian." Altruism is a scale from 0 to 10 following Falk et al. (2018), where 0 is low willingness to give, and 10 is high willingness to give. I perform an F-test for equality of means by treatment groups, where the smallest p-value corresponds to 0.20 for the variable Republican.

Table A2: Effects of exposure to diversity on the allocation decision under different subsamples and specifications.

	Allocation in USD (≠40)		Give positive amount	
	(1)	(2)	(3)	(4)
β_1: Diverse	0.957*	1.357**	0.006	0.025
	(0.556)	(0.568)	(0.029)	(0.031)
β_2: Foreigner	0.033	0.269	0.013	0.031
	(0.550)	(0.557)	(0.028)	(0.029)
β_3: Diverse × Foreigner	-2.433***	-2.728***	-0.024	-0.041
	(0.717)	(0.728)	(0.040)	(0.043)
Mean Baseline	11.19	11.19	0.80	0.80
H_0: $\beta_1 + \beta_3 = 0$ (p-value)	0.001	0.003	0.528	0.572
Controls	No	Yes	No	Yes
Observations	2,719	2,719	1,601	1,601
R^2	0.01	0.07	0.0003	0.08

Notes: This table presents a robustness analysis of the allocation decision, using an OLS regression estimating equation (1) with Robust Standard Errors. Columns 1 and 2 show the results of the regression with dependent variable allocation in USD, restricting the sample to exclude the individuals that made an allocation of 40 USD (all their endowment). Columns 3 and 4 show the regression results with a dependent variable being an indicator variable that takes value 1 if the allocation decision was positive, and 0 otherwise. Mean baseline shows the average of the dependent variable for the baseline group, which is "Homogeneous - Fellow National" treatment. The controls include: gender, age, political party, education, race, and state fixed effects. $* p < 0.10$, $** p < 0.05$, $*** p < 0.01$.

Table A3: Effects of exposure to diversity on social proximity, and social proximity as a mediator by country, OLS regression with Robust Standard errors.

Sample:	Proximity (IOS)		Allocation in USD		Proximity (IOS)		Allocation in USD	
	Foreigner: China				Foreigner: Canada			
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
β_1: Diverse	0.928***	0.968***	1.223*	-0.462	0.610***	0.644***	1.631**	0.679
	(0.149)	(0.154)	(0.725)	(0.701)	(0.147)	(0.152)	(0.711)	(0.677)
β_2: Foreigner	-0.357***	-0.306**	-0.122	0.527	-0.256*	-0.293**	1.059	1.459**
	(0.135)	(0.137)	(0.723)	(0.672)	(0.135)	(0.139)	(0.697)	(0.655)
β_3: Diverse × Foreigner	-1.090***	-1.154***	-3.992***	-2.012**	-0.532***	-0.530***	-2.675***	-1.844*
	(0.198)	(0.201)	(1.026)	(0.973)	(0.198)	(0.203)	(0.992)	(0.943)
Proximity (IOS)				1.817***				1.561***
				(0.143)				(0.140)
Mean Baseline	2.74	2.74	11.85	11.85	2.74	2.74	11.85	11.85
H_0: $\beta_1 + \beta_3 = 0$ (p-value)	0.211	0.145	0.000	0.000	0.559	0.402	0.131	0.077
Controls	No	Yes	No	No	No	Yes	No	No
Observations	1,604	1,604	1,604	1,604	1,601	1,601	1,601	1,601
R^2	0.07	0.20	0.02	0.14	0.03	0.14	0.005	0.10

Notes: This table presents a country-wise breakdown of the analysis performed in Table 2. Columns 1 to 4 represent the results focusing on China as the foreign country, and columns 5 to 8 use Canada as the foreign country. Columns 1 to 2 and 5 to 6 show the main specification using Social Proximity (scale 1-7) as the dependent variable. Columns 3 to 4 and 7 to 8 have as dependent variable Allocation decision in USD. Mean baseline shows the average of the dependent variable for the baseline group, which is "Homogeneous - Fellow National" treatment. The controls include: gender, age, political party, education, race, and state fixed effects. $* p < 0.10$, $** p < 0.05$, $*** p < 0.01$.

Table A4: Mediation Analysis for social proximity as a mediator in the allocation towards the ingroup decision.

	Estimate	95% CI Lower	95% CI Upper	p-value
ACME	1.101	-0.717	1.52	0.000***
ADE	0.315	-0.812	1.45	0.566
Total Effect	1.415	0.202	2.59	0.026**
Prop. Mediated	0.763	0.374	3.10	0.026**

Notes: This table presents a mediation analysis following Imai et al. (2010), using the full sample size (2808) over 100 simulations. The analysis focuses on the comparison between ingroup allocation in the homogeneous context and ingroup allocation in the diverse context. ACME corresponds to the average causal mediation effect and ADE corresponds to the average direct effect. $* p < 0.10$, $** p < 0.05$, $*** p < 0.01$.

Table A5: Order effects: the additional treatment effect of diversity on allocations (proximity) when the allocation decision (proximity elicitation) was presented second in the experiment.

	Allocation in USD			Proximity (IOS)		
Sample by Foreigner Country:	Both	China	Canada	Both	China	Canada
	(1)	(2)	(3)	(4)	(5)	(6)
Diverse	1.150	0.898	1.360	1.190***	0.872***	1.559***
	(0.850)	(0.986)	(0.992)	(0.172)	(0.199)	(0.207)
Foreigner	0.687	1.224	0.094	-0.239	-0.305*	-0.176
	(0.855)	(0.973)	(1.029)	(0.163)	(0.182)	(0.192)
Second	-0.055	-0.055	-0.055	0.139	0.139	0.139
	(0.969)	(0.970)	(0.970)	(0.198)	(0.198)	(0.198)
Diverse × Foreigner	-2.851**	-1.303	-4.532***	-1.150***	-0.573**	-1.745***
	(1.110)	(1.388)	(1.428)	(0.217)	(0.271)	(0.280)
Diverse × Second	0.560	1.383	-0.313	-0.830***	-0.555*	-1.163***
	(1.226)	(1.418)	(1.457)	(0.251)	(0.295)	(0.295)
Foreigner × Second	-0.416	-0.342	-0.416	-0.137	0.087	-0.377
	(1.215)	(1.395)	(1.446)	(0.237)	(0.271)	(0.270)
Diverse × Foreigner × Second	-1.043	-2.812	1.085	0.660**	0.134	1.208***
	(1.587)	(1.977)	(2.056)	(0.312)	(0.396)	(0.392)
Observations	2,808	1,601	1,604	2,808	1,601	1,604
R^2	0.01	0.008	0.02	0.06	0.03	0.09

Notes: This table studies whether the order of presentation of the allocation decision matters, using an OLS regression of regression 1 with Robust Standard Errors, yet adding interaction effects with an indicator variable named Second. For columns 1 to 3, the dependent variable is the allocation decision in USD (values 0 to 40), and Second takes value 1 if the allocation decision was second, and 0 otherwise. For columns 4 to 6, the dependent variable is the perceived social proximity using the IOS scale (values 1 to 7), and Second takes value 1 if the social proximity elicitation was second, and 0 otherwise. Columns 1 and 4 perform the analysis over the full sample, whereas Columns 2 and 5 on the subsample where the foreign country was China and Columns 3 and 6 on the subsample where the foreign country was Canada. $* \ p < 0.10$, $** \ p < 0.05$, $*** \ p < 0.01$.

Table A6: Effects of exposure to diversity on policy views collected, OLS regression with Robust Standard errors.

	Welfare Payments (1)	Health insurance (2)	Foreign Aid (3)	Child Opportunities (4)
Diverse	0.201^{**}	0.009	-0.051	0.027
	(0.084)	(0.084)	(0.073)	(0.081)
Observations	1,192	1,192	1,192	1,192
R^2	0.005	9.3×10^{-6}	0.0004	9.3×10^{-5}

Notes: This table shows the regressions of attitudes towards different policies over an indicator variable, Diverse, that takes value 1 if the participant was exposed to a diverse context and zero otherwise. The dependent variables are categorical variables representing 5 levels of agreement: from -2 meaning "Strongly disagree" to 2 meaning "Strongly Agree." In column 1 the dependent variable is the level of agreement to the statement: "The government should redistribute local tax revenues as welfare payments across all communities nationwide, rather than only within the local communities they were raised." In column 2 the dependent variable is the level of agreement to the statement: "The government should use local tax revenues to fund health insurance across all communities nationwide, rather than to fund health insurance only within the local communities they were raised." In column 3 the dependent variable is the level of agreement to the statement: "The government should send foreign aid to countries that are in most need of help, rather than to countries that are our international allies." In column 4 the dependent variable is the level of agreement to the statement: "The government should take measures to ensure no child of the world is disadvantaged in access to education, the labor force, and marriage, rather than focusing on American children." The regressions are done without controls. $*$ $p < 0.10$, $**$ $p < 0.05$, $***$ $p < 0.01$.

Table A7: Effects of exposure to diversity on policy views, and social proximity as a mediator, OLS regression with Robust Standard errors.

	National over local policy			
	(1)	(2)	(3)	(4)
Diverse	0.201^{**}		0.180^{**}	0.122
	(0.084)		(0.087)	(0.089)
Proximity		0.094^{***}		0.075^{***}
		(0.018)		(0.019)
Observations	1,192	1,192	1,192	1,192
R^2	0.005	0.02	0.19	0.20

Notes: This table shows the regressions with the dependent variable being attitudes towards national over local redistribution policy measured through categorical variables representing 5 levels of agreement: from -2 meaning "Strongly disagree" to 2 meaning "Strongly Agree." The dependent variable is the level of agreement to the statement: "The government should redistribute local tax revenues as welfare payments across all communities nationwide, rather than only within the local communities they were raised." The explanatory variables correspond to an indicator variable, Diverse, that takes value 1 if the participant was exposed to a diverse context and zero otherwise, and the perceived social proximity, measured using the IOS scale with values 1 to 7. $* p < 0.10$, $** p < 0.05$, $*** p < 0.01$.

Table A8: Effects of exposure to diversity on average giving and a general measure of altruism, by context. OLS regression with Robust Standard errors.

	Allocation in USD	Altruism Scale (GPS)	
	(1)	(2)	(3)
β_1: Diverse	-0.345	0.072	0.002
	(0.390)	(0.093)	(0.150)
β_2: Foreigner			-0.140
			(0.152)
β_3: Diverse × Foreigner			0.093
			(0.195)
Mean Baseline	12.17	7.71	7.81
H_0: $\beta_1 + \beta_3 = 0$ (p-value)	-	-	0.442
Observations	2,808	2,808	2,808
R^2	0.0003	0.0002	0.0006

Notes: Column 1 shows the differences in average allocations in USD (values 0 to 40) in the diverse relative to a homogeneous context. Column 2 shows the differences in average altruism using the GPS scale (levels 0 to 10) in the diverse relative to a homogeneous context. Column 3 estimates equation (1) using the altruism GPS scale as the dependent variable. The regressions are estimated without control variables. Mean baseline shows the average of the dependent variable for the baseline group, which is the pooled sample facing the diverse context in columns 1 and 2, and the "Homogeneous - Fellow National" treatment in column 3. $* p < 0.10$, $** p < 0.05$, $*** p < 0.01$.

A3 Conceptual framework

Consider a DM from the U.S. facing a society composed of herself (i) and two other individuals (j and $-j$). A DM must allocate resources with only one randomly selected individual: receiver j. In this society, each individual $k \in \{i, j, -j\}$ has group membership $g_k \in \{N, F\}$, which correspond to U.S. national (N) and foreigner (F). I can define G_s to be the set of existing groups that the DM is exposed to in a society s. I consider two types of social contexts characterized by G_s: a homogeneous context, where either $G_s = \{N, N\}$ or $G_s = \{F, F\}$, and a diverse context, where $G_s = \{N, F\}$.

The conceptual framework is based on two assumptions established in the literature. The first assumption corresponds to the fact that a decision-maker places a greater weight on the receiver's pay-offs when the receiver is perceived as closer to their own, which draws from research in economics on how individuals behave more altruistically towards people that are perceived as part of their ingroup (Chen and Li, 2009), that are socially closer (Leider et al., 2009), and that are perceived as closer (Robson, 2021). The second assumption indicates that this perception of social proximity can be affected by the social context, by changing the reference groups. This insight draws from extensive research in psychology suggesting that context exerts a significant influence on perception (Gold, 2014). In what follows, I present a formalization of each assumption, and subsequently, I will present a series of hypotheses building from the assumptions.

A3.1 Assumption 1. Allocations and perceived social proximity are positively correlated

In the experiment, the selected players will earn together a total of \$50 dollars, which are initially distributed as \$40 for DM i, \$5 for receiver j and \$5 for non-receiver $-j$. The DM (i) chooses the amount that she wants to redistribute from her initial endowment towards the selected receiver (j). To inform the analysis, I assume that the DM is maximizing a utility function that depends on her own pay-off and what the selected individual j receives. The pay-off that the other individual $k \neq i, j$ in the society receives is not relevant for the DM, as the concerns over the earnings of any k are assumed to be separable, and the amount k receives is fixed. Following Cappelen et al. (2007) the optimization problem is represented as follows:

$$\max_{x_j} U_i(x_i, x_j) = x_i - \frac{\omega(\hat{\gamma}_j)}{2}(x_j - F_j)^2 \qquad \text{s.t.} \quad x_i + x_j = 45, \quad x_j \geq 5$$

where x_i and x_j correspond to the allocations that i and j receive, respectively; $\omega(.)$ represents the weight player i puts on allocating the fair outcome towards player j, relative to her selfishness; and $\hat{\gamma}_j$ is the perceived social proximity towards participant j, which I define as the probability of j being a part of the ingroup. Finally, F_j represents what the DM considers the fair income to j, which is assumed to be independent of the treatment manipulation. Therefore, if the solution to the problem above is interior, the optimal allocation will be given by the following equation:

$$x_j^* = F_j - \frac{1}{\omega(\hat{\gamma}_j)} \tag{2}$$

which indicates that the optimal allocation depends on what i considers fair to give to j and the weight i gives on the fair allocation. Assumption 1 is represented under the following assumption:

A1. $\frac{\partial x^*}{\partial \hat{\gamma}_j} > 0$.

This assumption indicates that the weight player i puts on allocating the fair outcome towards j depends positively on how close i feels towards j. This implies that an increase in perceived social proximity $\hat{\gamma}_j$ generates an increase in allocation x_j^*.

A3.2 Assumption 2. Social context affects perceived social proximity

From Assumption 1, the DM behaves more prosocially to j, if the DM considers j to be an ingroup. However, the DM does not know with certainty whether j is an ingroup (in) or not. Instead, the DM takes into account in her decision the probability of individual j being an ingroup, denoted by $\gamma_j = f(in|g_j)$, which I define as the social proximity j, and I assume that $f(in|N) > f(in|F)$, as the DM is from the U.S.[19] In my set-up, for a DM to determine how much to give to others, she must assess the perceived social proximity of j within a society where she is exposed to other individuals, where each individual of the society has group membership $g_k \in G_s$.

[19]The decision to interpret social proximity as a probability comes from simplicity in adapting Esponda et al. (2023) framework into this setting. The rationale resonates with the assumption that individuals care more about people that they consider an ingroup, relative to unknown others (Chen and Li, 2009).

I consider a DM that might suffer from contrast-driven biases in perceptions in their assessment of perceived social proximity of j, which will depend on the group distribution of the society G_s. The framework draws from Kahneman and Tversky (1972) "representativeness heuristic", where a decision-maker can form distorted beliefs about a target group by overweighting its representative types. I incorporate this formally following Bordalo et al. (2016) representativeness measure given by the likelihood ratio: $R(in, g_j, g_{-j}) := \frac{f(in|g_j)}{f(in|g_{-j})}$, which captures how representative being an ingroup (in) is to group g_j of the receiver relative to group g_{-j} of the non-receiver.

Thus, the DM's *perceived* social proximity of j will be given in the following way:

$$\hat{\gamma}_j = \kappa f(in|g_j)(R(in, g_j, g_{-j}))^{\alpha} \tag{3}$$

where κ is a normalization factor, and $\alpha \geq 0$ is a parameter that reflects to what extent the DM is affected by the bias, where if $\gamma_p = 0$, social context does not distort social proximity. However, if $\gamma_p > 0$, then G_s will distort perceived social proximity. Assumption 2 is represented under the following assumption:

A2. $\alpha > 0$.

A3.3 Hypotheses

Following the assumptions A1 and A2 and equations (2) and (3), I can derive the following observations for the effect of social context on the allocation decisions of decision-maker i towards receiver j.

Hypothesis A3.1. *If assumptions A1 and A2 are satisfied, allocation x_j^* from the DM towards a U.S. national receiver in the diverse context is higher than in the homogeneous context.*

Proof. A change from a homogeneous to a diverse context decreases the value of $f(in|g_{-j})$, making being type in more representative for group g_j. Given A2, this generates an increase in perceived social proximity $\hat{\gamma}_j$. Given A1, the increase in perceived social proximity generates an increase in x_j^*. □

Hypothesis A3.2. *If assumptions A1 and A2 are satisfied, allocation x_j^* from the DM towards a foreigner receiver in the diverse context is lower than in the homogeneous context.*

Proof. A change from a homogeneous to a diverse context increases the value of $f(in|g_{-j})$, making being type in less representative for group g_j. Given A2, this generates a decrease

in perceived social proximity $\hat{\gamma}_j$. Given A1, the decrease in perceived social proximity generates a decrease in x_j^*. □

A3.4 Relative proximity as opposed to absolute proximity

Social categorization theory in social psychology, defined by Turner et al. (1987), argues that individuals might use a *meta-contrast principle* in determining which individual is a member of the ingroup and which is an outgroup. The principle indicates that the individual makes use of a rule that maximizes intergroup (across groups) differences and minimizes intragroup (within group) differences. A way to represent this in our conceptual framework of our allocation decisions is to make the weight an individual puts on being fair towards the receiver as $\omega(\hat{\gamma}_j - \hat{\gamma}_{-j})$ as opposed to $\omega(\hat{\gamma}_j)$.

When incorporating this modification, the results obtained from the data in the experiment can be consistent with the experiment. The new model specification allows for the presence of effects on allocations on both the ingroup and the outgroup, even in the absence of effects of diversity over the social proximity towards foreigners.

A4 Pre-Analysis Plan

The experiment and hypotheses were pre-specified and a pre-analysis plan (PAP) was registered in the AEA RCT Registry (AEARCTR-0010179). As explained in section 3.1, the main baseline analysis was pre-specified to study the effects of diversity for two types of outgroups separately, where each outgroup is expected to have a different level of dissimilarity with the ingroup (strong and weak outgroup). However, Figure A1 shows that in the experiment, the two types of outgroups have the same level of dissimilarity as measured through the perceived social proximity in the homogeneous context (in the absence of contextual effects). Therefore, we focus on the treatment effects pooling both countries as "Foreigners." The main specification of the baseline analysis in the PAP is thus equivalent to equation (1).

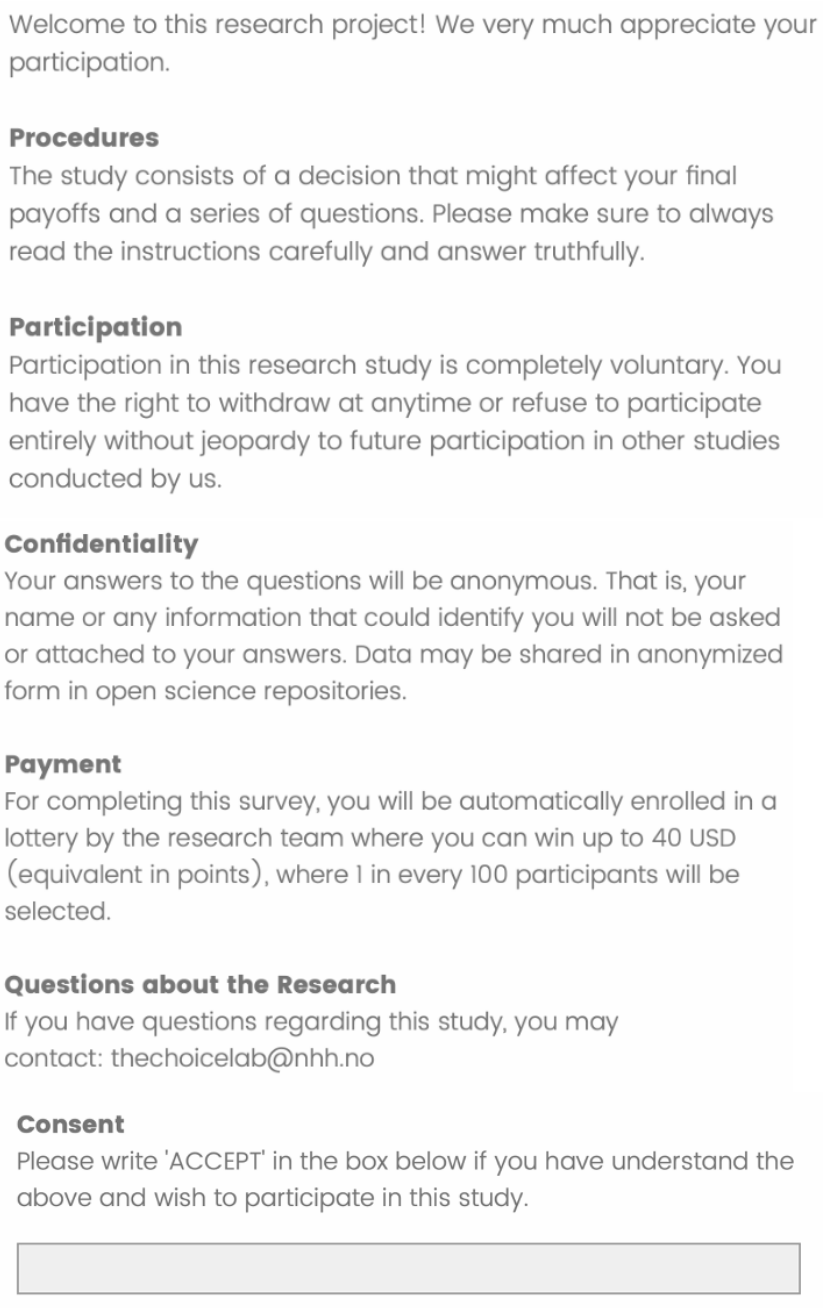
A4.1 Moral universalism

I prespecified heterogeneity in the treatment effect on allocation due to differences in moral universalism. Enke et al. (2023) and Cappelen et al. (2024) conceptualize and show that for individuals that exhibit low (high) universalism, social proximity plays an important (small) role in defining altruistic allocations. Therefore, I hypothesized that the higher the level of universalism, for a fixed change in social proximity, the smaller the treatment effect on allocation.

However, some limitations were found in this approach. First, universalism was not measured as suggested in Enke et al. (2023), as there was the worry that the allocation decisions previously performed might affect allocation decisions in the universalism measures, for instance, as anchors. Instead, I used policy views questions obtained from Enke et al. (2023) and Cappelen et al. (2024) that are correlated with the universalism measure, and expected to use them as proxies for universalism. Two main concerns arise from this approach. First, although the policy views measures are correlated with measures of universalism, the papers suggest there is large heterogeneity depending on the policy, bringing noise to the policy views composite used in this paper. Second, as my treatment effect brings saliency to the topic of nationalities, the responses over policies might be affected by the treatment. Table A6 shows that indeed, one of the policies is strongly affected by the exposure to a diverse context. As a consequence, the heterogeneity analysis of treatment effects by levels of universalism is not appropriate in this experimental setting.

A5 Instructions

Figure A5: Consent.



Welcome to this research project! We very much appreciate your participation.

Procedures
The study consists of a decision that might affect your final payoffs and a series of questions. Please make sure to always read the instructions carefully and answer truthfully.

Participation
Participation in this research study is completely voluntary. You have the right to withdraw at anytime or refuse to participate entirely without jeopardy to future participation in other studies conducted by us.

Confidentiality
Your answers to the questions will be anonymous. That is, your name or any information that could identify you will not be asked or attached to your answers. Data may be shared in anonymized form in open science repositories.

Payment
For completing this survey, you will be automatically enrolled in a lottery by the research team where you can win up to 40 USD (equivalent in points), where 1 in every 100 participants will be selected.

Questions about the Research
If you have questions regarding this study, you may contact: thechoicelab@nhh.no

Consent
Please write 'ACCEPT' in the box below if you have understand the above and wish to participate in this study.

Figure A6: Page 1.

This is a study that will be run on multiple samples of respondents coming from different places.

Before starting the survey, we will match you with two other respondents from the study. The three of you, together, will participate in a lottery to **win a total of $50 as a bonus** (1 in every 100) that will be distributed between the three.

If you win, the three of you will share the $50 bonus. However, **the amount each one receives depends on your choice.** Therefore, please **read the instructions carefully.**

→

Figure A7: Page 2.

You have been matched to the following **two other participants (A and B)**. Below, for each individual you have information about:

1. The **sample** they were drawn from.
2. The **initial distribution** of the **$50 bonus**.

Either A or B will be randomly selected. You will make a decision regarding only the selected participant.

→

Figure A8: Page 3.

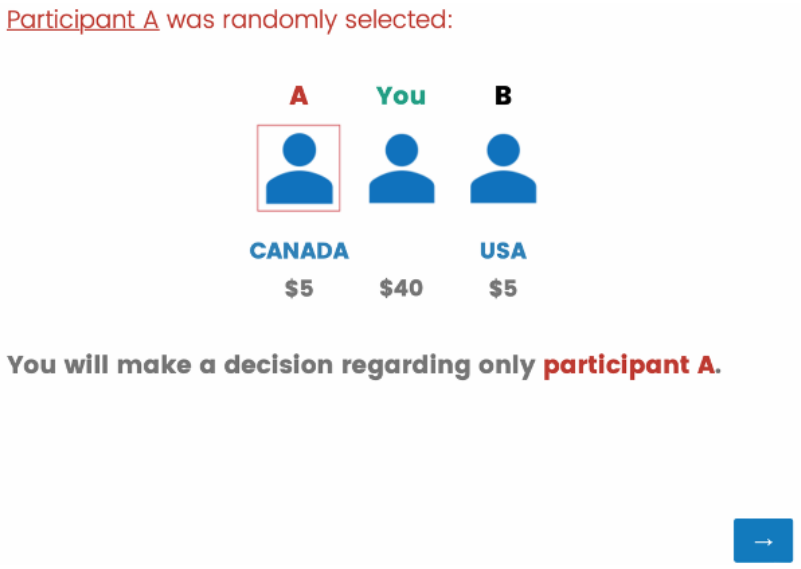


Figure A9: Closeness elicitation

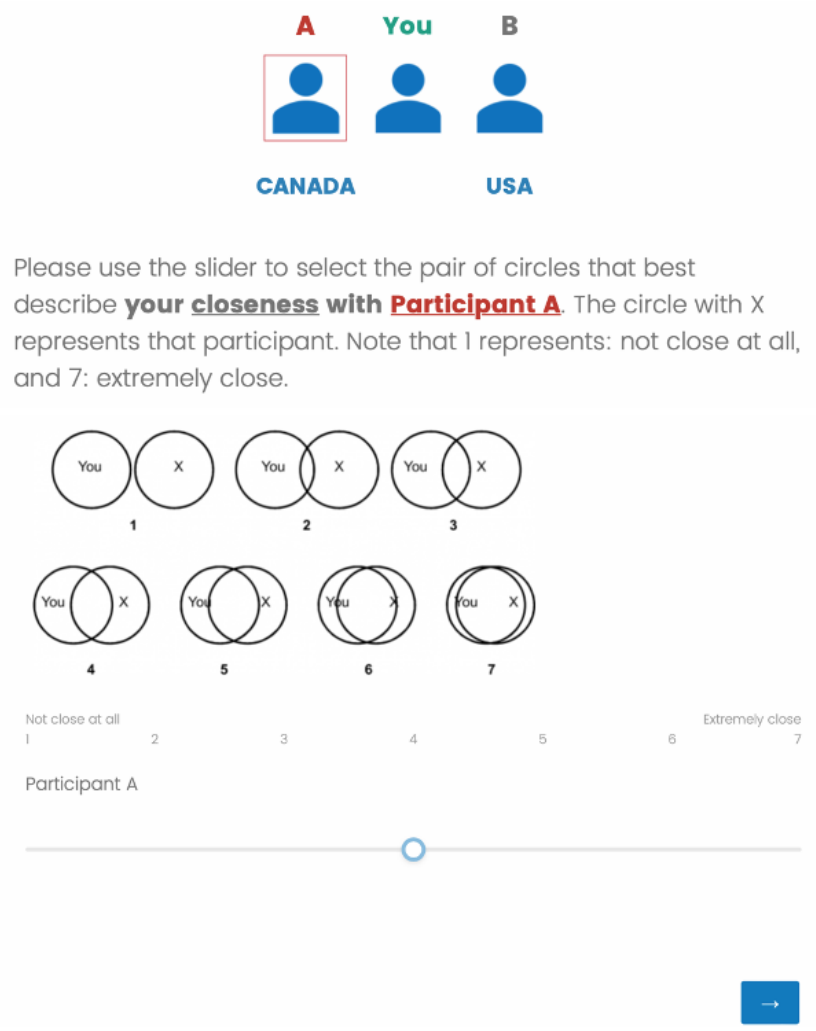


Figure A10: Allocation Decision

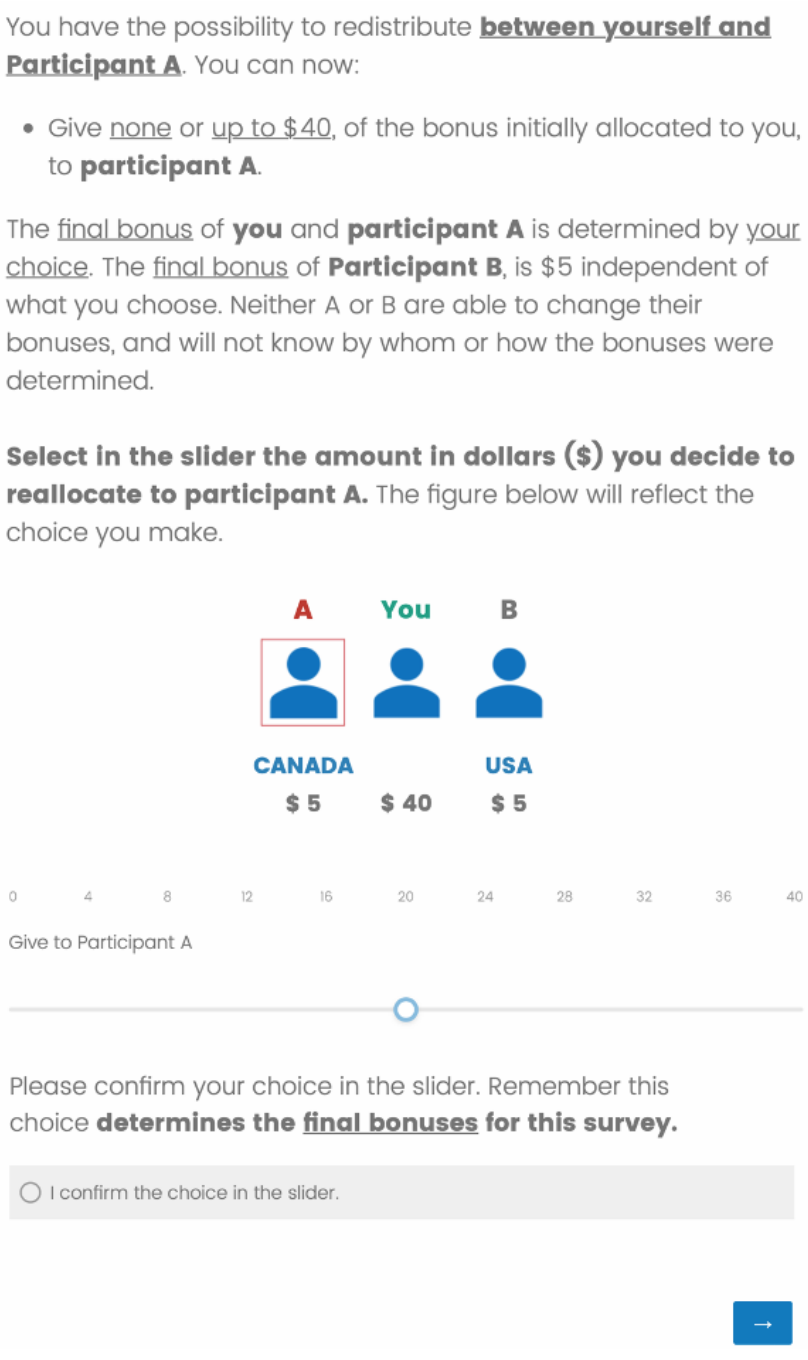


Figure A11: Attention check

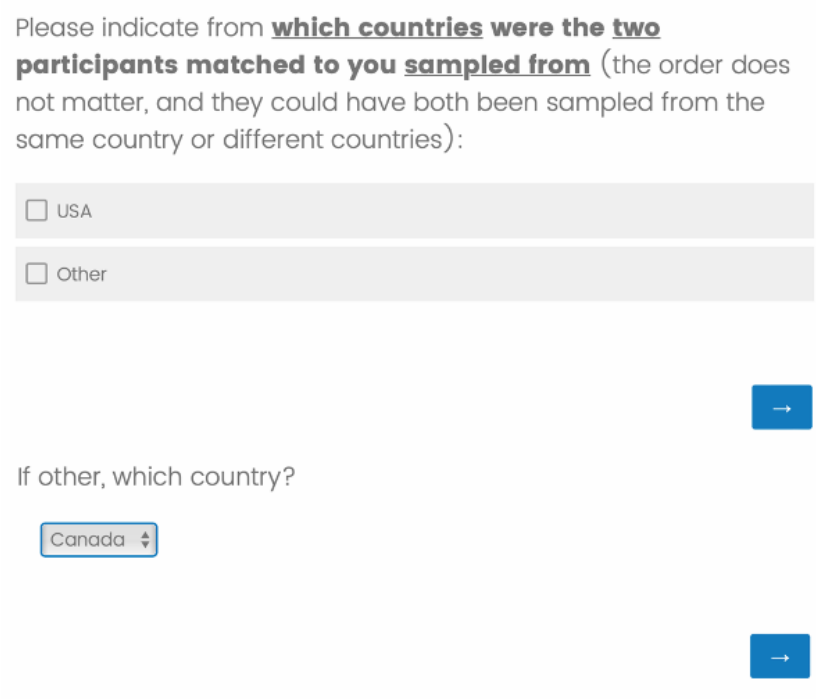


Figure A12: Open-ended question

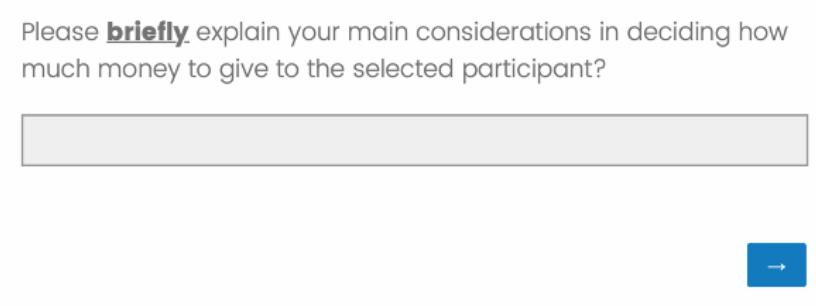


Figure A13: Policy views

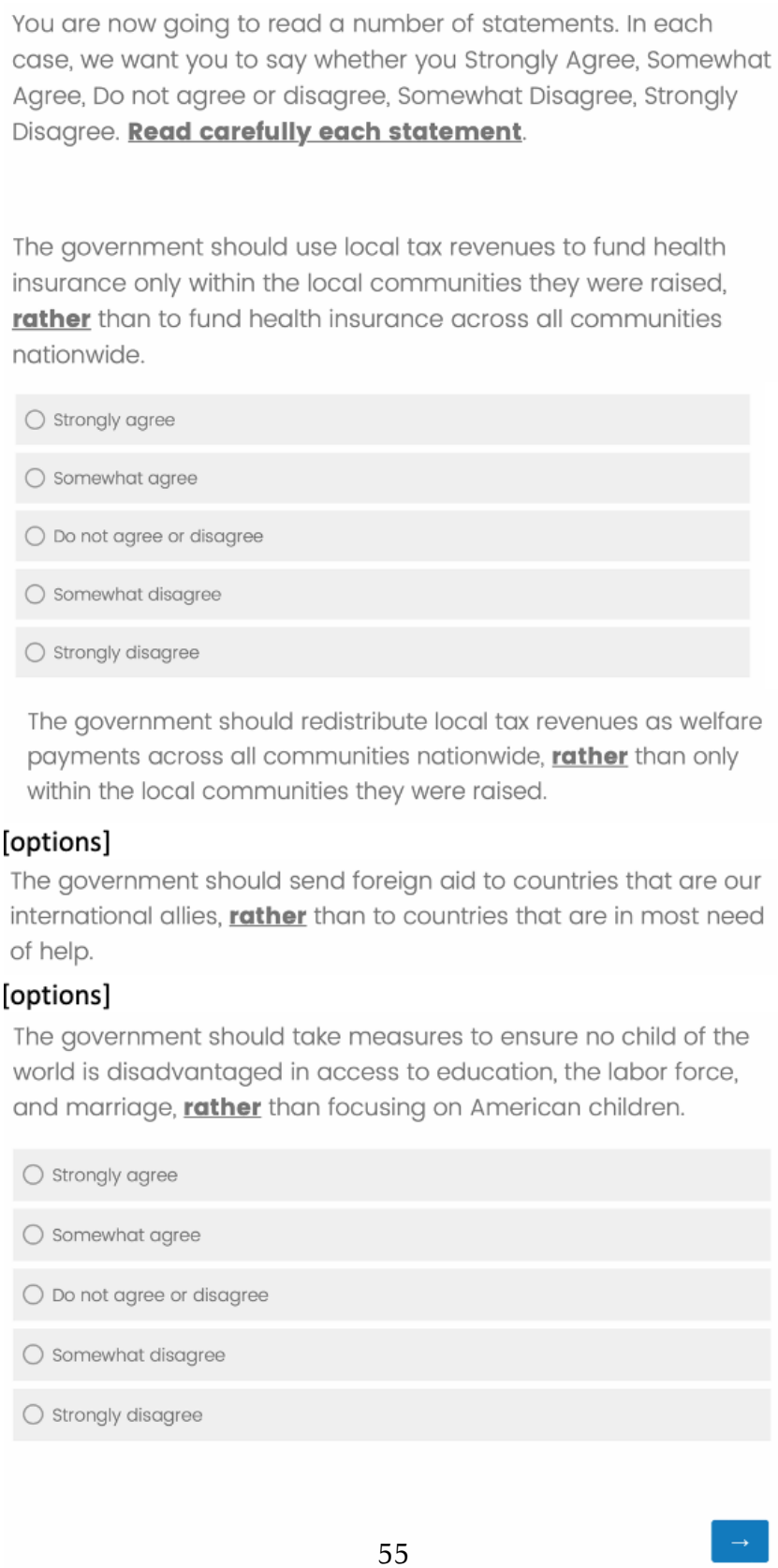


Figure A14: Altruism elicitation

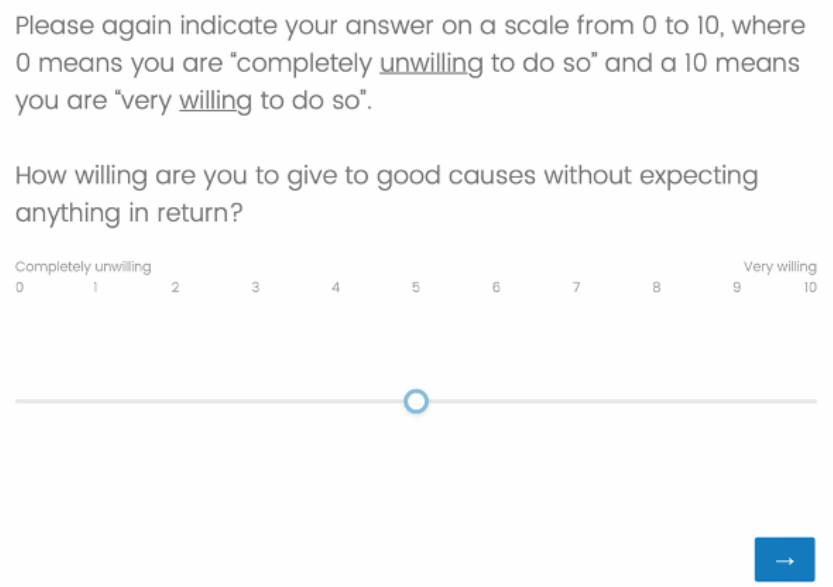


Figure A15: Background demographic information. Part 1.

Background questionnaire

Please answer the following questionnaire. You must answer these questions truthfully.

What is your age?

Which party did you support in the last U.S. elections?

- Republican
- Democrat
- Independent
- I didn't support any party

Generally speaking, do you usually think of yourself as a Republican, a Democrat, an Independent, or something else?

- Democrat
- Independent
- Republican
- Other

What is the highest level of school you have completed or the highest degree you have received?

- High school graduate or less
- Bachelor's degree in college (4-year)
- Master's degree
- Doctoral degree
- Professional degree (JD, MD)

Figure A16: Background demographic information. Part 2.

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