From Extreme to Mainstream:
The Erosion of Social Norms[*]

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Abstract

Social norms, usually persistent, can change quickly when new public information arrives, such as a surprising election outcome. People may become more inclined to express views or take actions previously perceived as stigmatized and may judge others less negatively for doing so. We examine this possibility using two sets of experiments. We first show via revealed preference experiments that Donald Trump's rise in popularity and eventual victory increased individuals' willingness to publicly express xenophobic views. We then show that individuals are judged less negatively if they expressed a xenophobic view in an environment where that view is more popular.

Keywords: Social norms; social acceptability; elections; xenophobia; political attitudes; social interactions; communication

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1 Introduction

Social norms, the set of 'social sanctions or rewards' that incentivize a certain behavior (Bénabou and Tirole, 2011), are an important element of any society: some behaviors and opinions are socially desirable, while others are stigmatized. There is growing evidence that individuals care to a large extent about how they are perceived by others and that such concerns might affect important decisions in a variety of settings, from charitable donations (Andreoni and Bernheim, 2009; DellaVigna, List and Malmendier, 2012; Andreoni, Rao and Trachtman, 2017) to schooling choices (Bursztyn and Jensen, 2015) to political behavior (Gerber, Green and Larimer, 2008; DellaVigna et al., 2017; Enikolopov et al., 2017; Perez-Truglia and Cruces, 2017). Moreover, these social image concerns matter both in interactions with other people from the same social group (Bursztyn and Jensen, 2015) and in interactions with strangers, such as surveyors and solicitors (DellaVigna, List and Malmendier, 2012; DellaVigna et al., 2017).

A recent literature has documented the persistence of cultural traits and norms over long periods of time (Voigtländer and Voth, 2012; Fernández, 2007; Giuliano, 2007; Algan and Cahuc, 2010; Alesina, Giuliano and Nunn, 2013). However, little is known about what factors might lead long-standing social norms to *change*, or even more so, to change *quickly*. In this paper, we argue that aggregators of private opinions in a society, such as elections, might lead to updates in individuals' perceptions of what people around them think, and thus induce fast changes in the social acceptability of holding and expressing certain opinions and in the likelihood that these opinions are publicly expressed.[1]

Consider the support for the communist regime in the Soviet Union in the late 1980s. Kuran (1991) argues that many individuals opposed the regime but believed that others supported it. In that environment, a referendum on the regime would have quickly updated people's opinions about the views of others. Incorrect beliefs about the opinions of others are not restricted to totalitarian regimes, where expressing personal views is often risky. In fact, as we argue below, if most individuals assume that a specific opinion is stigmatized, the stigma may be sustained in equilibrium.[2]

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[1]In the view of social norms we adopt, they guide public or potentially public, but not private actions. We do not take a broader view on social norms that also includes self-image concerns that can shape even one's private behavior by rewarding adherence and punishing deviance. Notice that since our paper explains how new public information can change social norms in the narrower (and our preferred) sense, it also suggests that social norms in the broader sense change – specifically, the part of social norms responsible for rewards or punishments by *others*. Thus, when we say that social norms are eroded, they do so according to either definition.

[2]This phenomenon is known in social psychology as "pluralistic ignorance" (Katz and Allport, 1931), where privately most people reject a view, but incorrectly believe that most other people accept it, and therefore end up acting accordingly. For example, in 1968 most white Americans substantially overestimated the support for racial segregation among other whites (O'Gorman, 1975). A related concept is "preference falsification" (Kuran, 1995): people's stated, public preferences are influenced by social acceptability, and might be different from their true, private preferences. For example, American college graduates consistently understate their support for immigration restrictions when asked directly as compared to their preferences elicited in a less obtrusive way, which is consistent with preference falsification (Janus, 2010).

In this paper, we examine how social norms can be eroded quickly when new public information arrives, such as an election outcome.[3] We use experiments to test the idea that Donald Trump's rise in popularity and eventual victory in the 2016 U.S. Presidential election causally increased individual's willingness to publicly express anti-immigrant (xenophobic) views, as well as the social acceptability of such expression.[4]

To organize thoughts and connect the experiments within a single framework, we build a model where two types of individuals, xenophobic and tolerant, choose an action, but in doing so they care about approval or disapproval of other people who might observe the action. Like the agents choosing the action, the members of the audience are Bayesian, and their inference about the agent's type depends on the strategies he uses in equilibrium. In this environment, social pressure might lead some agents to choose the action that they do not naturally prefer, and it is even possible that all agents choose the same action (which, arguably, prevents learning about the distribution of types).[5] We then study the impact of public signals and show that a signal suggesting that more people are likely to be xenophobic increases the share of agents who choose the xenophobic action. However, the same signal may decrease the audience's perception that an agent who chose the xenophobic action is a xenophobe. Indeed, when few individuals are perceived to be xenophobic, there is no social pressure to appear to be one, and thus only xenophobes would choose a xenophobic action. In contrast, when xenophobic individuals are thought to be common, such social pressure might be there, and thus not everyone acting in a xenophobic way is a true xenophobe.[6]

We capture the effects of Trump's rise in popularity using a series of experiments. Throughout his campaign, Donald Trump proposed, among other things, the construction of a wall separating the U.S. and Mexico and a ban on Muslims from entering the U.S. His popularity might thus send

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[3]A different mechanism, whereby powerful individual players can cause unraveling of norms by refusing to honor the reputation mechanism is documented by Greif (2006) in the context of Genoan merchants and by Richman (2017) in the context of modern diamond traders.

[4]We thus focus on the consequences of Trump's election rather than its causes or determinants. With respect to the latter, Enke (2017) demonstrates the link between tribalistic (as opposed to universal) moral values and Trump vote at the county level, while Allcott and Gentzkow (2017) discuss the possible role of fake news. Relatedly, Xiong (2017) studies the effect of the celebrity status of Ronald Reagan on his electoral support, and suggests that a similar effect may have helped Trump. At the same time, our focus is on causes and not consequences of changes in social norms (see Ali and Bénabou, 2016, on the latter).

[5]The model is thus similar to earlier work on social image concerns and social norms (see Bénabou and Tirole, 2006, for a general framework on incentives and prosocial behavior, and Ali and Lin, 2013, for a model where ethical voters vote because they want to, while opportunistic ones vote in order to appear ethical). To keep the model simple and focused on our experiments, we ignore the impact of explicit incentives (as in Bénabou and Tirole, 2006), laws (Bénabou and Tirole, 2011), or learning about optimal policy (Ali and Bénabou, 2016) on behavior. The possibility of pooling and the resulting non-transmission of information is suggested in Morris (2001), where an advisor who is afraid of being perceived as biased ultimately avoids giving informative advice. Unlike all these papers, however, we do not fix a "socially desirable" action and instead have it emerge endogenously in equilibrium (as in Bernheim, 1994).

[6]A similar effect appears in Bénabou and Tirole (2006), where an explicit incentive to do a prosocial action enables selfish people to do so, thus reducing the signaling value of such action. Similarly, in Ali and Lin (2013), a higher propensity of opportunistic voters (those caring about social image but not social welfare) to vote makes other such voters less willing to turn out.

an informative signal about the number of people who sympathize with these proposals and thus about those who hold xenophobic views. As a result, Donald Trump's electoral success potentially caused a shift in social norms regarding expressing views on immigrants. We first examine the effect of Trump's rise in popularity (and thus of information aggregation) on people's willingness to publicly express xenophobia. The first set of experiments were conducted on *Amazon Mechanical Turk (mTurk)* in the weeks just before and just after the November 2016 U.S. Presidential election. Participants were offered a bonus cash reward if they authorized the researchers to make a donation to a strongly anti-immigration organization on their behalf.[7] Accepting the offer is therefore a *profitable* xenophobic action. At baseline, participants who randomly expected their decision to be potentially observed by and discussed with a surveyor in a future interaction (the "public" condition) were significantly more likely to forgo the donation bonus payment than those who expected their choice to be entirely anonymous (the "private" condition). This suggests the presence of social stigma associated with the action. Before making the donation decision, a random subset of participants received information that positively updated their perceptions of Trump's popularity in their home state on the eve of the election. We find that, for these participants, the wedge in the likelihood of undertaking the xenophobic action in private and public disappeared. This difference with respect to the baseline condition was driven entirely by an increase in the donation rate in the public condition, with no change in the private condition.

We then exploited the "natural experiment" of Trump's unexpected victory as an alternative treatment that could generate increases in the willingness to publicly express xenophobic views. We replicated the experimental intervention shortly after the election, restricting the design to the baseline condition with no additional information on Trump's popularity. We find that after the election, the wedge between private and public donation rates disappeared, even in the absence of the experimental information intervention. Again, this difference was entirely driven by an increase in the public donation rate; the private donation rate remained unchanged from the pre-election intervention. Our results suggest that Donald Trump's rise in popularity did not make these participants more xenophobic, but instead made those who were already xenophobic more comfortable expressing their xenophobic views in public.

To provide further evidence of the hypothesis we analyze, we implemented in 2018 an additional experiment to study the effect of Trump's rise in popularity on expression of xenophobia. This new experiment allows us to circumvent the main limitations of the original study. First, we recruit a larger sample of 1,600 participants and we do so through an online panel survey company, making our sample less subject to the concerns related to the reliability of *mTurk* workers. Second, we

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[7]A small share of subjects were steered towards donating to a pro-immigrant organization, so we could claim that the subjects' match with the organization is random (and ensure that participants would not associate the experimenters with a specific political view). In the case of a pro-immigration organization, both actions (donating and not donating) were unlikely to be stigmatized. We steered most subjects to an anti-immigrant organization to maximize power in the case where we hoped to find stigma.

implement a public condition that implies visibility by other subjects in the same geographic area of the respondents (and thus a more relevant "peer group," when compared to observability by a surveyor). We overcome the challenge of manipulating perceptions of Trump's local level of popularity in the 2016 election after the election had already occurred by exploiting the fact in some areas of the U.S. where that election was very contested, the candidate who won the election at the county level was different from the one who won at the metropolitan statistical area (MSA) level. The subjects of this experiment were all recruited from the Pittsburgh MSA. In the beginning of the experiment, participants were given three political facts about their area; we randomize whether one of these facts was that Donald Trump won the election in "Pittsburgh's metropolitan area" or that Hillary Clinton won the election in "Pittsburgh's county." Next, participants received the same incentivized offer to donate to a xenophobic organization as in the original *mTurk* election experiment, and as before we randomly manipulated their expectations of anonymity. All participants were told that the donation decisions would be posted on a website to be shared with all the participants from their area. Half of the participants were assured that their individual responses would be kept completely anonymous (the "private" condition). The other half, instead, were exposed to a treatment designed to make them think that the responses posted on the website would not be anonymous (the "public" condition).

The results mirror those of the original experiment: donation rates are similar in private for the "Trump won" and "Clinton won" treatments. In public, donation rates are unchanged under the "Trump won" treatment, while they are significantly lower under the "Clinton won" treatment. Also, consistent with an underlying mechanism of updates in perceptions about the local popularity in xenophobic views, we find that the "Trump won" treatment shifts the distribution of participants' perceptions about the local popularity of those views to the right. Moreover, we use the "Trump won" treatment as an instrument for the shift in perceptions, and show that participants' perceptions causally affect their donation in public, but not in private.[8]

We then turn our attention to the study of how the 2016 election changed people's interpretation of observed xenophobic expression. We again hired an online panel survey company to recruit a sample of about 1,800 respondents who had previously self-identified to the firm as democrats. The respondents are asked to play a dictator game in which they can decide how to split $2 between themselves and someone else. Our goal is to evaluate how negatively they judge someone for expressing xenophobia in private or in public, depending on the perceptions of the popularity of xenophobia in that person's area (with lower donations in the dictator game corresponding to more negative judgement). We tell a recruited participant (henceforth *player 1*) that a participant from a previous study (*player 2*) donated money to a named xenophobic organization, and cross-randomize whether we tell player 1 that: i) Trump or Clinton won the election in player 2's area; and ii) player 2's donation was in private or publicly observable on a website shared with other participants from

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[8]In Section 3.2.3, we discuss potential threats to the exclusion restriction in our instrumental variable approach.

his area. Note that participants assigned as player 2 were real participants from the experiment described above. Other design elements are important to emphasize. Player 2 did not know he was going to be part of a dictator game in the future and player 1 was informed about this fact. Also, player 1 did not know that player 2's area was Pittsburgh (which would have potentially limited the size of the shifts in player 1's perceptions about Trump's popularity in player 2's area). Finally, player 1 was not told that player 2 had been offered an incentive to donate to the organization.

We find that the amount given by player 1 participants to player 2 participants are similar when player 2's donation was in private, regardless of who won the election in player 2's area. This helps us deal with confounds, such as learning about local motives to privately oppose immigration (since shifting perceptions on who won the election in player 2's area could have changed the perception of what that area is). Player 1 participants also give a similar amount to player 2 when his decision was in public when told that Clinton won in player 2's area. The logic is simple: there is no social pressure to act as a xenophobe in an area where Clinton won (the pressure is actually in the opposite direction). Therefore it must be that player 2 is indeed a xenophobe, just like in the private cases that also did not involve social considerations. In the final treatment, where player 2's decisions were to be observed in an area where Trump won the election, player 1 participants give significantly more to player 2. Player 2 was now potentially subject to social pressure to publicly act as a xenophobe since his donation decision was going to be observed by local peers in an area where Trump won the election. The inference player 1 could make on whether player 2 was truly a xenophobe is therefore weakened due to the strategic incentives player 2 could have to donate in order to pander to the majority. Here again, we use the information on who won the election in player 2's area as an instrument for player 1's perception of the popularity of xenophobia in that area, and show that these perceptions affect the amount given by player 1 when player 2's decision was public but not when it was private.

In Appendix D we present the design and results from a similar experiment conducted on *mTurk*, where participants were asked to play a dictator game with another respondent in Switzerland, and where we manipulated perceptions of the popularity of anti-Muslim sentiment in Switzerland, by randomly giving information about the 2009 Swiss referendum that banned the construction of minarets in that country. The results are again consistent with the predictions of our framework.

Our results suggest that Trump's rise in popularity and eventual electoral victory could have casually changed social norms regarding the expression of xenophobic views in the U.S. Though we detect no changes in *privately-held* views, we believe the findings on public expression are of great policy relevance.[9]

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[9]For example, increases in public expression of anti-immigrant sentiment might also lead to more frequent acts of hate crime against immigrants, and might also facilitate coordination for large-scale actions, such as demonstrations and movements. Recent work provides evidence that such demonstrations and movements might affect many important outcomes, from election results (Madestam et al., 2013) to the stock market valuation of different firms (Acemoglu, Hassan and Tahoun, 2018). In addition, reductions in the stigma associated with holding previously-extreme views might lead to shifts in the language used in and reported by the popular media, and might also reduce

Our results contribute to a growing literature that examines the impacts of political institutions on social norms and culture more generally. This literature typically studies the long-run impact of political institutions (e.g., Lowes et al., 2017); we show that changes on the political side can lead to fast changes in social norms. Our paper also adds to a recent theoretical literature on social norms (e.g., Bénabou and Tirole, 2011; Acemoglu and Jackson, 2017) by studying how new information may lead to unraveling of such norms. Our findings also speak to a cross-disciplinary literature on the consequences of political actions, both theoretical (e.g., Lohmann, 1993) and empirical (e.g., Madestam et al., 2013). Methodologically, this paper also relates to a literature on the measurement of sensitive attitudes, which includes approaches such as the "randomized response technique" (Warner, 1965), the "list experiment" (Raghavarao and Federer, 1979), the "endorsement experiment" (Sniderman and Piazza, 1993), and the "lost letter technique" (Milgram, 1977). In our study, the private donation decision provides a measure based on revealed preference, where concerns about social desirability are minimized due to anonymity.

Our work also relates to existing papers studying the economic consequences of conformity. Prendergast (1993) identifies rational incentives for managers to conform to supervisors' opinions in order to appear competent, which in turn hampers information transmission. Andreoni, Nikiforakis and Siegenthaler (2017) study 'conformity traps,' situations where groups of individuals fail to coordinate on a beneficial action due to individual incentives to conform to the predominant and inefficient behavior. In a laboratory experiment they find, in particular, that opinion polls can facilitate changes of norms that benefit the group. Their setting, however, is one of full information, and thus opinion polls facilitate switching from one equilibrium to another. Our model has incomplete information and features a unique equilibrium, and elections can change the beliefs about the distribution of other people's opinions (though we do not take a position on whether overcoming conformity is necessarily socially beneficial). In a different setting, Kets and Sandroni (2016) study the trade-off between the performance of conforming versus diverse groups of individuals.

Our paper also contributes to a recent experimental literature on the effect of social norms on behavior. Krupka and Weber (2013) show that elicited social norms predict changes in behavior across variants of the dictator game. Bursztyn, González and Yanagizawa-Drott (2018) directly manipulate perceived social norms, which in turn changes behavior. Here, our interest is in evaluating how natural processes aggregating information about private opinions (such as an election) can lead to fast changes on behavior through an erosion of existing social norms. Our approach also allows us to evaluate, using revealed preference, how updates about existing norms change both the way people express themselves and the way people judge others for expressing themselves.

The remainder of this paper proceeds as follows. We introduce a simple framework formalizing our argument in Section 2. In Section 3, we present the design and results from the two versions of

the stigma associated with consuming and discussing certain news sources on the far side of the political spectrum. Increases in public expression of such views can thus lead to increases in individuals' overall exposure to them, and more exposure might eventually lead to changes in privately-held views, via persuasion or simple conformism.

experiment 1, which study the expression of xenophobic views. In Section 4, we present the design and results from experiment 2, which studies the interpretation of xenophobic expression. Section 5 concludes.

2   Motivating Framework

To organize thoughts and motivate our experimental designs, we present a simple model of communication.

2.1   Model

A society S consists of individuals that may have one of two types, A or B (so $t_i \in \{A, B\}$ for citizen i). The distribution of types is i.i.d, with $\Pr\{t_i = A\} = p$. This probability p is itself a random variable with realization chosen by Nature at the beginning of the game from two possible values, so that $p = p_H$ with probability θ and $p = p_L$ with probability $1 - \theta$, where $\theta \in (0, 1)$ and $0 < p_L < p_H < 1$. Each citizen knows his/her own type but not the realization of p (but might get signals about that); however, the process by which p is determined is known. In what follows, we will refer to the citizen choosing an action (the actor) as "he" and to a generic member of the audience as "she."

The actor needs to decide between two actions, which we also denote A and B, slightly abusing notation. We interpret action A as the preferred action of type A and B as the preferred action of type B. More specifically, assume that the utility levels of each type from the corresponding action are $V_A > 0$ and $V_B > 0$, respectively, and the utility levels from the opposite actions are normalized to zero.

Suppose that citizen i is the actor choosing $d_i \in \{A, B\}$, and suppose he is doing so before an audience of size $n \geq 0$, with $n_{priv} = 0$ corresponding to a private decision and $n_{pub} > 0$ to a public decision. Members of the audience observe the decision d_i and use it, as well as any other information they have, to update their beliefs on citizen i's type t_i. We assume that citizen i gets utility χ_i if type A member of the audience believes he is type A (as opposed to B) or if type B one believes he is type B (as opposed to A). We find it convenient to denote individual i's total social image concerns when making a public decision, $n_{pub}\chi_i$, by h_i, and we will use this notation in what follows. Thus, we assume that citizen i makes decision d_i to maximize

$$U_i(d_i) = V_{t_i}\mathbf{I}\{d_i = t_i\} + \mathbf{I}_{pub}h_i\mathbf{E}_i\left(\Pr_{-i}\left(t_i = t_{-i} \mid d_i, t_{-i}\right) \mid t_i\right),$$

where $-i$ denotes a generic member of the audience.

We are interested in Perfect Bayesian equilibria that satisfy the D1 criterion (Cho and Kreps, 1987). Throughout the paper we assume that social image concerns h_i are distributed smoothly

and that direct payoffs from preferred action (V_A and V_B) are not too small relative to these social image concerns.[10]

Assumption 1. *Social image concerns h_i are independent of type t_i and are distributed on $[m, M]$ with c.d.f. $F(h)$ and p.d.f. $f(h)$ such that $f(h) h \left(h - \tilde{V}\right) \leq \tilde{V}$, where $\tilde{V} = \min\{V_A, V_B\}$. In addition, $\tilde{V} \geq (p_H - p_L) M$.*

2.2 Analysis

Each individual i, upon learning his/her type, updates on the distribution of types in the society. For type A and type B the expected shares of type A equal, respectively,

$$
\begin{aligned}
P_A &= \frac{\theta p_H^2 + (1 - \theta) p_L^2}{\theta p_H + (1 - \theta) p_L}; \\
P_B &= \frac{\theta p_H (1 - p_H) + (1 - \theta) p_L (1 - p_L)}{\theta (1 - p_H) + (1 - \theta) (1 - p_L)}.
\end{aligned}
$$

Proposition 1. *Under Assumption 1 there is a unique equilibrium. In the private decision case, citizen i chooses the action that corresponds to his type, $d_i = t_i$. In the public decision case:*

(i) If $V_B \leq m P_B (P_A + P_B - 1)$, then citizen i chooses $d_i = A$;

(ii) If $V_B \in (m P_B (P_A + P_B - 1), M (2P_B - 1))$, then citizen i of type A chooses $d_i = A$, while citizen of type B chooses $d_i = A$ if h_i is above some threshold and $d_i = B$ otherwise;

(iii) If $V_B \geq M (2P_B - 1)$ and $V_A \geq M (1 - 2P_A)$, then citizen i chooses $d_i = t_i$;

(iv) If $V_A \in (m (1 - P_A) (1 - P_A - P_B), M (1 - 2P_A))$, then citizen i of type B chooses $d_i = B$, while citizen of type A chooses $d_i = B$ if h_i is above some threshold and $d_i = A$ otherwise;

(v) If $V_A / H \leq m (1 - P_A) (1 - P_A - P_B)$, then citizen i chooses $d_i = B$.

These cases are exhaustive and mutually exclusive. Moreover, an increase in θ weakly increases the share of individuals of either type who choose $d_i = A$, and strictly so for type B in (ii) and for type A in (iv).

Let us introduce an informative public signal s about the share of type A in the society (which was denoted by p) that can take two values: $s \in \{p_L, p_H\}$. Assume that $s = p$ with probability $\mu \geq \frac{1}{2}$ ($\mu = \frac{1}{2}$ corresponds to an uninformative signal, and $\mu = 1$ to a precise revelation of p). This signal both changes citizen i's belief about the distribution of types in the audience and also changes the way the audience updates about citizen i's type. Thus, citizen i is now maximizing

$$
U_i (d_i; s) = V_{t_i} \mathbf{I} \{d_i = t_i\} + \mathbf{I}_{pub} h_i \mathbf{E}_i \left(\Pr_{-i} (t_i = t_{-i} \mid d_i, t_{-i}, s) \mid t_i, s\right).
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[10]Assumption 1 ensures uniqueness of equilibrium. However, the comparative statics results hold more generally, in the Milgrom and Shannon (1994) sense (e.g., for minimal or maximal equilibrium).

Here, the first instance of s corresponds to audience members' posterior that the citizen is type A (B) being higher if the signal is $s = p_H$ $(s = p_L)$; the second instance captures the citizen believing that audience is more likely to consist of A types $(B$ types) if $s = p_H$ $(s = p_L)$. Both effects push the citizen towards choosing action A if $s = p_H$ (the intuition for $s = p_L$ is similar). The latter effect is simple: if the audience is more likely to consist of A types, then choosing action A is more likely to boost one's social image from their viewpoint. The former effect is slightly subtler: if a member of the audience has a strong prior that the citizen is type A, it is difficult for a citizen of type A to persuade her otherwise, and he might as well give up on the social image concerns and choose the action he likes.

The above intuition is summarized in the following proposition.

Proposition 2. *In the private decision case, the signal s does not change the equilibrium: citizen i still chooses the action that corresponds to his type, $d_i = t_i$. Consider the public decision case, and suppose that signal s is informative $(\mu > \frac{1}{2})$. A citizen is (weakly) more likely to choose $d_i = A$ if she receives signal $s = p_H$ as compared to the case of no signal. If she receives signal $s = p_L$, the citizen is (weakly) less likely to choose $d_i = A$ than in the case of no signal.*

Let us now analyze how signal s affects the posterior probability that the citizen who chose action A is indeed type A.

Proposition 3. *Suppose that for low signal $s = p_L$, citizens of type $t_i = B$ choose action $d_i = B$. Then the audience's posterior that a citizen who chose action A is indeed type A is (weakly) lower for high signal $s = p_H$ than for low signal $s = p_L$. (The converse is true for the posterior probability that the citizen has type B.)*

In other words, if for signal $s = p_L$ indicating that type B is relatively frequent, citizens of type B choose the corresponding action, then anyone who chose action A must be indeed type A. A signal $s = p_H$ indicating that type A is more frequent might lead to some B type citizens picking action A, making it possible that the citizen who chose action A is actually type B.

2.3 Discussion

The literature on strategic conformity goes back to the models of Prendergast (1993) in the context of managers conforming to the information possessed by their supervisors to signal their competence and Bernheim (1994), which shows that social concerns can lead to formation of social norms. Developing these ideas, Morris (2001) shows that the fear of being seen as biased could completely shut down information transmission from an advisor to a decision-maker. Ali and Bénabou (2016) and Ali and Lin (2013) study how social image concerns can give rise to pro-social behavior by non-altruistic individuals, in the contexts of contributions to public goods and voter turnout, respectively. In these models, like in our paper, increased propensity of non-altruistic individuals

to act prosocially makes it more difficult for observers to identify truly prosocial individuals. Our model builds on these important precursors, albeit with notable differences. Perhaps most importantly, we seek to capture a contentious political setting where the same social image (e.g., of a xenophobic person) might be approved by some and stigmatized by others, as opposed to situations where all individuals seek to espouse a particular prosocial image. With that goal in mind, the model is kept deliberately simple. For example, we do not model learning about optimal policy from the actions of other citizens, a feature that plays an important role in Ali and Bénabou (2016), because we do not see any evidence of that in our experiments.

3 Experiment 1: Expressing Xenophobia

In this section we present the results of two related experiments showing that Donald Trump's rise in popularity and eventual victory in the 2016 U.S. Presidential election causally increased individuals' perception of the social acceptability of holding strong anti-immigration views and their willingness to publicly express them.

3.1 Experiment 1A: U.S. Presidential Elections

We implemented the first experiment respectively in the two weeks before and in the week after the 2016 presidential election. The timing of the experiment allowed us to exploit the uniqueness of the situation and study the process of information aggregation as it was unfolding. We conducted both waves with workers from the online platform *mTurk*. A number of recent papers in economics have used the same platform to conduct surveys or experiments (e.g., Kuziemko et al., 2015). The platform draws workers from very diverse backgrounds, though it is not representative of the U.S. population as a whole.

3.1.1 Experimental Design

Wave 1: Intervention Before the Election.   During the two weeks prior to the presidential election, we recruited participants (N = 458) from the eight states in which the expected probability of Donald Trump's victory at the state level was 100%, according to the website *Predictwise*: Alabama, Arkansas, Idaho, Nebraska, Oklahoma, Mississippi, West Virginia, and Wyoming. *mTurk* workers with at least 80% approval rate could see our request, which was described as a "5 minute survey" with a reward of $0.50. Each worker could participate in the survey only once. Workers who clicked on the request were displayed detailed instructions about the task, and given access to links to the study information sheet and the actual survey. The survey was conducted on the online platform *Qualtrics*.[11]

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[11]See the survey script in Appendix C.2. The reader can access the survey information sheet and interactively follow the survey at `http://ssd.az1.qualtrics.com/jfe/form/SV_0Uhwmq3Icp7XSa9`.

After answering a number of demographic questions, half of the participants were randomly informed about the 100% local odds from the website (*information* condition) while the other half were not informed (*control* condition). Though restricting to these states might affect the external validity of the findings, it also allows us not to worry about the role of heterogeneous priors (and updates) in response to an informational treatment: the 100% forecast ensured that for this half of the sample, the direction of the update about Trump's local popularity is either zero or positive, but never negative.[12,13]

Our main goal is to measure the perceived social acceptability of strong anti-immigrant sentiment using a donation experiment with real stakes. Participants were first told that they would be given the opportunity to make a donation to a randomly drawn organization that could either be anti- or pro-immigration, to ensure that participants would not associate the experimenters with a specific political view. To maximize power and avoid direct deception, the randomization was such that more than 90% of participants (N=428) would get assigned the organization we were interested in: the *Federation of American Immigration Reform*.[14] To make sure that the participants were aware of the organization's very strong anti-immigration stance, a few more details about the organization and its founder were provided in the experiment:

> The Federation for American Immigration Reform (FAIR) is an **immigration-reduction organization** of concerned individuals who believe that immigration laws must be reformed, and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of 'The Immigration Invasion' who

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[12]In the information condition, before being given the information about the 100% local odds from the website, respondents were asked about their beliefs on the probability of Trump winning the election in their state. This question was asked to respondents in the control condition only at the end of the survey instead. Eliciting priors in the control group to assess the direction of the update would have been challenging since the forecast information was available online. Therefore, asking the question before the donation decision could have undone the treatment. Answers to the question if asked after the donation decision could have been affected by the decision itself and by the private/public condition later assigned to the participant. For analogous reasons, the control condition did not include a placebo statement about Trump, since this could have primed participants to think about his chances of winning the election in the next couple of weeks.

[13]Here we describe the protocol of the experiment as it was registered on the AEA RCT registry with number AEARCTR-0001752. As described in the registry, we planned to reach 400 individuals by November 7 – the day before the election and thus conceptually the last day in which the survey could be done (also pre-registered as the trial end date). In the piloting phase (on October 26 and 27) we were able to recruit 184 participants. We thus expected not to have any issue recruiting 400 more subjects in the eight days between October 31 and November 7, given that in two days we were able to survey nearly half of that sample size. However, only 274 *mTurk* workers selected themselves into the study during the registered trial dates. The number of active *mTurk* workers in these states is lower than we had originally expected (and to our knowledge no estimates of the *mTurk* population in those states exist), which made it difficult to recruit enough participants before the election. In order to reach the desired (and registered) sample size, we decided to include individuals who participated in the pilot experiment conducted before the registration with nearly identical versions of the protocol. In particular, both the wording of the informational treatment and the wording of the donation decision were completely unchanged. If we restrict the analysis to the 274 subjects who followed the registered protocol, results are directionally similar, as discussed in Subsection 3.1.2.

[14]The pro-immigration organization was the *National Immigration Forum*. Of course, it is still possible that to some degree the participants assigned to the Federation of American Immigration Reform were more likely to associate the researcher with anti-immigration views than those assigned to the pro-immigration organization.

wrote "I've come to the point of view that for European-American society and culture to persist requires a European-American majority, and a clear one at that."

Participants were then asked if they would like to authorize the researchers to donate $1 to that organization on their behalf. The money would not come from the subject's $0.50 payment for participation in the study. Moreover, the participant would also be paid an *extra* $1 (or about 1/6 of an hourly wage on *mTurk*) if he authorized the donation. Rejecting the donation would not affect the monetary payoffs to the participant in any way other than through the loss of this extra amount.

In addition to the original randomization of informing subjects about Trump's probability of victory in the participant's state, we introduced a second layer of cross-randomization at the donation stage. Half of the participants were assured that their donation authorization would be kept completely anonymous, and that no one, not even the researchers would be able to match their decision to their name: we refer to this condition as the *private* condition. Specifically, participants were told:

> Note: just like any other answer to this survey, also **your donation decision will be completely anonymous**. No one, not even the researchers, will be able to match your decision to your name.

The other half of the subjects were instead informed, right before the donation question was displayed to them, that they might be personally contacted by the research team to verify their answers to the questions in the remaining part of the survey: this is what we refer to as the *public* condition.

> Important: in order to ensure the quality of the data collected, a member of the research team **might personally contact you** to verify your answers to the next question and the following ones.

Names and contact information were not collected during the intervention, since the practice is not allowed on *mTurk*. As a result, it was not possible to credibly lead participants to believe that their decision would be observed by other individuals, for example, from their state. However, on *mTurk* it is possible to contact participants individually on the platform via their worker ID. We were therefore able to minimize deception since the decision was anonymous yet researchers could still potentially contact participants (moreover, participants in the public condition might have believed that they would be asked for personal information in case they were contacted later on). As mentioned before, social acceptability with respect to surveyors and solicitors is also informative to the study of social pressure and social image concerns, as examined in DellaVigna, List and Malmendier (2012) and DellaVigna et al. (2017).

Wave 2: Intervention After the Election. We exploited the natural experiment of Trump's unexpected victory as an alternative "treatment" that could lead to an increase in the social acceptability of holding xenophobic views. We repeated the experimental intervention in the same states during the first week after the election, restricting the design to the control condition with no additional initial information on Trump's popularity. We recruited both subjects who had participated before the election (N = 168; 166 of them assigned to the anti-immigration organization) and new participants (N = 218; 215 assigned to that organization). Based on naturally occurring variation, we can assess the impact of Trump's electoral victory on the perceived social acceptability of xenophobia.

Interpreting the Design Through the Lens of the Framework. We interpret type A as xenophobic and type B as tolerant; action A as the xenophobic action (authorizing the donation to the anti-immigration organization) and action B as the tolerant one (not authorizing this donation). Our assumption is that xenophobic individuals strictly prefer action A (they help an aligned organization and get a dollar) and tolerant strictly prefer action B (implicitly, we assume that associating with the organization creates more than a dollar of disutility for tolerant people). The citizens who choose their action in the model correspond to the subjects in our experiment. The high signal $s = p_H$ is information that Trump is 100% likely to win the subject's home state (in the experiment before the election), or that Trump won the election (after the election); in the private setting, there is no audience, whereas in the public setting, the audience is the researchers. The model predicts (Proposition 2) that citizens who got this high signal are more likely to choose the xenophobic action than those who got no signal in the public setting, and that there is no difference in the private setting.

3.1.2 Main Results

Appendix Table B1 provides evidence that individual characteristics are balanced across all four pre-election experimental conditions, confirming that the randomization was successful. The first four bars of Figure 1 display our main findings from the pre-election experiment. In the control condition before the election, we observe a large and statistically significant wedge between donation rates in private and in public: a drop from 54% in private to 34% in public (the p-value of a t test of equality is 0.002). Among individuals in the information condition, we observe no difference in private and public donation rates, which are 47% and 46%, respectively (p-value=0.839). Moreover, we find no significant difference in private donation rates between the information and control conditions (p-value=0.280), suggesting that the information is not increasing privately-held xenophobia. The increase in public donation rates between the two conditions is statistically significant (p-value=0.089), as is the difference in differences between donation rates in private across conditions and donation rates in public across conditions (p-value=0.050). These results indicate

that the information provided causally increased the social acceptability of the action to the point of eliminating the original social stigma associated with it.[15] The first two columns of Table 1 display the difference in differences results in regression format and show that our results are unchanged when individual covariates are included. The table also displays p-values from permutation tests, showing that our findings are robust to that inference method.

As an additional way of examining the effect of Trump's increased popularity on public expression of xenophobia, we compare the private and public donation rates in the control condition before and after the election. In the last two bars of Figure 1, we analyze the actions of respondents who participated in both waves of the experiment. Though we focus on a subset of the original participants, we find no evidence of selective attrition, and the samples in the different conditions (before and after) are again well balanced (see Appendix Table B2). In private, we again observe no increase in donation rates (54% before the election and 49% after the election, p-value=0.440). In public, we observe a significant increase from 34% before the election to 48% after it (p-value=0.060). The difference in differences between donation rates in private before and after the election and donation rates in public before and after the election in the control condition is also statistically significant (p-value=0.062). It is worth emphasizing that the donation rates following the two different "treatments" (either experimental or natural) are extremely similar: 47% vs. 49% in private, and 46% vs. 48% in public. The last two columns of Table 1 display the results in regression format, and again confirm that the findings are robust to using permutation tests. Our results are also robust to different samples for the post-election experiment, such as also including new participants, as displayed in Appendix Table B3.[16]

3.2 Experiment 1B: Pittsburgh Voters

We also developed a second experiment that, while maintaining the basic design idea of first experiment, improved it along several dimensions. As in the first experiment, we randomize the perceptions of Trump's popularity among the respondents' peers (using a new strategy that does not rely on the timing of the experiment in relation to the presidential election), and ask the respondents to make a donation to an anti-immigration organization, either in a public condition or

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[15] Apart from social stigma, another possible reason for the lower donation rates in the public condition with respect to the private condition is that participants might want to avoid talking with the surveyor because of the extra effort and time this requires (independently of the topic of the conversation), and they might expect the likelihood of having to talk to be higher in case they decide to make the donation. However, this mechanism should operate both in the control and in the treatment conditions, thus not affecting our identification of the reduction in social stigma.

[16] If we restrict the analysis to the 274 subjects who followed the registered protocol results are directionally similar: raw donation rates are respectively, for the private and public groups, 54% and 35% in the control condition before the election, 50% and 39% in the information condition before the election, and 39% and 45% in the control condition after the election. As with the full sample, the wedge between the public and private condition is significant in the control condition before the election (p-value=0.018), and not significant in the information condition (p-value=0.219), or after the election (p-value=0.607). The difference in differences between donation rates in private across conditions and donation rates in public across conditions is smaller than in the full sample and not significant before the election (8.4%, p-value=0.486), but large and significant after the election (24.9%, p-value=0.068).

in a private condition. However, and first, the second experiment was run on a larger sample to increase statistical power. Second, instead of recruiting workers from *mTurk*, the participants were recruited through a survey company making our sample less subject to the concerns related to the reliability of *mTurk* workers. Third, we randomized the visibility of the donation with respect to participants' potential peers (that is, other residents in their area) and not with respect to the surveyor.[17]

3.2.1 Experimental Design

Between August and October 2018, an online panel survey company recruited participants (N = 1600) from the seven counties composing the Pittsburgh, PA Metropolitan Statistical Area (Allegheny, Armstrong, Beaver, Butler, Fayette, Washington, Westmoreland).[18] Each panelist could participate in the survey only once.[19]

After the election, the information treatment originally used in the first experiment could no longer be used to change the respondents' beliefs about Trump's local popularity. In order to overcome this issue, we developed a new strategy for manipulating subjects' beliefs that exploited the variation in the identity of the winner of the popular vote in the 2016 presidential election across overlapping geographical areas. While Donald Trump won the popular vote in Pittsburgh's metropolitan area, Hillary Clinton won it in Allegheny, the county where Pittsburgh is located. At the beginning of the survey, respondents were told three facts about Pittsburgh politics. Half of the participants were randomized into the *Trump won* condition, and had one of the facts state that:

> "In the 2016 US Presidential Election, Donald Trump won Pittsburgh's metropolitan area."

The other half of the participants were instead randomized into the *Clinton won* condition, and were told that:

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[17]Experimenter demand effects might be enhanced in the public condition of Experiment 1A, in which the respondent expects to be contacted by a member of the research team (see the recent work on the topic by (de Quidt, Haushofer and Roth, 2018)). By replicating the results of Experiment 1A with a non-*mTurk* sample and with a public condition not involving any interaction with the surveyor, we show that the direction and magnitude of our findings do not rely on these features of the design. The public condition of Experiment 1B also does not involve any time or hassle cost of interacting with the surveyor, which could have affected the donation decisions in Experiment 1A.

[18]The company, Qualtrics, is the same used by Elias, Lacetera and Macis (2016) and works as a panel aggregator that leverages a variety of actively managed participant databases. The databases consist of online participants who have opted into participating in market research studies in exchange for incentives. On a quarterly basis, quality evaluations are performed by third-party data specialists to evaluate the databases on key aspects including response quality and consistency of the panelists.

[19]See the survey script in Appendix C.3. The reader can access the survey information sheet and interactively follow the survey at `http://ssd.az1.qualtrics.com/jfe/form/SV_erhJZhOcoOf0u6F`.

"In the 2016 US Presidential Election, Hillary Clinton won Pittsburgh's county."

The remaining two bullet points were the same for both groups of participants and contained neutral historical information about Pittsburgh politics. These two extra bullets were included to limit the participants' ability to infer the purpose of the study.

In the next part of the intervention, we measured the perceived social acceptability of strong anti-immigrant sentiment using a donation experiment similar to the one described above. Participants were first told that they would be given the opportunity to make a donation to a randomly drawn organization that could either be anti- or pro-immigration. As above, we analyze the behavior of the participants who were asked to donate to FAIR, the same organization of Experiment 1A. Before the organization was revealed, the participants were also told that the donation would not be subtracted from their payment for participating in the survey, and that in case they authorized the donation they would be paid an extra $1. Again, to ensure that the participants were aware of FAIR's very strong anti-immigration stance, a few details about the organization and its founder were provided.

In addition to the first randomization informing subjects about either Trump's or Clinton's victory, we introduced a second layer of cross-randomization at the donation stage. All of the participants were told that the results of the survey would be posted online. The link to the website was given to all participants, so that it was clear to each participants that other participants (who came from the same geographical area around Pittsburgh, a fact known to participants) would have had access to the result of the survey. Importantly, however, half of the participants were assured that their individual responses would be kept completely anonymous, and that the results would be posted in aggregate form as percentages only: we refer to this condition as the *private* condition. Specifically, participants were told:

> "The anonymized results from this survey will be posted on our website in approximately one month. Results will be reported as percentages only, so your individual response to the survey will remain anonymous. We will notify you when the results become available on our website, [website link]."

The other half of the subjects were instead not given this assurance of anonymity. In practice, their decision appeared on the website in anonymous form as for the other half of the participants. Importantly, however, their decisions were not reported as percentages in aggregated form: instead, for each participant, the website reported the (anonymous) survey response ID and the individual donation decision. To avoid deception, the subjects were never explicitly told that their personal details would be published on the website along with their donation decision. The participants, however, were given clues suggesting that their name and email could be published on the website together with their individual donation decision. This is what we refer to as the *public* condition:

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"The results from this survey, including your individual donation decision and the do-
nation decisions of all of the other Pittsburgh respondents to this survey, will be posted
on our website in approximately one month. There is no need to provide your name,
email, etc. here; the survey company we work with has this information already. We
will notify you when the results become available on our website, [website link]."

Note that the survey company indeed has access to the participants' personal identifying infor-
mation, but we (the experimenters) do not. As a result, the statements in both conditions were
factually true.

Participants were then asked to predict the share of Pittsburgh voters that agree with the
following anti-immigration statements:

"For European American society and culture to persist requires a European-American
majority, and a clear one at that."

and

"Both legal and illegal immigration should be drastically reduced because immigrants
undermine American culture and do not respect American values."

These provide two measures of the perceived local popularity of anti-immigrant sentiment. At
the end of the survey, the respondents answered a few demographic questions.

Interpreting the Design Through the Lens of the Framework. In this experiment, the
citizens are our subjects (survey participants), and the audience (in the public setting) are those
who would visit the website we provided (mostly survey participants, but also potentially a larger
Internet audience). In this sense, just like in the model, both the senders and the receivers are
essentially drawn from the same population. We interpret information that Trump won Pittsburgh
MSA as the high signal $s = p_H$ and information that Clinton won Pittsburgh county as the low
signal $s = p_L$. The model predicts (Proposition 2) that citizens who got signal $s = p_H$ are more
likely to choose the xenophobic action than those choose who got signal $s = p_L$ in the public setting,
and that there is no difference in the private setting.

3.2.2 Main Results

Appendix Table B4 provides evidence that individual characteristics are balanced across all four
experimental conditions, confirming that the randomization was successful. Figure 2 displays the
main findings from this experiments. In the *Clinton won* condition, we observe a large and statisti-
cally significant wedge between donation rates in private and in public: a drop from 30% in private
to 20% in public (the p-value of a t test of equality is <0.001). Among individuals in the *Trump won*

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condition, we observe no difference in private and public donation rates, which are 31% and 33%, respectively (p-value=0.594). Moreover, we find no significant difference in private donation rates between the *Clinton won* and *Trump won* conditions (p-value=0.894), suggesting that the information about the winner of the popular vote is not changing privately-held xenophobia. The increase in public donation rates between the two conditions is statistically significant (p-value<0.001), as is the difference in differences between donation rates in private across conditions and donation rates in public across conditions (p-value=0.008). These results indicate that the information provided about Trump having won the popular vote in the Pittsburgh area causally increased the social acceptability of the action to the point of eliminating the social stigma associated with it among the participants who were told that Clinton won the popular vote. Table 2 display the difference in differences results in regression format and show that our results are unchanged when individual covariates are included.[20] The table also displays p-values from permutation tests, showing that our findings are robust to that inference method.

3.2.3 Evidence of Mechanism

Appendix Figure B1 shows that, consistent with an underlying mechanism of updates in perceptions about the local popularity in xenophobic views, the *Trump won* treatment shifts to the right the distribution of participants' perceptions about the local popularity of these views. The average belief goes up from 42.6% to 50.1% (p-value<0.001).

Given this strong shift in perceptions caused by the treatment, we also use the *Trump won* treatment as an instrument moving perceptions. In Appendix Table B6, we present evidence that participants' perceptions causally affect their donation in public, but not in private. A one percentage point increase in the perception of the local popularity of xenophobia increases donation rates in public by 2.3 percentage points.

We view the IV results are suggestive, since it is possible that the *Trump won* treatment affects donation rates through other channels. However, we find this unlikely. First, note that the donations in private do not change, which rules out channels not associated with social acceptability. Nevertheless, it could still be that public decisions are shifted by an update in the *variance* in people's perceptions about the local popularity of xenophobia. This would not be at odds with the overall interpretation of the results as driven by perceptions of social acceptability and social punishment, but would be inconsistent with the IV interpretation of effects driven by changes in the first moment of the perceptions. Reassuringly, though we cannot observe the variance in

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[20]Heterogeneous treatment effects by race, gender, age, marital status, education, and income are reported in Appendix Table B5. The direction of the treatment effect is the same in all subgroups, and differences in the magnitude of the effects between subgroups are never statistically significant. Point estimates indicate, however, that the wedge in donations between public and private in the Clinton won treatment is lower among Whites than among non-Whites, and that the reduction in the wedge in the Public condition is complete among Whites but only partial among non-Whites.

perceptions at the individual level, we observe that across individuals, the information given does not affect the variance in the distribution of guesses.[21]

4   Experiment 2: Interpreting Xenophobic Expression

4.1   Experimental Design

In November 2018, an online survey panel survey company recruited participants (N = 1830) from the U.S. who had previously self-identified as Democrats.[22] Each panelist could participate in the survey only once. The survey was conducted on the online platform Qualtrics.

First, all participants answered a number of demographic questions. The participants of this experiment were randomized into one of four conditions, corresponding to the four treatments of Experiment 1B run with subjects from Pittsburgh: the *Clinton won, private* group, the *Clinton won, public* group, the *Trump won, private* group, and the *Trump won, public* group. Those in the two *Clinton won* groups were told that we surveyed, in another survey, participants from an area where Hillary Clinton won in 2016. Those in the two *Trump won* groups were told instead that we surveyed participants from an area that Donald Trump won in 2016. We did not give to the subjects any other information about the area where the other experiment was conducted.

All subjects were then presented with two anti-immigrant quotes (the same used in the second experiment), and were asked to predict the share of voters in the other participant's area that they believed would agree with the quotes. These provide two measures of the beliefs that the participants in this experiment had about the popularity of anti-immigrant sentiments in the area where the previous study took place.

Next, subjects (players 1) were informed that they had been matched with a participant from the previous survey (player 2). Each player 1 was matched with a random player 2 from one of the four original conditions. For example, a player 1 randomized into the *Clinton won, private* group for Experiment 2 was matched with a player 2 that was randomized into the *Clinton won, private* condition in Experiment 1B. Players 1, however, were not informed that the previous survey was an experiment with different treatment conditions. The subjects were then told that player

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[21]A possible alternative explanation for the findings is that the *Trump won* treatment in Experiment 1B (and similarly the *information* treatment and the election results in Experiment 1A) might have changed the perceived local acceptability of acting selfishly. Donald Trump can be seen both as the anti-immigrants candidate and as the candidate of greed and self-interest (we thank an anonymous referee for raising this point). The results of Experiment 3 (reported in Appendix E), however, help us rule out this hypothesis. The design of Experiment 3 is similar to that of Experiment 1: it uses donation decisions made either in a private or in a public condition to study the social acceptability of a view. In Experiment 3, however, instead of varying the perceived local popularity of candidate Trump as we do in Experiment 1, we directly randomize the perceived local popularity of anti-Muslim sentiments. Consistently with an update in the perceived popularity of the view being the mechanism at play in both Experiment 1 and 3, we find similar patterns of results in both experiments.

[22]The company we used for this experiment is Prime Panels. See the survey script in Appendix C.4. The reader can access the survey information sheet and interactively follow the survey at `http://ssd.az1.qualtrics.com/jfe/form/SV_4VgnEZSmikzSf8p`.

2 authorized a donation to an anti-immigrant organization, after being shown the exact text of the question in which the donation was authorized. Importantly, the text included either the text of the *private* treatment or of the *public* treatment, so that the subject could fully understand the condition under which the other participant made the donation choice. For example, players 1 in the *Trump won, public* group knew that the player 2 they were matched with was from an area where Donald Trump won the 2016 election and decided to authorize a donation to the anti-immigration organization knowing that his donation decision would have been published online, possibly along with his personal details. The subjects, however, were not informed about the fact that the donation in the previous survey was incentivized.

Finally, players 1 were asked to play a dictator game in which they could decide how to split $2 between themselves and player 2. The subject were told that their decision on how much to give to the other participant was anonymous, and that when making his donation decision, player 2 did not know that he would be playing this follow-up game.

Interpreting the Design Through the Lens of the Framework. Players 1 were informed that a particular subject from a previous study chose xenophobic action A after observing either signal $s = p_L$ (Clinton won the election in the area) or $s = p_H$ (Trump won the election in the area); players 1 therefore know the realization of the signal s as well. The model predicts (Proposition 3) that players 1 believe that a player 2 who chose xenophobic action A is less likely to be xenophobic in the case of signal $s = p_H$ than in the case of signal $s = p_L$. This would be reflected in how players 1 punish players 2 in the dictator game.

4.2   Main Results

Appendix Table B7 provides evidence that individual characteristics are balanced across all four experimental conditions, confirming that the randomization was successful. Figure 3 displays our main findings from the third experiment.

Panel A displays comparisons of average donations across groups. In the *Clinton won, private*, *Clinton won, public*, and *Trump won, private* conditions the average amount given is very similar, at respectively $0.78, $0.81, and $0.78. The p-value of a test of joint equality of the three averages is 0.739. In none of these conditions would player 2 face any pressure to donate to the anti-immigrant organization in order to pander to the majority: in the two private conditions there is not social pressure, and in the *Clinton won, public* condition the desire to pander to the majority would, if anything, pressure the subject into not authorizing the donation. From the decision to donate, the subject could then infer that player 2 was likely to truly hold xenophobic views. The lack of difference across the two private conditions helps us deal with alternative interpretations, such as learning about local motives to privately oppose immigration (since shifting perceptions on who won the election in player 2's area could have changed the perception of what that area is).

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In the *Trump won, public* condition the average donation is $0.88, higher than in the *Clinton won, private* condition (p-value 0.006), the *Clinton won, public* condition (p-value 0.052), and *Trump won, private* condition (p-value 0.008). The one in the *Trump won, public* condition is the only donation that could have been driven by the desire of player 2 to pander to the majority, complicating the inference that player 1 could make about the anti-immigration views of the participant from the previous study.

Panel B compares the share of participants who do *not* share anything from their $2 endowment with player 2. Here again, the percentage of subject deciding not to transfer anything to the other participant is similar across the *Clinton won, private*, *Clinton won, public*, and *Trump won, private* conditions, at respectively 18%, 21% and 22%. The p-value of a test of joint equality of the three averages is 0.374. Importantly, the share of participants not donating is 8% in the *Trump won, public* group, significantly lower than in the other three conditions (p-value <0.001 for all three pairwise comparisons).[23]

Appendix Table B8 displays the results in regression format and show that our results are not changed when individual covariates are included.

In Appendix D we present the design and results from a similar experiment conducted on *mTurk*, where participants were asked to play a dictator game with another respondent in Switzerland, and where we manipulated perceptions of the popularity of anti-Muslim sentiment in Switzerland, by randomly giving information about the 2009 Swiss referendum that banned the construction of minarets in that country. The results are again consistent with the predictions of our framework.

4.3 Evidence of Mechanism

Appendix Figure B2 shows that, consistent with an underlying mechanism of updates in perceptions about the local popularity in xenophobic views in the area of player 2, the *Trump won* treatment shifts to the right the distribution of the dictator's perceptions about the local popularity of these views. The average belief goes up from 44.9% to 53.5% (p-value<0.001).

We can again use the *Trump won* treatment as an instrument moving perceptions. In Appendix Table B9, we present evidence that the dictators' perceptions causally affect their amount given and the probability of giving when the previous study subject donated in public, but not when he donated in private.

Again, the information given does not affect the variance in the distribution of guesses on the popularity of xenophobic views in the area of the previous study subject.

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[23]The median amount given was $1 in all treatments, so we do not use it as an outcome.

5 Conclusion

In this paper, we study how social norms, usually thought of as relatively stable and persistent, can change rapidly when new information becomes available. In our first sets of experiments, we show that a positive, experimentally-induced update in people's beliefs about Donald Trump's popularity increases their willingness to publicly express xenophobic views. The effect of his actual victory is very similar. We see no evidence that this election increased the likelihood of *having* such views, at least not in the days immediately following the election, and therefore conclude that the increased expression of certain views should be attributed to a shift of social norms rather than individual preferences or attitudes, at least in the short run. Using dictator games, we also test the model's prediction that individuals are judged less negatively for expressing a view that is popular in their environment, and find that it is indeed the case.

Our findings shed light on the factors that can trigger rapid change in social norms, and in particular, norms against the expression of xenophobic views. Our results suggest that social norms regarding the expression of such views in the U.S. might have already been causally changed by Trump's rise in popularity and eventual electoral victory. More broadly, the mechanisms we study in this paper might help explain the rise – and potential consequences – of other crucial recent events such as the *Brexit* vote in the U.K., and more generally the rise in anti-immigrant and anti-minority sentiment in the developed world.

Our analysis suggests at least two lines for subsequent work. One deals with the joint evolution of individual views and social norms. While we see no evidence that Donald Trump's election changed people's views on immigration in the very short run, it is well possible that the changed social norm will expose people to views that will eventually influence their own. These individual views could eventually affect both social norms and political decisions. Thus, understanding how individuals acquire and change their preferences through social interactions is of utmost importance. An interesting and important question, for example, is whether laws prohibiting certain speech (such as those banning denial of the Holocaust in Germany and some other countries) are more or less effective in forming public opinion as compared to cases where such speech is not banned but highly stigmatized (as, e.g., in the U.S.)

A different set of questions stems from our dictator game experiments. We observed that subjects were largely willing to forgive the individual if he publicly expressed xenophobic views as part of conforming to the social norm. Yet they were remarkably unwilling to forgive the individual for holding such views, despite knowing little about the reasons why he acquired them. This alone would be consistent with subjects viewing people from other settings as similar to them as individuals, but living in different social environments, but this explanation is perhaps too simplistic. Nevertheless, understanding how people judge thoughts and actions of people from their own and from different societies and cultures, and perhaps ultimately why social norms emerge, is

another interesting avenue for future research.

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Figures and Tables

Figure 1: **Experiment 1A: Donation Rates Before and After the Election**
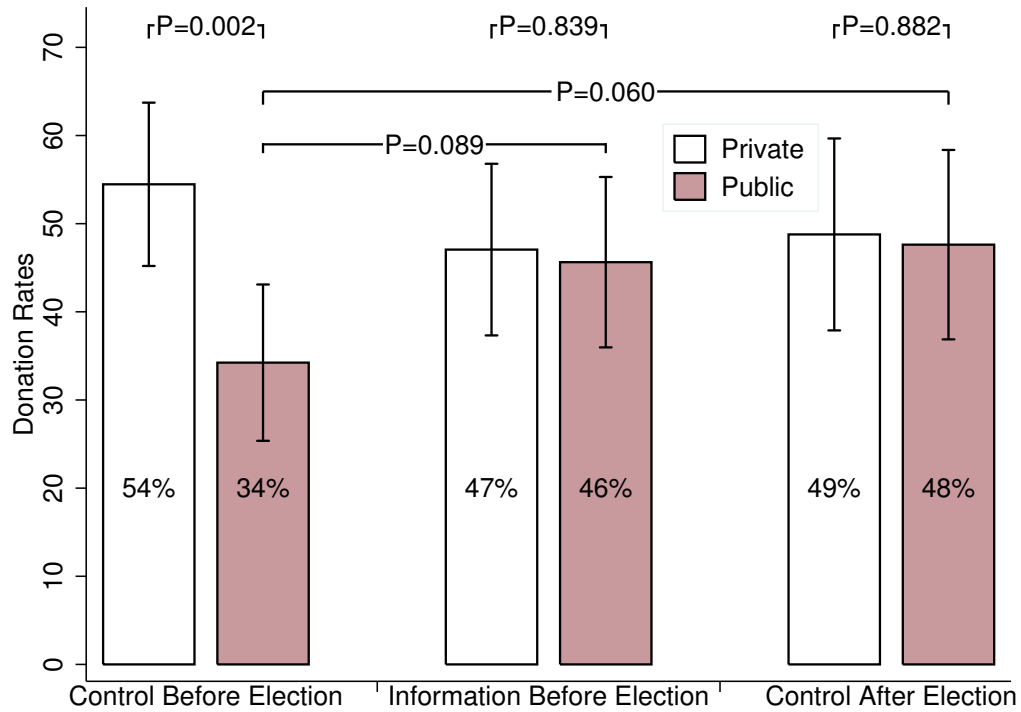
Notes: the two bars on the left display donation rates to the anti-immigration organization for individuals in the private and public conditions in the control group before the election (full sample, respectively N=112 and N=111), the two central bars display those in the information group before the election (full sample, respectively N=102 and N=103), and the last two bars display those in the control group after the election (for individuals already surveyed before the election, respectively N=82 and N=84). Error bars reflect 95% confidence intervals. Top horizontal bars show *p*-values for *t* tests of equality of means between different experimental conditions.

Figure 2: **Experiment 1B: Donation Rates**
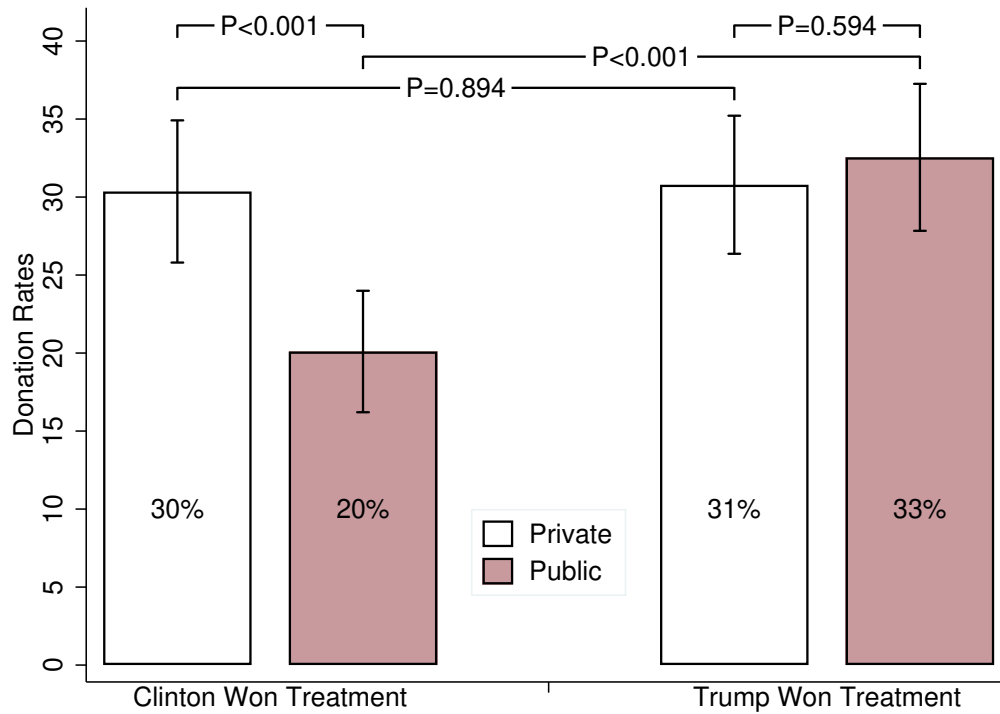
Notes: the two bars on the left display donation rates to the anti-immigration organization for individuals in the private and public conditions in the Clinton Won treatment group (respectively N=392 and N=408), and the two bars on the right display those for individuals in the private and public conditions in the Trump Won treatment group (respectively N=419 and N=381). Error bars reflect 95% confidence intervals. Top horizontal bars show *p*-values for *t* tests of equality of means between different experimental conditions.

Figure 3: **Experiment 2: Donation Rates**
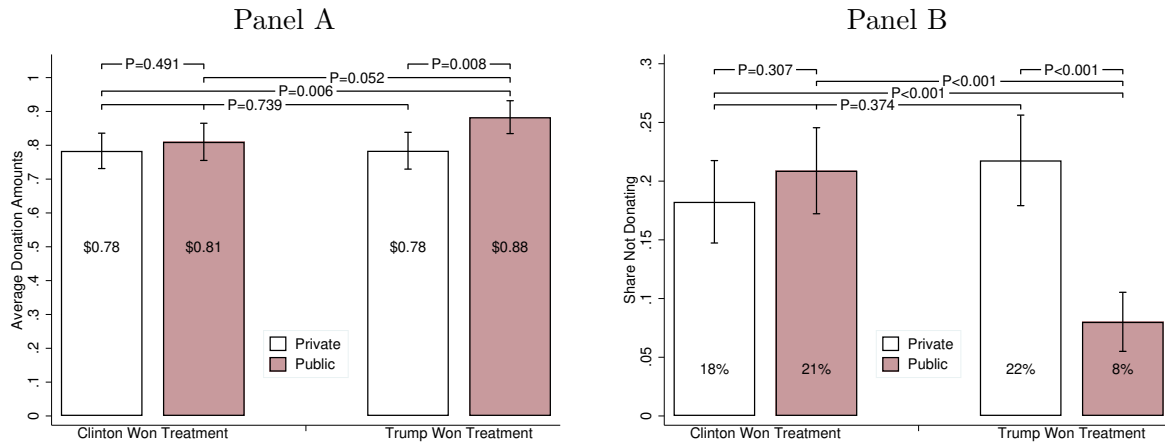
Notes: Panel A displays average donation amounts to the individuals from experiment 1 in the four experimental conditions. The two bars on the left display donations for individuals in the private and public conditions in the Clinton Won treatment group (respectively N=466 and N=474), and the two bars on the right display those for individuals in the private and public conditions in the Trump Won treatment group (respectively N=441 and N=449). Panel B displays the percent of subjects not making positive donations. Error bars reflect 95% confidence intervals. Top horizontal bars show *p*-values for *t* tests of equality of means between different experimental conditions.

Table 1: **Experiment 1A: Difference in Differences Regressions**

Dependent Variable	Dummy: individual authorizes donation to anti-immigrant organization			
	(1)	(2)	(3)	(4)
Public	-0.202***	-0.200***	-0.202***	-0.199***
	[0.065]	[0.066]	[0.065]	[0.065]
	(0.004)	(0.005)	(0.004)	(0.007)
Information	-0.074	-0.077	-0.074	-0.076
	[0.069]	[0.068]	[0.069]	[0.068]
	(0.277)	(0.266)	(0.277)	(0.281)
Public*Information	0.188*	0.178*	0.188*	0.178*
	[0.096]	[0.096]	[0.096]	[0.096]
	(0.045)	(0.062)	(0.045)	(0.062)
After Election			-0.057	-0.062
			[0.073]	[0.072]
			(0.380)	(0.304)
Public*After Election			0.191*	0.186*
			[0.102]	[0.101]
			(0.071)	(0.080)
Mean Donation Rate Control Private Before Election		0.545		
Controls	No	Yes	No	Yes
N	428	428	594	594
R^2	0.022	0.033	0.017	0.034

Notes: Columns (1) and (2) includes the full pre-election sample. Columns (3) and (4) add the post-election sample of individuals already surveyed before the election. Columns (1) presents OLS regression of a dummy variable for whether a individual donates to the anti-immigration organization on a dummy for the Public condition, a dummy for the Information condition, and a dummy for the Public Information condition. The control private condition before the election is the omitted group, for which we report the mean donation rate. Columns (3) replicates and adds a dummy for the after election condition, and a dummy for the Public after election condition. Columns (2) and (4) replicate and add individual covariates (gender, age, marital status, years of education, household income, and race). Robust standard errors in brackets. *P*-values from permutation tests with 1,000 repetitions in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1% based on robust standard errors.

Table 2: **Experiment 1B: Difference in Differences Regressions**

Dependent Variable	Dummy: individual authorizes donation to anti-immigrant organization	
	(1)	(2)
Public	-0.103***	-0.108***
	[0.031]	[0.031]
	(0.002)	(0.000)
Trump Won Treatment	0.004	0.001
	[0.032]	[0.033]
	(0.889)	(0.987)
Public*Trump Won Treatment	0.120***	0.129***
	[0.045]	[0.045]
	(0.005)	(0.001)
Mean Donation Rate Clinton Won Private Treatment	0.304	
Controls	No	Yes
N	1,600	1,587
R^2	0.012	0.023

Notes: Columns (1) presents OLS regression of a dummy variable for whether a individual donates to the anti-immigration organization on a dummy for the public condition, a dummy for the Trump Won condition, and a dummy for the Trump Won public condition. The Clinton Won private condition is the omitted group, for which we report the mean donation rate. Column (2) replicates and add individual covariates (gender, age, marital status, years of education, household income, and race). Robust standard errors in brackets. *P*-values from permutation tests with 1,000 repetitions in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1% based on robust standard errors.

Supplementary Appendix
(Not For Publication)

A Theory Proofs

Proof of Proposition 1.

In the private case, $n = 0$, and thus each citizen chooses $d_i = t_i$. So consider the public case. Slightly abusing notation, let us write $U_{A,h}(d_i)$ to denote the utility $U_i(d_i)$ of citizen i with $t_i = A$ and $h_i = h$, and let us write $U_{B,h}(d_j)$ to denote the utility $U_j(d_j)$ of citizen j with $t_j = B$ and $h_j = h$.

In what follows, we denote the equilibrium shares of types A and types B who choose action A by r_A and r_B, respectively. Then an individual with prior belief P about the share of type A (where $P = P_A$ for type A and $P = P_B$ for type B, where P_A and P_B are defined in the text, believes that a decision-maker who chose $d_i = A$ has type A with probability $Q_{P,A} = \frac{Pr_A}{Pr_A + (1-P)r_B}$, while one who chose $d_i = B$ has type A with probability $Q_{P,B} = \frac{P(1-r_A)}{P(1-r_A)+(1-P)(1-r_B)}$.

Our first observation is that the following increasing differences property holds in any equilibrium: $U_{A,h}(A) - U_{A,h}(B) > U_{B,h}(A) - U_{B,h}(B)$. Suppose, to obtain a contradiction, than this is not the case. Let us write down these conditions:

$$V_A + h\left(P_A Q_{P_A,A} + (1 - P_A)(1 - Q_{P_B,A})\right) - h\left(P_A Q_{P_A,B} + (1 - P_A)(1 - Q_{P_B,B})\right) \leq$$
$$h\left(P_B Q_{P_A,A} + (1 - P_B)(1 - Q_{P_B,A})\right) - V_B - h\left(P_B Q_{P_A,B} + (1 - P_B)(1 - Q_{P_B,B})\right).$$

Rearranging, we get

$$V_A + V_B + h\left(P_A - P_B\right)\left(Q_{P_A,A} + Q_{P_B,A} - Q_{P_A,B} - Q_{P_B,B}\right) \leq 0.$$

The latter bracket cannot exceed 2, since all the terms are probabilities lying on $[0, 1]$. Thus, we have

$$V_A + V_B \leq 2h\left(P_A - P_B\right).$$

Since $p_L < P_A < P_B < p_H$, we have $P_A - P_B < p_H - p_L$. However, by Assumption 1, $V_A, V_B \geq h(p_L - p_H)$. This contradiction implies the increasing differences property.

This increasing differences property implies that any equilibrium that satisfies the D1 criterion has the feature that if all citizens choose $d_i = B$ on equilibrium path, then anyone who deviates to choose action A will be considered to be type A (and the other way around). Indeed, it means that the benefit from deviating to action A, $U_i(A) - U_i(B)$, cannot be maximized for an individual of type B.

To proceed, notice that if $U_{A,h}(A) \geq U_{A,h}(B)$ for some h, then $U_{A,h'}(A) > U_{A,h'}(B)$ for $h' < h$. Indeed, suppose not. Denoting

$$L = P_A Q_{P_A,A} + (1 - P_A)(1 - Q_{P_B,A}) - P_A Q_{P_A,B} - (1 - P_A)(1 - Q_{P_B,B}),$$

we have $V_A + hL \geq 0$ and $V_A + h'L \leq 0$, which implies $(h - h') L \geq 0$, so $L \geq 0$. However, then $V_A + h'L > 0$, a contradiction. Similarly if $U_{B,h}(B) \geq U_{B,h}(A)$ for some h, then $U_{B,h'}(B) \geq U_{B,h'}(A)$ for $h' < h$. This implies that A types may choose action B only if their social image concerns exceed a certain cutoff, and the same applies to B types choosing action A. More precisely, if r_A is the share of A types choosing action A, then all those with $h < F(r_A)$ choose action A and all those with $h > F(r_A)$ choose action B (either set may be empty); similarly, B types with $h < 1 - F(r_B)$ choose action B and those with $h > 1 - F(r_B)$ choose action A.

Let us show that either $r_A = 1$ or $r_B = 0$. Suppose not, so $r_A < 1$ and $r_B > 0$. This means that citizen i with $t_i = A$ and $h_i = M$ chooses B and citizen j with $t_j = B$ and $h_j = M$ chooses A. This is only possible if $U_{A,M}(A) \leq U_{A,M}(B)$ and $U_{B,M}(A) \geq U_{B,M}(B)$. However, this contradicts the single crossing property, so either $r_A < 1$ or $r_B = 0$ in any equilibrium.

Now fix $r_B = 0$ and suppose that h is the cutoff social image concern for type A, so $r_A = F(h)$. Consider $G_A(h) = U_{A,h}(A \mid r_A = F(h), r_B = 0) - U_{A,h}(B \mid r_A = F(h), r_B = 0)$ as a function of h; let us show that it has at most one zero, and if so it changes the sign from positive to negative. We have

$$
\begin{aligned}
G_A(h) &= V_A + h\left(P_A Q_{P_A,A} + (1 - P_A)(1 - Q_{P_B,A})\right) \\
&\quad - h\left(P_A Q_{P_A,B} + (1 - P_A)(1 - Q_{P_B,B})\right) \\
&= V_A + h\left(P_A - P_A \frac{P_A(1 - F(h))}{1 - P_A F(h)} - (1 - P_A)\left(1 - \frac{P_B(1 - F(h))}{1 - P_B F(h)}\right)\right) \\
&= V_A + h(1 - P_A)\left(\frac{P_A}{1 - P_A F(h)} - \frac{1 - P_B}{1 - P_B F(h)}\right).
\end{aligned}
$$

Suppose that $G_A(h) = 0$ for some h. This implies, in particular, that $\frac{P_A}{1 - P_A F(h)} < \frac{1 - P_B}{1 - P_B F(h)}$. It suffices to prove that in that case $\frac{dG_A(h)}{dh} < 0$. We have

$$
\begin{aligned}
\frac{d_A G(h)}{dh} &= hf(h)(1 - P_A)\left(\frac{(P_A)^2}{(1 - P_A F(h))^2} - \frac{P_B(1 - P_B)}{(1 - P_B F(h))^2}\right) \\
&\quad + (1 - P_A)\left(\frac{P_A}{1 - P_A F(h)} - \frac{1 - P_B}{1 - P_B F(h)}\right).
\end{aligned}
$$

Consider two cases. If $P_B \geq \frac{1}{2}$, then $\frac{P_B}{1-P_B} \geq 1$, so

$$\frac{P_B\left(1-P_B\right)}{\left(1-P_BF\left(h\right)\right)^2} = \frac{P_B}{1-P_B}\frac{\left(1-P_B\right)^2}{\left(1-P_BF\left(h\right)\right)^2} \geq \left(\frac{1-P_B}{1-P_BF\left(h\right)}\right)^2 > \left(\frac{P_A}{1-P_AF\left(h\right)}\right)^2,$$

which means that both terms in $\frac{dG_A(h)}{dh}$ are negative, which proves that $\frac{dG_A(h)}{dh} < 0$. So suppose $P_B < \frac{1}{2}$, which means $\frac{P_B}{1-P_B} < 1$. We have

$$
\begin{aligned}
\frac{1}{1-P_A}\frac{dG_A\left(h\right)}{dh} &= hf\left(h\right)\left(\frac{\left(P_A\right)^2}{\left(1-P_AF\left(h\right)\right)^2} - \frac{\left(1-P_B\right)^2}{\left(1-P_BF\left(h\right)\right)^2}\right) + \left(\frac{P_A}{1-P_AF\left(h\right)} - \frac{1-P_B}{1-P_BF\left(h\right)}\right)\\
&\quad + hf\left(h\right)\frac{1-2P_B}{1-P_B}\frac{\left(1-P_B\right)^2}{\left(1-P_BF\left(h\right)\right)^2}\\
&= \left(\frac{P_A}{1-P_AF\left(h\right)} - \frac{1-P_B}{1-P_BF\left(h\right)}\right)\left(hf\left(h\right)\left(\frac{P_A}{1-P_AF\left(h\right)} + \frac{1-P_B}{1-P_BF\left(h\right)}\right)+1\right)\\
&\quad + hf\left(h\right)\frac{1-2P_B}{1-P_B}\frac{\left(1-P_B\right)^2}{\left(1-P_BF\left(h\right)\right)^2}.
\end{aligned}
$$

After plugging in $\frac{P_A}{1-P_AF(h)} - \frac{1-P_B}{1-P_BF(h)} = -\frac{V_A}{h(1-P_A)}$, we get

$$
\begin{aligned}
\frac{1}{1-P_A}\frac{dG_A\left(h\right)}{dh} &= -\frac{V_A}{h\left(1-P_A\right)}\left(hf\left(h\right)\left(\frac{P_A}{1-P_AF\left(h\right)} + \frac{1-P_B}{1-P_BF\left(h\right)}\right)+1\right)\\
&\quad + hf\left(h\right)\frac{1-2P_B}{1-P_B}\frac{\left(1-P_B\right)^2}{\left(1-P_BF\left(h\right)\right)^2}\\
&\leq -\frac{V_A}{h\left(1-P_A\right)}\left(hf\left(h\right)\left(P_A+1-P_B\right)+1\right) + hf\left(h\right)\frac{1-2P_B}{1-P_B}\\
&< -\frac{V_A}{h}\left(hf\left(h\right)+1\right) + hf\left(h\right)\\
&= \frac{-V_A + hf\left(h\right)\left(h-V_A\right)}{h} \leq \frac{-V_A+V_A}{h} = 0,
\end{aligned}
$$

proving the result.

We can similarly prove that if we fix $r_A = 1$ and consider $G_B\left(h\right) = U_{B,h}\left(A \mid r_A = 1, r_B = 1-F\left(h\right)\right) - U_{B,h}\left(B \mid r_A = 1, r_B = 1-F\left(h\right)\right)$, which may be written as

$$
\begin{aligned}
G_B\left(h\right) &= h\left(P_BQ_{P_A,A} + \left(1-P_B\right)\left(1-Q_{P_B,A}\right)\right)\\
&\quad -V_B - h\left(P_BQ_{P_A,B} + \left(1-P_B\right)\left(1-Q_{P_B,B}\right)\right)\\
&= h\left(P_B\frac{P_A}{1-\left(1-P_A\right)F\left(h\right)} + \left(1-P_B\right)\left(1-\frac{P_B}{1-\left(1-P_B\right)F\left(h\right)}\right) - \left(1-P_B\right)\right) - V_B\\
&= hP_B\left(\frac{P_A}{1-\left(1-P_A\right)F\left(h\right)} - \frac{1-P_B}{1-\left(1-P_B\right)F\left(h\right)}\right) - V_B,
\end{aligned}
$$

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then it has at most one zero, and if so, it changes the sign from negative to positive.

Now consider the following cases. If $V_A \geq M(1 - 2P_A)$ and $V_B \geq M(2P_B - 1)$, then $G_A(M) \geq 0$ and $G_B(M) \leq 0$. This implies that there is an equilibrium where all A types choose A and all B types choose B, and since $G_A(h) > 0$ and $G_A(h) < 0$ for all $h < M$, this is the only equilibrium. Notice that conditions $V_A < M(1 - 2P_A)$ and $V_B < M(2P_B - 1)$ are mutually exclusive (adding the right-hand sides yields $2(P_B - P_A) < 0$). If $V_A < M(1 - 2P_A)$ and $V_B \geq M(2P_B - 1)$, then all B types choose action B, as do some A types, and in that case all A types choose B if and only if $G_A(m) \leq 0$. Similarly, if $V_A \geq M(1 - 2P_A)$ and $V_B < M(2P_B - 1)$, then all citizens choose A if and only if $G_B(m) \geq 0$. This gives the equilibrium characterization.

Let us prove the comparative statics with respect to θ. Notice that both P_A and P_B are increasing as a function of θ. This means that an increase in θ may switch the equilibrium type from (v) to (iv) to (iii) etc, but not the other way around. Now suppose that for a given θ the equilibrium type is (iv), so all B types choose action B, and the cutoff h for A types is such that $G_A(h) = 0$. Consider a marginal increase in θ; since $\frac{dG_A(h)}{dh} < 0$, it suffices to prove that $G_A(h)$ is strictly increasing in θ at such h. For this, it is sufficient to prove that $G_A(h)$ has a positive derivative with respect to P_A and nonnegative with respect to P_B whenever $G_A(h) = 0$. We have

$$
\begin{aligned}
\frac{\partial G_A(h)}{\partial P_A} &= h\left(\frac{1 - P_B}{1 - P_B F(h)} - \frac{P_A}{1 - P_A F(h)}\right) + h\frac{1 - P_A}{1 - P_A F(h)} \\
&= \frac{V_A}{1 - P_A} + h\frac{1 - P_A}{1 - P_A F(h)} > 0; \\
\frac{\partial G_A(h)}{\partial P_B} &= h(1 - P_A)\frac{1 - F(h)}{(1 - P_B F(h))^2} \geq 0.
\end{aligned}
$$

This proves that the share of type A choosing action A is strictly increasing in θ if the equilibrium type is (iv). The case of equilibrium type (ii) is considered similarly. This completes the proof. ∎

Proof of Proposition 2.

Consider a citizen of type A who got signal $s = p_H$. Then his posterior about the share of type A is

$$
\begin{aligned}
P_{A,s=p_H} &= p_H\frac{\theta\mu p_H}{\theta\mu p_H + (1 - \theta)(1 - \mu)p_L} + p_L\frac{\theta\mu(1 - \theta)(1 - \mu)p_L}{\theta\mu p_H + (1 - \theta)(1 - \mu)p_L} \\
&= \frac{\theta\mu p_H^2 + (1 - \theta)(1 - \mu)p_L^2}{\theta\mu p_H + (1 - \theta)(1 - \mu)p_L} = \frac{\tau_H p_H^2 + (1 - \tau_H)p_L^2}{\tau_H p_H + (1 - \tau_H)p_L},
\end{aligned}
$$

where $\tau_H = \frac{\theta\mu}{\theta\mu + (1 - \theta)(1 - \mu)}$. Similarly, if he got signal $s = p_L$, then his posterior would be

$$
P_{A,s=p_L} = \frac{\tau_L p_H^2 + (1 - \tau_L)p_L^2}{\tau_L p_H + (1 - \tau_L)p_L},
$$

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where $\tau_H = \frac{\theta(1-\mu)}{\theta(1-\mu)+(1-\theta)\mu}$ If a citizen of type B gets either of these signals, his posteriors would be

$$P_{B,s=p_H} = \frac{\tau_H p_H (1-p_H) + (1-\tau_H) p_L (1-p_L)}{\tau_H (1-p_H) + (1-\tau_H)(1-p_L)},$$

$$P_{B,s=p_L} = \frac{\tau_L p_H (1-p_H) + (1-\tau_L) p_L (1-p_L)}{\tau_L (1-p_H) + (1-\tau_L)(1-p_L)},$$

respectively. Thus, the equilibrium in this case given by Proposition 1 with θ being replaced by either τ_H for signal s_H or τ_L for signal s_L. Notice that $\mu > \frac{1}{2}$ implies $\tau_H > \theta > \tau_L$; then the result follows immediately from the comparative statics with respect to θ. This completes the proof. ∎

Proof of Proposition 3.

Suppose that for $s = p_L$, citizens with type $t_i = B$ choose action $d_i = B$. Then $\Pr_{s=s_L}(t_i = A \mid d_i = A, t_{-i}) = 1$ for either type of citizen t_{-i}; this follows from Bayes formula if $G_A(M) > 0$ in equilibrium or from that the equilibrium satisfies the D1 criterion (see the proof of Proposition 1) if $G_A(M) = 0$. Then the corresponding probability for signal $s = p_H$, $\Pr_{s=s_H}(t_i = A \mid d_i = A, t_{-i}) \leq 1$. Furthermore, if for $s = p_H$, $G_B(M) > 0$ so some citizens with type $t_i = B$ choose action $d_i = A$, then $\Pr_{s=s_H}(t_i = A \mid d_i = A, t_{-i}) < 1$. This completes the proof. ∎

A.1 Multiple equilibria

If we do not impose Assumption 1, there may be multiple equilibia. One reason for multiplicity is given by the following example.

Example 1. *Suppose $V_A = V_B = 1$, $p_H = 0.9$, $p_L = 0.1$, $\theta = \frac{1}{2}$. Then type A citizens believe that others are type A with probability $P_A = 0.82$, while type B citizens believe that others are type A with probability $P_B = 0.18$. Let h be distributed on $[m, M]$ such that $m \geq \frac{25}{16} = 1.5625$ (an example of a distribution that satisfies this and also the first requirement of 1 is one with p.d.f. $f(h) = \frac{1}{h(h-1)}$ for $h \in \left[\frac{25}{16}, \frac{25}{25-9e}\right]$ and $f(h) = 0$ otherwise).*

In this example, there are two equilibria. The first has all A citizens choosing $d_i = A$ and all B citizens choosing $d_i = B$. Indeed, then $r_A = 1$ and $r_B = 0$, and the expected utilities of type A from the two actions are

$$
\begin{aligned}
U_{A,h}(A) &= V_A + h\left(P_A \frac{P_A r_A}{P_A r_A + (1-P_A) r_B} + (1-P_A)\left(1 - \frac{P_B r_A}{P_B r_A + (1-P_B) r_B}\right)\right) \\
&= V_A + h P_A; \\
U_{A,h}(B) &= h\left(P_A \frac{P_A(1-r_A)}{P_A(1-r_A)+(1-P_A)(1-r_B)} + (1-P_A)\left(1 - \frac{P_B(1-r_A)}{P_B(1-r_A)+(1-P_B)(1-r_B)}\right)\right) \\
&= h(1-P_A),
\end{aligned}
$$

and we thus have

$$U_{A,h}(A) - U_{A,h}(B) = V_A + hP_A - h(1 - P_A) = 1 + 0.64h > 0.$$

This means that citizens of type A do not want to deviate, and, similarly, neither do citizens of type B.

However, there is another equilibrium, where all A citizens choose $d_i = B$ and all B citizens choose $d_i = A$. Indeed, if they do, then $r_A = 0$ and $r_B = 1$. If so, the expected utilities of type A from the two actions are

$$
\begin{aligned}
U_{A,h}(A) &= V_A + h(1 - P_A); \\
U_{A,h}(B) &= hP_A.
\end{aligned}
$$

We thus have

$$U_{A,h}(A) - U_{A,h}(B) = V_A + h(1 - P_A) - hP_A = 1 - 0.64h \leq 1 - 0.64 \times \frac{25}{16} = 0.$$

This means that type A citizens are indeed better off choosing action B (and almost all of them strictly so), and likewise B citizens prefer action A. Thus, it is an equilibrium.

The intuition behind Example 1 is simple. Citizens of different types may have very different beliefs about the distribution of types in the society, and they overestimate the share of citizens of their own type relative to other players. The example shows that it is possible that everyone chooses the "opposite" action for signaling purposes (and the signals are interpreted correctly, i.e., action A is interpreted as evidence that the actor is of type B). Since both types believe that their type is common, deviating is not profitable, because the audience of their own type will fail to recognize them as one of their own. Despite this simple intuition, we believe that this equilibrium is hardly realistic, and imposed the second part of Assumption 1 to ensure that citizens care about the action enough to rule it out, so V_A and V_B are not too small relative to social image concerns.

The next example shows that the first part of Assumption 1 is also necessary to ensure equilibrium uniqueness.

Example 2. *Let $V_A = V_B = 1$, $p_H = \frac{99}{100}$, $p_L = \frac{2}{3}$, $\theta = \frac{9}{10}$. Let $m = M = 2$, so h has a degenerate distribution (this may be easily generalized to a smooth distribution with high density). In this way, the first part of Assumption 1 is violated, while the second is satisfied.*

Here, we have $P_A \approx 0.97$ and $P_B \approx 0.74$. One can verify that there are three equilibria. In one, every citizen chooses action A; in another, both types of citizens choose their preferred action, and there is also a third equilibrium where all A types choose action A, while B types split, with about 48% choosing action A and the rest choosing B.

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The intuition behind this multiplicity is the following. Choosing one's preferred action is an equilibrium, because an actor of type B believes that there is a sufficient share of type B citizens in the audience. Importantly, if everyone chooses their preferred action, then this action allows the audience to infer the actor's type precisely. Now suppose we make some B actors switch into choosing action A. In this case, if a B type citizen chooses action B, then everyone will still believe he is B, while choosing action A is inconclusive. However, the posterior of a type A audience member will go down very little (her prior that a citizen is type A is very strong), while the posterior of a type B audience member will be more sensitive, and she will put a substantial probability on the actor being type B. This effect makes choosing action A more attractive. In other words, if there is some pooling in equilibrium, then for an individual decision-maker, pooling allows to hide true identity and allow every member of the audience to make the inference she finds more likely, which likely corresponds to her type.

We rule out this type of multiplicity for convenience in formulating the predictions of the model. However, even if the first part of Assumption 1 is violated, the signs of the derivatives with respect to θ (as computed in the proof of Proposition 1) are the same. This implies that even if there are multiple equilibria, the comparative statics results hold for all stable equilibria (with stability appropriately defined), in particular the largest and the smaller ones (in the sense of the share of citizens choosing, e.g., action A).

A.2   Private signals

Throughout the model, we consider signal s to be public. This is motivated by our experimental design. For example, in the experiment during the 2016 election, our subjects presumably knew that if they are contacted by a researcher, this researcher would know the information about Trump's local popularity that was provided to them. In the Pittsburgh experiment, because the subjects were not aware of the other treatments, it is likely that they thought that other subjects would be provided the same information, so they would know about Trump's or Clinton's local popularity when accessing the website that we provided. All this points to public signals, where the actor expects the audience to have gotten the signal as well, as the natural setting to describe our experiment.

Nevertheless, it is possible that some subjects did not understand or believe that the audience will likely have the same information. For example, in the Pittsburgh experiment, even though the link to the survey results was provided to subjects only, some might have thought that this information would be available more broadly (perhaps they thought that their friends would find the results by googling their names). This would correspond to a private signal, where the actor gets the signal about the value of p, but the audience does not. In other words, the actor would

then maximize

$$U_i \left(d_i; s_{priv} \right) = V_{t_i} \mathbf{I} \left\{ d_i = t_i \right\} + \mathbf{I}_{pub} h_i \mathbf{E}_i \left(\Pr_{-i} \left(t_i = t_{-i} \mid d_i, t_{-i} \right) \mid t_i, s_{priv} \right);$$

the difference is that the interior probability is not conditional on the signal s_{priv} because the audience does not receive the signal.

It is straightforward to show that the comparative statics predictions of the model (Propositions 2 and 3) continue to hold in the case of private signals. The easiest way to see that is to consider the functions $G_A \left(h \right)$ and $G_B \left(h \right)$ defined in the proof of Proposition 1 and show that they are monotonically increasing in direct inclusions of P_A and P_B (which correspond to the actor's beliefs of distribution of A types in the audience, conditional on his type) while holding the inclusions through $Q_{P_A,A}, Q_{P_A,B}, Q_{P_B,A}, Q_{P_B,B}$ (which correspond to audience member's posterior conditional on her type and the actor's decision) fixed. This immediately yields the comparative statics result as in Proposition 2, whereas the proof of Proposition 3 remains literally the same. In other words, the predictions of the model do not qualitatively depend on whether the signals are private or public, i.e. if the decision-makers are aware that the audience has the same information or not.

B Appendix Figures and Tables

Figure B1: **Experiment 1B: Beliefs About Others**
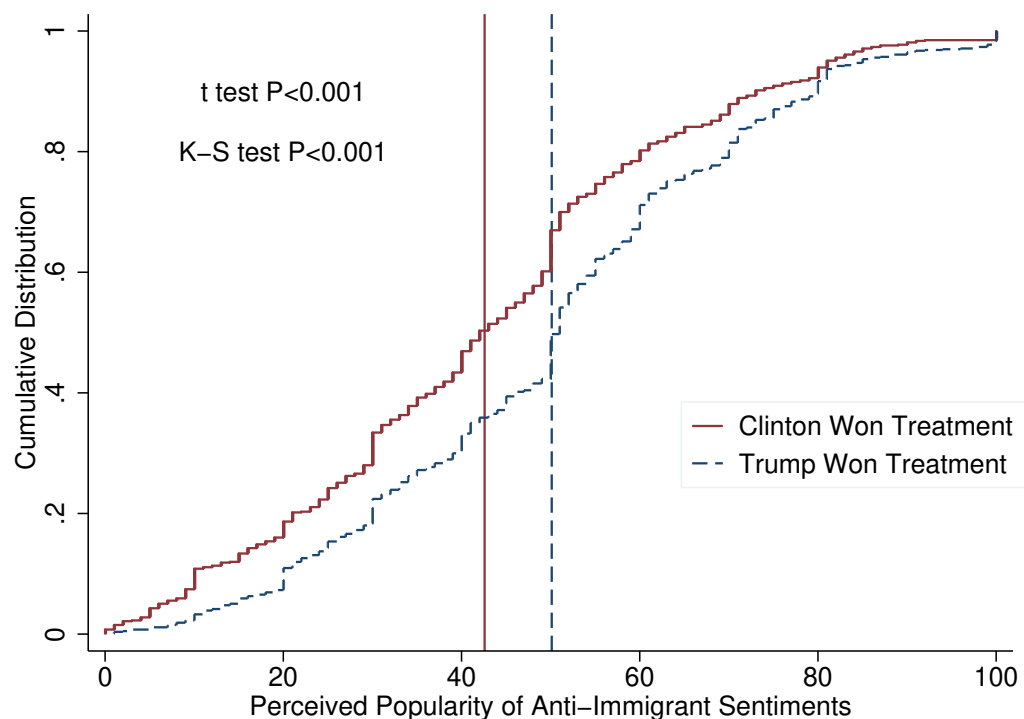
t test P<0.001

K–S test P<0.001

Clinton Won Treatment
Trump Won Treatment

Cumulative Distribution

Perceived Popularity of Anti–Immigrant Sentiments

Notes: Empirical cumulative distributions of perceived popularity of anti-immigrant sentiments for individuals in the Clinton Won treatment and in the Trump Won treatment (respectively N=793 and N=794). The two vertical lines display the means of the two distributions. K-S P is the *p*-value of a Kolmogorov-Smirnov test of equality of the two distributions, while *t* test P is the *p*-value of a test of equality of means.

Figure B2: **Experiment 2: Beliefs About Others**
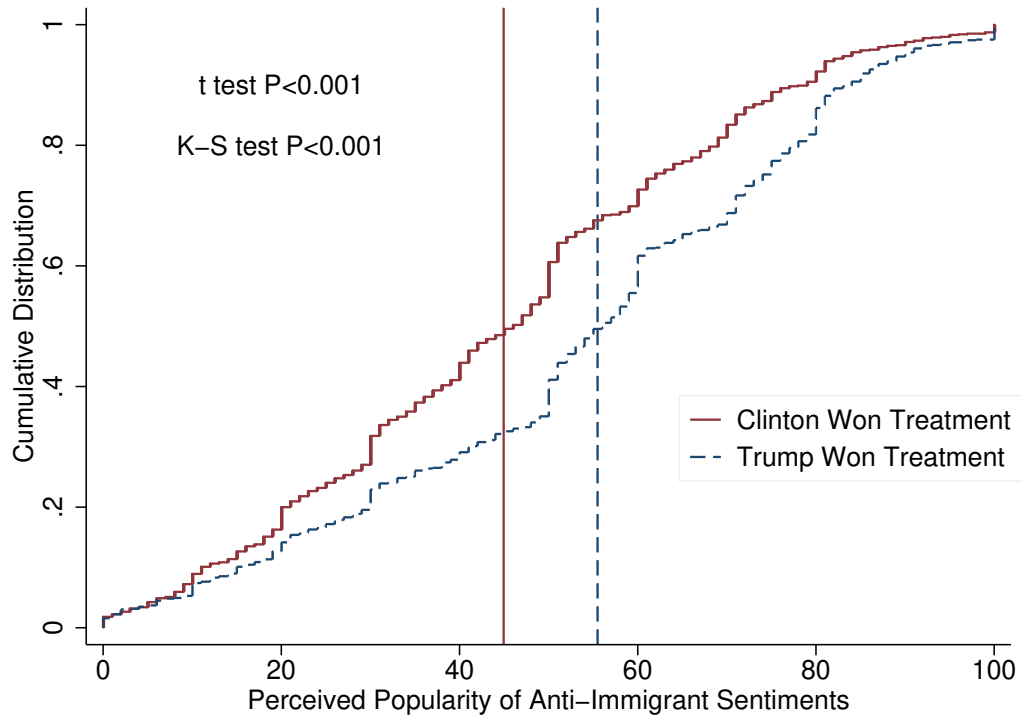
Notes: Empirical cumulative distributions of perceived popularity of anti-immigrant sentiments for individuals in the Clinton Won treatment and in the Trump Won treatment (respectively N=940 and N=890). The two vertical lines display the means of the two distributions. K-S P is the *p*-value of a Kolmogorov-Smirnov test of equality of the two distributions, while *t* test P is the *p*-value of a test of equality of means.

Table B1: **Experiment 1A Before Election: Balance of Covariates**

	Full Sample	Control Private	Control Public	Information Private	Information Public	p-*value*
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.65	0.63	0.61	0.71	0.66	0.511
	[0.477]	[0.484]	[0.489]	[0.458]	[0.476]	
Age	36.17	35.53	35.73	35.65	37.87	0.419
	[11.437]	[10.953]	[11.637]	[11.136]	[12.015]	
Married	0.48	0.44	0.44	0.48	0.58	0.120
	[0.500]	[0.498]	[0.499]	[0.502]	[0.496]	
Education	14.54	14.67	14.54	14.34	14.60	0.684
	[2.034]	[2.094]	[2.057]	[2.027]	[1.962]	
Household Income	67102.80	67455.36	71621.62	63186.27	65728.16	0.200
	[32845.443]	[36229.968]	[29093.596]	[29296.954]	[35853.786]	
White	0.86	0.85	0.84	0.87	0.88	0.754
	[0.348]	[0.360]	[0.370]	[0.335]	[0.322]	
Totals	428	112	111	102	103	

Notes: Column (1) reports the mean level of each variable, with standard deviations in brackets, for the full sample. Columns (2) to (5) report the mean level of each variable, with standard deviations in brackets, for all the experimental conditions. Column (6) reports the p-value of a test that means are the same in all the experimental conditions.

Table B2: **Experiment 1A After Election: Balance of Covariates**

	Panel A: After Election Balance of Covariates			
	Full Repeated Sample After Election	Control Private After Election	Control Public After Election	p-*value*
	(1)	(2)	(3)	(4)
Female	0.59	0.59	0.60	0.898
	[0.493]	[0.496]	[0.494]	
Age	36.46	36.89	36.04	0.593
	[10.289]	[8.973]	[11.468]	
Married	0.49	0.51	0.48	0.645
	[0.501]	[0.503]	[0.502]	
Education	14.69	14.68	14.70	0.951
	[2.023]	[1.974]	[2.081]	
Household Income	68343.37	70731.71	66011.90	0.356
	[32832.857]	[32165.870]	[33498.604]	
White	0.86	0.87	0.86	0.872
	[0.347]	[0.343]	[0.352]	
Information Before Election	0.48	0.51	0.45	0.751
	[0.501]	[0.503]	[0.501]	
Public Before Election	0.48	0.46	0.50	0.444
	[0.501]	[0.502]	[0.503]	
Totals	166	82	84	
	Panel B: After Election Sample Selection			
	Full Sample	Non-repeated Sample	Repeated Sample	p-*value*
	(1)	(2)	(3)	(4)
Female	0.64	0.67	0.60	0.136
	[0.481]	[0.473]	[0.492]	
Age	36.15	36.01	36.40	0.713
	[11.309]	[11.877]	[10.283]	
Married	0.49	0.49	0.49	0.918
	[0.500]	[0.501]	[0.501]	
Education	14.55	14.47	14.67	0.309
	[2.033]	[2.041]	[2.019]	
Household Income	67772.93	67534.48	68184.52	0.840
	[33374.356]	[33820.315]	[32686.249]	
White	0.86	0.86	0.86	0.814
	[0.349]	[0.353]	[0.345]	
Information Before Election	0.48	0.48	0.49	0.801
	[0.500]	[0.500]	[0.501]	
Public Before Election	0.50	0.50	0.48	0.661
	[0.501]	[0.501]	[0.501]	
Totals	458	290	168	

Notes: Panel A reports summary statistics for the repeated sample and presents a test of random assignment for the experiment after the election. Column (1) reports the mean level of each variable, with standard deviations in brackets, for the full sample of individuals who had participated in the survey both before and after the election. Columns (2) and (3) report the mean level of each variable, with standard deviations in brackets, for all the experimental conditions. Column (4) reports the *p*-value of a test that means are the same in both the experimental conditions. Panel B reports summary statistics for the full sample and presents a test of selective attrition for the experiment after the election. Column (1) reports the mean level of each variable, with standard deviations in brackets, for the full sample of individuals who had participated in the survey before the election. Columns (2) and (3) report the mean level of each variable, with standard deviations in brackets, respectively for individuals who did not participate and participated in the survey after the election. Column (4) reports the *p*-value of a test that means are the same in both the conditions.

Table B3: **Experiment 1A: Difference in Differences Regressions – Different Samples**

Dependent Variable	Dummy: individual donates to anti-immigrant organization							
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
Public	-0.202***	-0.200***	-0.202***	-0.199***	-0.202***	-0.205***	-0.202***	-0.203***
	[0.065]	[0.066]	[0.065]	[0.065]	[0.065]	[0.066]	[0.065]	[0.065]
	(0.004)	(0.005)	(0.004)	(0.007)	(0.001)	(0.001)	(0.000)	(0.002)
Information	-0.074	-0.077	-0.074	-0.076	-0.074	-0.079	-0.074	-0.079
	[0.069]	[0.068]	[0.069]	[0.068]	[0.069]	[0.068]	[0.069]	[0.068]
	(0.277)	(0.266)	(0.277)	(0.281)	(0.287)	(0.250)	(0.269)	(0.248)
Public*Information	0.188*	0.178*	0.188*	0.178*	0.188*	0.186*	0.188*	0.183*
	[0.096]	[0.096]	[0.096]	[0.096]	[0.096]	[0.096]	[0.096]	[0.096]
	(0.096)	(0.062)	(0.045)	(0.062)	(0.042)	(0.050)	(0.049)	(0.053)
After Election			-0.057	-0.062	-0.209***	-0.197**	-0.148**	-0.116*
			[0.073]	[0.072]	[0.064]	[0.092]	[0.058]	[0.062]
			(0.380)	(0.304)	(0.005)	(0.002)	(0.001)	(0.006)
Public*After Election			0.191*	0.186*	0.307***	0.311***	0.263***	0.260***
			[0.102]	[0.101]	[0.094]	[0.094]	[0.083]	[0.082]
			(0.071)	(0.080)	(0.000)	(0.000)	(0.007)	(0.007)
Control Private Before Election					0.545			
Controls	No	Yes	No	Yes	No	Yes	No	Yes
N	428	428	594	594	643	643	809	809
R^2	0.022	0.033	0.017	0.034	0.023	0.033	0.014	0.031

Notes: Columns (1) and (2) includes the full pre-election sample. Columns (3) and (4) add only the post-election sample of individuals already surveyed before the election. Columns (5) and (6) add only the post-election sample of individuals not surveyed before the election. Columns (7) and (8) add both the post-election samples. Columns (1) presents OLS regression of a dummy variable for whether a individual donates to the anti-immigration organization on a dummy for the Public condition, a dummy for the Information condition, and a dummy for the Public Information condition. The control private condition before the election is the omitted group, for which we report the mean donation rate. Columns (3) replicates and adds a dummy for the after election condition, and a dummy for the Public after election condition. Columns (2) and (4) replicate and add individual covariates (gender, age, marital status, years of education, household income, and race). Robust standard errors in brackets. *P*-values from permutation tests with 1,000 repetitions in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1% based on robust standard errors.

Table B4: **Experiment 1B: Balance of Covariates**

	Full Sample	Clinton Won Private	Clinton Won Public	Trump Won Private	Trump Won Public	p-*value*
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.49	0.50	0.49	0.50	0.46	0.711
	[0.500]	[0.501]	[0.501]	[0.501]	[0.499]	
Age	42.89	42.64	43.91	42.60	42.35	0.480
	[15.231]	[14.784]	[15.522]	[14.955]	[15.669]	
Married	0.44	0.44	0.44	0.45	0.44	0.997
	[0.497]	[0.497]	[0.498]	[0.498]	[0.497]	
Education	14.19	14.22	14.27	14.09	14.17	0.680
	[2.220]	[2.203]	[2.283]	[2.093]	[2.307]	
Household Income	56323.25	55556.99	56941.03	57103.37	55582.01	0.909
	[39331.754]	[39317.398]	[39758.092]	[40007.064]	[38248.176]	
White	0.90	0.89	0.91	0.92	0.89	0.512
	[0.296]	[0.312]	[0.284]	[0.278]	[0.311]	
No Demographics	0.01	0.02	0.00	0.01	0.01	0.215
	[0.090]	[0.123]	[0.050]	[0.084]	[0.089]	
Totals	1600	392	408	419	381	

Notes: Column (1) reports the mean level of each variable, with standard deviations in brackets, for the full sample. Columns (2) to (5) report the mean level of each variable, with standard deviations in brackets, for all the experimental conditions. Column (6) reports the *p*-value of a test that means are the same in all the experimental conditions.

Table B5: Experiment 1B: Heterogeneity

	White		Female		Age		Married		Education		Income	
	No	Yes	No	Yes	Below Median	Above Median	No	Yes	Below Median	Above Median	Below Median	Above Median
	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)
Public	-0.194**	-0.095***	-0.121***	-0.087**	-0.128***	-0.083*	-0.094**	-0.117**	-0.134***	-0.075*	-0.091**	-0.120**
	[0.094]	[0.032]	[0.044]	[0.043]	[0.041]	[0.046]	[0.041]	[0.046]	[0.043]	[0.043]	[0.040]	[0.047]
Trump Won Treatment	-0.019	0.005	0.007	-0.002	0.016	-0.012	-0.010	0.018	-0.043	0.048	0.008	-0.008
	[0.108]	[0.034]	[0.047]	[0.045]	[0.044]	[0.048]	[0.043]	[0.050]	[0.046]	[0.046]	[0.043]	[0.049]
Public*Trump Won Treatment	0.075	0.131***	0.134**	0.110*	0.101*	0.160**	0.160***	0.079	0.196***	0.051	0.130**	0.118*
	[0.138]	[0.048]	[0.064]	[0.063]	[0.060]	[0.068]	[0.060]	[0.068]	[0.063]	[0.065]	[0.060]	[0.068]
Clinton Private Treatment												
Mean Donation Rate	0.333	0.299	0.330	0.276	0.287	0.321	0.293	0.316	0.312	0.295	0.270	0.343
N	154	1,433	811	776	838	749	883	704	796	791	851	736
R^2	0.035	0.013	0.015	0.009	0.017	0.013	0.014	0.014	0.018	0.011	0.014	0.012

Notes: This table reports heterogeneous treatment effects. Each column shows results from a separate OLS regression of a dummy variable for whether an individual donates to the anti-immigration organization on a dummy for the public condition, a dummy for the Trump Won condition, and a dummy for the Trump Won public condition. The Clinton Won private condition is the omitted group, for which we report the mean donation rate. Each column shows the results for a different subsample across six traits. "Age" is a dummy that is equal to one for individuals above the median age in the sample, "Education" is a dummy that is equal to one for individuals above the median years of education in the sample, and "Income" is a dummy equal to one for individuals above the median income in the sample. Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1% based on robust standard errors.

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Table B6: **Experiment 1B: Instrumental Variable Regressions**

	Panel A: First Stage Regressions					
Dependent Variable	Perceived Share of Voters Holding Xenophobic Views					
	(1)	(2)	(3)	(4)	(5)	(6)
Trump Won Treatment	7.528***	7.559***	9.492***	9.385***	5.541***	5.632***
	(1.111)	(1.101)	(1.568)	(1.547)	(1.580)	(1.573)
Mean of Dependent Variable	42.588		41.451		43.666	
in the Clinton Won Treatment						
	Panel B: Instrumental Variable Regressions					
Dependent	Dummy: individual authorizes donation to anti-immigrant organization					
	(1)	(2)	(3)	(4)	(5)	(6)
Perceived Share of Voters			0.000	0.000	0.023***	0.024***
Holding Xenophobic Views			(0.003)	(0.003)	(0.007)	(0.008)
Mean Donation Rate						
at a 50% Perceived Share of Voters			30.507		34.350	
Holding Xenophobic Views						
Sample	Full Sample		Private Treatment		Public Treatment	
Controls	No	Yes	No	Yes	No	Yes
N	1587	1587	802	802	785	785

Notes: Panel A presents OLS regressions of the perceived share of voters holding xenophobic views on a dummy for the Trump Won treatment. Specifically, we measure the percentage of Pittsburgh voters the respondents believed would agree with the quote "For European American society and culture to persist requires a European-American majority, and a clear one at that." The Clinton Won treatment is the omitted group, for which we report the mean perceived share. For columns (3), (4), (5), and (6) these estimates also represent the first stage of the instrumental variable regressions presented in Panel B. Panel B presents IV regressions of a dummy variable for whether an individual donates to the anti-immigration organization on the perceived share of voters holding xenophobic views. The latter is instrumented with the Trump Won treatment. We substract 50 from the measure of the share, so that the incercept of the regression represents the average donation rate at a perceived share of 50%. Columns (2) and (4) and (6) replicate and add individual covariates (gender, age, marital status, years of education, household income, and race). Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1% based on robust standard errors.

Table B7: **Experiment 2: Balance of Covariates**

	Full Sample	Clinton Won Private	Clinton Won Public	Trump Won Private	Trump Won Public	p-*value*
	(1)	(2)	(3)	(4)	(5)	(6)
Female	0.51	0.52	0.49	0.53	0.51	0.586
	[0.500]	[0.500]	[0.500]	[0.500]	[0.500]	
Age	44.50	45.59	43.55	44.41	44.47	0.329
	[17.054]	[17.298]	[16.424]	[16.820]	[17.664]	
Married	0.39	0.37	0.38	0.40	0.40	0.683
	[0.487]	[0.482]	[0.485]	[0.491]	[0.490]	
Education	14.30	14.24	14.39	14.32	14.26	0.747
	[2.270]	[2.361]	[2.261]	[2.148]	[2.306]	
Household Income	54961.75	55568.67	55738.40	55170.07	53307.35	0.747
	[37560.939]	[38580.298]	[37503.814]	[37076.771]	[37093.439]	
White	0.77	0.76	0.76	0.80	0.79	0.357
	[0.418]	[0.426]	[0.430]	[0.402]	[0.410]	
Totals	1830	466	474	441	449	

Notes: Column (1) reports the mean level of each variable, with standard deviations in brackets, for the full sample. Columns (2) to (5) report the mean level of each variable, with standard deviations in brackets, for all the experimental conditions. Column (6) reports the *p*-value of a test that means are the same in all the experimental conditions.

Table B8: **Experiment 2: Regressions**

Dependent Variable	Average donation		Dummy: no donation	
	(1)	(2)	(3)	(4)
Clinton Won Private group	-0.099***	-0.099***	0.102***	0.101***
	[0.036]	[0.037]	[0.022]	[0.022]
	(0.008)	(0.009)	(0.000)	(0.000)
Clinton Won Public group	-0.073*	-0.072*	0.129***	0.127***
	[0.037]	[0.037]	[0.023]	[0.023]
	(0.044)	(0.048)	(0.000)	(0.000)
Trump Won Private group	-0.099***	-0.100***	0.138***	0.137***
	[0.037]	[0.037]	[0.023]	[0.023]
	(0.008)	(0.007)	(0.000)	(0.000)
Trump Won Public group	0.883		0.080	
Controls	No	Yes	No	Yes
N		1830		
R^2	0.005	0.011	0.021	0.035

Notes: Columns (1) presents an OLS regression of the donation amount to the previous survey participant on a dummy for the Clinton Won private group, a dummy for the Clinton Won public group, and a dummy for the Trump Won private group. Trump Won public group is the omitted group, for which we report the mean donation amount. Columns (3) presents an OLS regression of a dummy variable for subjects not making positive donations to the other survey participant on treatment dummies. Trump Won public group is the omitted group, for which we report the share of subjects not making positive donations. Columns (2) and (4) replicate and add individual covariates (gender, age, marital status, years of education, household income, and race). Robust standard errors in brackets. *P*-values from permutation tests with 1,000 repetitions in parentheses. * significant at 10%; ** significant at 5%; *** significant at 1% based on robust standard errors.

Table B9: **Experiment 2: Instrumental Variable Regressions**

Panel A: First Stage Regressions						
Dependent Variable	Perceived Share of Voters Holding Xenophobic Views					
	(1)	(2)	(3)	(4)	(5)	(6)
Trump Won Treatment	8.544***	8.779***	6.438***	6.619***	10.614***	10.896***
	(1.155)	(1.148)	(1.666)	(1.661)	(1.560)	(1.587)
Mean of Dependent Variable in the Clinton Won Treatment	44.948		45.118		44.781	
Panel B: Instrumental Variable Regressions						
Dependent	Amount Donated in the Dictator Game					
	(1)	(2)	(3)	(4)	(5)	(6)
Perceived Share of Voters Holding Xenophobic Views			0.000	0.000	0.007*	0.006*
			(0.006)	(0.006)	(0.004)	(0.003)
Mean Donation Rate at a 50% Perceived Share of Voters Holding Xenophobic Views			78.380		84.600	
Panel C: Instrumental Variable Regressions						
Dependent	Dummy: individual does not share anything in the dictator game					
	(1)	(2)	(3)	(4)	(5)	(6)
Perceived Share of Voters Holding Xenophobic Views			0.005	0.005	-0.012***	-0.012***
			(0.005)	(0.004)	(0.003)	(0.003)
Mean Donation Rate at a 50% Perceived Share of Voters Holding Xenophobic Views			20.916		14.558	
Sample	Full Sample		Private Treatment		Public Treatment	
Controls	No	Yes	No	Yes	No	Yes
N	1830	1830	907	907	923	923

Notes: Panel A presents OLS regressions of the perceived share of voters holding xenophobic views on a dummy for the Trump Won treatment. Specifically, we measure the percentage of Pittsburgh voters the respondents believed would agree with the quote "For European American society and culture to persist requires a European-American majority, and a clear one at that." The Clinton Won treatment is the omitted group, for which we report the mean perceived share. For columns (3), (4), (5), and (6) these estimates also represent the first stage of the instrumental variable regressions presented in Panel B. Panel B presents IV regressions of a dummy variable for whether an individual donates to the anti-immigration organization on the perceived share of voters holding xenophobic views. The latter is instrumented with the *Trump* treatment. We substract 50 from the measure of the share, so that the incercept of the regression represents the average donation rate at a perceived share of 50%. Columns (2) and (4) and (6) replicate and add individual covariates (gender, age, marital status, years of education, household income, and race). Robust standard errors in brackets. * significant at 10%; ** significant at 5%; *** significant at 1% based on robust standard errors.

C   Survey Scripts

C.1   Demographics

- What is your state of legal residence?
- What is your gender?
    - Male
    - Female
- What is your year of birth?
- What is your marital status?
    - Single
    - Married
- How would you describe your ethnicity/race? Please, check all that apply.
    - White or European American
    - Black or African American
    - Hispanic or Latino
    - Asian or Asian American
    - Other
- What is the highest level of school you have completed or the highest degree you have received?
    - Less than high school degree
    - High school graduate (high school diploma or equivalent including GED)
    - Some college but no degree
    - Associate degree in college (2-year)
    - Bachelor's degree in college (4-year)
    - Master's degree
    - Doctoral degree
    - Professional degree (JD, MD)

- What is your household annual income? Please indicate the answer that includes your entire household income in 2015 before taxes.
  - Less than $10,000
  - $10,000 to $19,999
  - $20,000 to $29,999
  - $30,000 to $39,999
  - $40,000 to $49,999
  - $50,000 to $59,999
  - $60,000 to $69,999
  - $70,000 to $79,999
  - $80,000 to $89,999
  - $90,000 to $99,999
  - $100,000 to $149,999
  - $150,000 or more

C.2 Experiment 1A

Experiment 1A: Control Private

- From 0 to 100, what share of people in the population of [state] do you think agrees with the following statement?

  "Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

- We will now **randomly select** one among two different organization, and will give you the possibility to make a donation to the selected organization:

  - one is an organization which seeks to **reduce overall migration** to the United States;
  - one is an organization which **welcomes immigrants** to the United States.

- The organization randomly chosen for you is the Federation for American Immigration Reform (FAIR).

  The Federation for American Immigration Reform is an **immigration-reduction organization** of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion" who wrote *"I've come to the point of view that for European-American society and culture to persist requires a European-American majority, and a clear one at that."*

  Would you like to have us donate $1 on your behalf to the Federation for American Immigration Reform? If you decide to have $1 donated to the immigration-reduction organization FAIR, we will also transfer $1 extra to your MTurk account. So, if you decide to donate, instead of $0.50 you will be paid in total $1.50. If instead you prefer not to donate, you will be paid only $0.50 for completing the survey.

  Note: just like any other answer to this survey, also **your donation decision will be completely anonymous**. No one, not even the researchers, will be able to match your decision to your name.

  So would you like to have us donate $1 on your behalf to the Federation for American Immigration Reform?

  - Yes
  - No

- From 0 to 100, what do you think is the probability of Donald Trump winning the presidential election in [state]?

Experiment 1A: Information Private

- From 0 to 100, what do you think is the probability of Donald Trump winning the presidential election in [state]?

- According to recent estimates from PredictWise, the predicted probability of Donald Trump winning the presidential election in [state] is 100%. That means that the vast majority of voters in [state] are probably going to support Donald Trump.

  Note: PredictWise reflects academic research into prediction markets. The backbone of predictions by PredictWise are generated from real-money markets that trade contracts on upcoming events. Estimates were downloaded on the PredictWise website on October 31, 2016. For more information, visit http://predictwise.com/.

- From 0 to 100, what share of people in the population of [state] do you think agrees with the following statement?

  "Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

- We will now **randomly select** one among two different organization, and will give you the possibility to make a donation to the selected organization:

    - one is an organization which seeks to **reduce overall migration** to the United States;
    - one is an organization which **welcomes immigrants** to the United States.

- The organization randomly chosen for you is the Federation for American Immigration Reform (FAIR).

  The Federation for American Immigration Reform is an **immigration-reduction organization** of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion" who wrote *"I've come to the point of view that for European-American society and culture to persist requires a European-American majority, and a clear one at that."*

  Would you like to have us donate $1 on your behalf to the Federation for American Immigration Reform? If you decide to have $1 donated to the immigration-reduction organization FAIR, we will also transfer $1 extra to your MTurk account. So, if you decide to donate, instead of $0.50 you will be paid in total $1.50. If instead you prefer not to donate, you will be paid only $0.50 for completing the survey.

  Note: just like any other answer to this survey, also **your donation decision will be completely anonymous**. No one, not even the researchers, will be able to match your decision to your name.

  So would you like to have us donate $1 on your behalf to the Federation for American Immigration Reform?

    - Yes
    - No

Experiment 1A: Control Public

- From 0 to 100, what share of people in the population of [state] do you think agrees with the following statement?

  "Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

- Important: in order to ensure the quality of the data collected, a member of the research team might **personally contact you** to verify your answers to the next question and the following ones.

- We will now **randomly select** one among two different organization, and will give you the possibility to make a donation to the selected organization:

  - one is an organization which seeks to **reduce overall migration** to the United States;

  - one is an organization which **welcomes immigrants** to the United States.

- The organization randomly chosen for you is the Federation for American Immigration Reform (FAIR).

  The Federation for American Immigration Reform is an **immigration-reduction organization** of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion" who wrote *"I've come to the point of view that for European-American society and culture to persist requires a European-American majority, and a clear one at that."*

  Would you like to have us donate $1 on your behalf to the Federation for American Immigration Reform? If you decide to have $1 donated to the immigration-reduction organization FAIR, we will also transfer $1 extra to your MTurk account. So, if you decide to donate, instead of $0.50 you will be paid in total $1.50. If instead you prefer not to donate, you will be paid only $0.50 for completing the survey.

  So would you like to have us donate $1 on your behalf to the Federation for American Immigration Reform?

  - Yes

  - No

- From 0 to 100, what do you think is the probability of Donald Trump winning the presidential election in [state]?

Experiment 1A: Information Public

- From 0 to 100, what do you think is the probability of Donald Trump winning the presidential election in [state]?

- According to recent estimates from PredictWise, the predicted probability of Donald Trump winning the presidential election in [state] is 100%. That means that the vast majority of voters in [state] are probably going to support Donald Trump.

  Note: PredictWise reflects academic research into prediction markets. The backbone of predictions by PredictWise are generated from real-money markets that trade contracts on upcoming events. Estimates were downloaded on the PredictWise website on October 31, 2016. For more information, visit http://predictwise.com/.

- From 0 to 100, what share of people in the population of [state] do you think agrees with the following statement?

  "Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

- Important: in order to ensure the quality of the data collected, a member of the research team might **personally contact you** to verify your answers to the next question and the following ones.

- We will now **randomly select** one among two different organization, and will give you the possibility to make a donation to the selected organization:

  - one is an organization which seeks to **reduce overall migration** to the United States;

  - one is an organization which **welcomes immigrants** to the United States.

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  Would you like to have us donate $1 on your behalf to the Federation for American Immigration Reform? If you decide to have $1 donated to the immigration-reduction organization FAIR, we will also transfer $1 extra to your MTurk account. So, if you decide to donate, instead of $0.50 you will be paid in total $1.50. If instead you prefer not to donate, you will be paid only $0.50 for completing the survey.

  So would you like to have us donate $1 on your behalf to the Federation for American Immigration Reform?

  - Yes

  - No

C.3 Experiment 1B

Experiment 1B: Trump Won Private

- This study focuses on political and social beliefs in Pittsburgh. Below are three interesting facts about Pittsburgh politics. Which of these facts did you know before reading them here?

  – Before Pittsburgh was chartered as a city in 1816, it elected a Chief Burgess rather than a mayor. The first Chief Burgess of Pittsburgh, George Robinson, was arrested on orders from George Washington due to his involvement in the Whiskey Rebellion.

  – Pittsburgh native and Olympic qualifying boxer Art Rooney was instrumental in the founding of the Pittsburgh Steelers in the 1930s and the Pittsburgh Penguins in the 1960s. His grandson, Thomas Rooney, serves in the House of Representatives.

  – In the 2016 US Presidential Election, Donald Trump won Pittsburgh's metropolitan area.

- We will now randomly select one among two different organizations, and will give you the opportunity to authorize a donation to the selected organization:
  One is an organization which seeks to reduce overall migration to the United States;
  One is an organization which welcomes immigrants to the United States.
  If you choose to authorize the donation, you will receive an additional $1, on top of your base payment for completing the survey. The $1 donation will not be subtracted from your base payment, so your total compensation will be your base payment plus the extra $1.
  If instead you choose not to donate, you will only receive your base payment for completing the survey.

- The organization randomly chosen for you is the **Federation for American Immigration Reform (FAIR).**
  The Federation for American Immigration Reform is an immigration-reduction organization of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion" who wrote "I've come to the point of view that for European American society and culture to persist requires a European-American majority, and a clear one at that."
  The anonymized results from this survey will be posted on our website in approximately one month. Results will be reported as percentages only, so your individual response to the survey will remain anonymous. We will notify you when the results become available on our website, [website link].
  Would you like us to donate $1 to FAIR on your behalf?

  – Yes, please donate $1 to FAIR on my behalf.

  – No, please do not donate $ to FAIR on my behalf.

- We will now present two quotes. For each, we will ask you to report what percentage of Pittsburgh voters you believe would agree with the quote.

- "For European American society and culture to persist requires a European-American majority, and a clear one at that."

- "Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

Experiment 1B: Clinton Won Private

- This study focuses on political and social beliefs in Pittsburgh. Below are three interesting facts about Pittsburgh politics. Which of these facts did you know before reading them here?

  - Before Pittsburgh was chartered as a city in 1816, it elected a Chief Burgess rather than a mayor. The first Chief Burgess of Pittsburgh, George Robinson, was arrested on orders from George Washington due to his involvement in the Whiskey Rebellion.

  - Pittsburgh native and Olympic qualifying boxer Art Rooney was instrumental in the founding of the Pittsburgh Steelers in the 1930s and the Pittsburgh Penguins in the 1960s. His grandson, Thomas Rooney, serves in the House of Representatives.

  - In the 2016 US Presidential Election, Hillary Clinton won Pittsburgh's county.

- We will now randomly select one among two different organizations, and will give you the opportunity to authorize a donation to the selected organization:
  One is an organization which seeks to reduce overall migration to the United States;
  One is an organization which welcomes immigrants to the United States.
  If you choose to authorize the donation, you will receive an additional $1, on top of your base payment for completing the survey. The $1 donation will not be subtracted from your base payment, so your total compensation will be your base payment plus the extra $1.
  If instead you choose not to donate, you will only receive your base payment for completing the survey.

- The organization randomly chosen for you is the **Federation for American Immigration Reform (FAIR).**
  The Federation for American Immigration Reform is an immigration-reduction organization of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion" who wrote "I've come to the point of view that for European American society and culture to persist requires a European-American majority, and a clear one at that."
  The anonymized results from this survey will be posted on our website in approximately one month. Results will be reported as percentages only, so your individual response to the survey will remain anonymous. We will notify you when the results become available on our website, [website link].
  Would you like us to donate $1 to FAIR on your behalf?

  - Yes, please donate $1 to FAIR on my behalf.

  - No, please do not donate $ to FAIR on my behalf.

- We will now present two quotes. For each, we will ask you to report what percentage of Pittsburgh voters you believe would agree with the quote.

- "For European American society and culture to persist requires a European-American majority, and a clear one at that."

- "Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

Experiment 1B: Trump Won Public

- This study focuses on political and social beliefs in Pittsburgh. Below are three interesting facts about Pittsburgh politics. Which of these facts did you know before reading them here?

  - Before Pittsburgh was chartered as a city in 1816, it elected a Chief Burgess rather than a mayor. The first Chief Burgess of Pittsburgh, George Robinson, was arrested on orders from George Washington due to his involvement in the Whiskey Rebellion.

  - Pittsburgh native and Olympic qualifying boxer Art Rooney was instrumental in the founding of the Pittsburgh Steelers in the 1930s and the Pittsburgh Penguins in the 1960s. His grandson, Thomas Rooney, serves in the House of Representatives.

  - In the 2016 US Presidential Election, Donald Trump won Pittsburgh's metropolitan area.

- We will now randomly select one among two different organizations, and will give you the opportunity to authorize a donation to the selected organization:
  One is an organization which seeks to reduce overall migration to the United States;
  One is an organization which welcomes immigrants to the United States.
  If you choose to authorize the donation, you will receive an additional $1, on top of your base payment for completing the survey. The $1 donation will not be subtracted from your base payment, so your total compensation will be your base payment plus the extra $1.
  If instead you choose not to donate, you will only receive your base payment for completing the survey.

- The organization randomly chosen for you is the **Federation for American Immigration Reform (FAIR).**
  The Federation for American Immigration Reform is an immigration-reduction organization of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion" who wrote "I've come to the point of view that for European American society and culture to persist requires a European-American majority, and a clear one at that."
  The results from this survey, including your individual donation decision and the donation decisions of all of the other Pittsburgh respondents to this survey, will be posted on our website in approximately one month. There is no need to provide your name, email, etc. here; the survey company we work with has this information already. We will notify you when the results become available on our website, [website link].
  Would you like us to donate $1 to FAIR on your behalf?

  - Yes, please donate $1 to FAIR on my behalf.

  - No, please do not donate $ to FAIR on my behalf.

- We will now present two quotes. For each, we will ask you to report what percentage of Pittsburgh voters you believe would agree with the quote.

- "For European American society and culture to persist requires a European-American majority, and a clear one at that."

- "Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

Experiment 1B: Clinton Won Public

- This study focuses on political and social beliefs in Pittsburgh. Below are three interesting facts about Pittsburgh politics. Which of these facts did you know before reading them here?

    - Before Pittsburgh was chartered as a city in 1816, it elected a Chief Burgess rather than a mayor. The first Chief Burgess of Pittsburgh, George Robinson, was arrested on orders from George Washington due to his involvement in the Whiskey Rebellion.

    - Pittsburgh native and Olympic qualifying boxer Art Rooney was instrumental in the founding of the Pittsburgh Steelers in the 1930s and the Pittsburgh Penguins in the 1960s. His grandson, Thomas Rooney, serves in the House of Representatives.

    - In the 2016 US Presidential Election, Hillary Clinton won Pittsburgh's county.

- We will now randomly select one among two different organizations, and will give you the opportunity to authorize a donation to the selected organization:
  One is an organization which seeks to reduce overall migration to the United States;
  One is an organization which welcomes immigrants to the United States.
  If you choose to authorize the donation, you will receive an additional $1, on top of your base payment for completing the survey. The $1 donation will not be subtracted from your base payment, so your total compensation will be your base payment plus the extra $1.
  If instead you choose not to donate, you will only receive your base payment for completing the survey.

- The organization randomly chosen for you is the **Federation for American Immigration Reform (FAIR).**
  The Federation for American Immigration Reform is an immigration-reduction organization of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion" who wrote "I've come to the point of view that for European American society and culture to persist requires a European-American majority, and a clear one at that."
  The results from this survey, including your individual donation decision and the donation decisions of all of the other Pittsburgh respondents to this survey, will be posted on our website in approximately one month. There is no need to provide your name, email, etc. here; the survey company we work with has this information already. We will notify you when the results become available on our website, [website link].
  Would you like us to donate $1 to FAIR on your behalf?

    - Yes, please donate $1 to FAIR on my behalf.

    - No, please do not donate $ to FAIR on my behalf.

- We will now present two quotes. For each, we will ask you to report what percentage of Pittsburgh voters you believe would agree with the quote.

- "For European American society and culture to persist requires a European-American majority, and a clear one at that."

- "Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

C.4 Experiment 2

Experiment 2: Trump Won Private

- In another survey, we surveyed participatns in an area that **Donald Trump** won in 2016.

- We will now present two quotes. For each, we will ask you to report what percentage of the voters **in the other participant's area** you believe would agree with the quote.
"For European American society and culture to persist requires a European-American majority, and a clear one at that."
"Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

- You have been matched with a participant from the previous survey. The other participant saw the question in the next screen. **Please read it carefully, since it will affect the amount of your bonus payment.**

- The other participant saw the following question:

  *The organization randomly chosen for you is the **Federation for American Immigration Reform (FAIR)**.*

  The Federation for American Immigration Reform is an immigration-reduction organization of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion," who wrote: "I've come to the point of view that for European American society and culture to persist requires a European-American majority, and a clear one at that."

  *The anonymized results from this survey will be posted on our website [later this month]. Results will be reported as percentages only, **so your individual response to the survey will remain anonymous**. We will notify you when the results become available on our website, [website link]. Would you like us to donate $1 to FAIR on your behalf?*

- The other participant authorized us to donate $1 to FAIR on his behalf.

- You and the other participant will split a total bonus of $2. You alone will make the decision of how much of the $2 you will receive and how much of the $2 the other participant will receive. You can choose to divide the $2 however you like, and you get to keep whatever you do not give to the other participant. For example, if you decide to give $1.30, then you will receive $0.70. Your survey provider will credit this bonus to your account.

  How much would you like to give to the other participant? Keep in mind that when making his donation decision, **the other participant did not know that he would be playing this follow-up game**. Your decision about how much to give the other participant will be completely anonymous.

Experiment 2: Clinton Won Private

- In another survey, we surveyed participatns in an area that **Hillary Clinton** won in 2016.

- We will now present two quotes. For each, we will ask you to report what percentage of the voters **in the other participant's area** you believe would agree with the quote.
  "For European American society and culture to persist requires a European-American majority, and a clear one at that."
  "Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

- You have been matched with a participant from the previous survey. The other participant saw the question in the next screen. **Please read it carefully, since it will affect the amount of your bonus payment.**

- The other participant saw the following question:

  The organization randomly chosen for you is the **Federation for American Immigration Reform (FAIR).**

  The Federation for American Immigration Reform is an immigration-reduction organization of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion," who wrote: "I've come to the point of view that for European American society and culture to persist requires a European-American majority, and a clear one at that."

  The anonymized results from this survey will be posted on our website [later this month]. Results will be reported as percentages only, **so your individual response to the survey will remain anonymous***. We will notify you when the results become available on our website, [website link]. Would you like us to donate $1 to FAIR on your behalf?*

- The other participant authorized us to donate $1 to FAIR on his behalf.

- You and the other participant will split a total bonus of $2. You alone will make the decision of how much of the $2 you will receive and how much of the $2 the other participant will receive. You can choose to divide the $2 however you like, and you get to keep whatever you do not give to the other participant. For example, if you decide to give $1.30, then you will receive $0.70. Your survey provider will credit this bonus to your account.

  How much would you like to give to the other participant? Keep in mind that when making his donation decision, **the other participant did not know that he would be playing this follow-up game**. Your decision about how much to give the other participant will be completely anonymous.

Experiment 2: Trump Won Public

- In another survey, we surveyed participatns in an area that **Donald Trump** won in 2016.

- We will now present two quotes. For each, we will ask you to report what percentage of the voters **in the other participant's area** you believe would agree with the quote.
"For European American society and culture to persist requires a European-American majority, and a clear one at that."
"Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

- You have been matched with a participant from the previous survey. The other participant saw the question in the next screen. **Please read it carefully, since it will affect the amount of your bonus payment.**

- The other participant saw the following question:

  *The organization randomly chosen for you is the **Federation for American Immigration Reform (FAIR).***

  The Federation for American Immigration Reform is an immigration-reduction organization of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion," who wrote: "I've come to the point of view that for European American society and culture to persist requires a European-American majority, and a clear one at that."

  *The results from this survey, including your individual donation decision and the donation decisions of all of the [other respondents to this survey from your area], will be posted on our website [later this month]. **There is no need to provide your name, email, etc. hear; the survey company we work with has this information already.** We will notify you when the results become available on our website, [website link]. Would you like us to donate $1 to FAIR on your behalf?*

- The other participant authorized us to donate $1 to FAIR on his behalf.

- You and the other participant will split a total bonus of $2. You alone will make the decision of how much of the $2 you will receive and how much of the $2 the other participant will receive. You can choose to divide the $2 however you like, and you get to keep whatever you do not give to the other participant. For example, if you decide to give $1.30, then you will receive $0.70. Your survey provider will credit this bonus to your account.

  How much would you like to give to the other participant? Keep in mind that when making his donation decision, **the other participant did not know that he would be playing this follow-up game**. Your decision about how much to give the other participant will be completely anonymous.

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Experiment 2: Clinton Won Public

- In another survey, we surveyed participatns in an area that **Hillary Clinton** won in 2016.

- We will now present two quotes. For each, we will ask you to report what percentage of the voters **in the other participant's area** you believe would agree with the quote.
  "For European American society and culture to persist requires a European-American majority, and a clear one at that."
  "Both legal and illegal immigration should be drastically reduced because immigrants undermine American culture and do not respect American values."

- You have been matched with a participant from the previous survey. The other participant saw the question in the next screen. **Please read it carefully, since it will affect the amount of your bonus payment.**

- The other participant saw the following question:

  The organization randomly chosen for you is the **Federation for American Immigration Reform (FAIR).**

  The Federation for American Immigration Reform is an immigration-reduction organization of concerned individuals who believe that immigration laws must be reformed and seeks to reduce overall immigration (both legal and illegal) into the United States. The founder of FAIR is John Tanton, author of "The Immigration Invasion," who wrote: "I've come to the point of view that for European American society and culture to persist requires a European-American majority, and a clear one at that."

  The results from this survey, including your individual donation decision and the donation decisions of all of the [other respondents to this survey from your area], will be posted on our website [later this month]. **There is no need to provide your name, email, etc. hear; the survey company we work with has this information already.** *We will notify you when the results become available on our website, [website link]. Would you like us to donate $1 to FAIR on your behalf?*

- The other participant authorized us to donate $1 to FAIR on his behalf.

- You and the other participant will split a total bonus of $2. You alone will make the decision of how much of the $2 you will receive and how much of the $2 the other participant will receive. You can choose to divide the $2 however you like, and you get to keep whatever you do not give to the other participant. For example, if you decide to give $1.30, then you will receive $0.70. Your survey provider will credit this bonus to your account.

  How much would you like to give to the other participant? Keep in mind that when making his donation decision, **the other participant did not know that he would be playing this follow-up game**. Your decision about how much to give the other participant will be completely anonymous.

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D   Experiment 2B: Dictator Game with Swiss Player

D.1   Experimental Design

D.1.1   Wave 1 – Non-Anonymous Behavior by the Swiss Player

In late February 2017, we recruited participants from the six states in which Hillary Clinton won the presidential election with the highest margin: California, Hawaii, Maryland, Massachusetts, New York, and Vermont. This was done to maximize the chances of recruiting subjects with liberal views, and in particular subjects with no anti-Muslim sentiment.[24]

First, after answering a number of demographic questions, all participants were told that a minaret is a tower typically built adjacent to a mosque and traditionally used for the Muslim call to prayer. Second, they were asked whether they would support the introduction of a law prohibiting the building of minarets in their state. Following our pre-registration, we focus on subjects who reported to be against the introduction of this law (N = 396), and we examine how they would interact with a person who has opposite views.[25] In order to do so, in the third part of the survey, participants were told that they were matched with a subject from another survey and were asked to play a dictator game in which they could decide how to split $3 (half of an hourly wage on the platform) between themselves and the other participant. We randomly assigned our participants to three different groups and randomized the background information we gave to our participants about the person they were matched with. Participants in the control group were only told that the participant they were matched with was a 24-year-old male from Switzerland. Note that we used real 24-year-old male subjects from Switzerland recruited to take part in a short survey by a research assistant from the University of Zurich.

Participants in the *anti-minarets* group were additionally told that this person supports the prohibition of the building of minarets in Switzerland. Participants in the *anti-minarets, public support* group were instead told that "like 57.5% of Swiss respondents, the participant supports the prohibition of the building of minarets in Switzerland."

D.1.2   Wave 2 – Anonymous Behavior by the Swiss Player

If we find higher donations in the *anti-minarets, public support* group, when compared to the *anti-minarets* one, we can conclude that the participants may believe that the Swiss person has strategic

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[24]As in Experiment 1A, MTurk workers with at least 80% approval rate could see our request, which in this case was described as a "4-5 minutes short survey" with a reward of $0.50. Each worker could participate in the survey only once. Workers who clicked on the request were displayed detailed instructions about the task, and given access to links to the study information sheet and the actual survey. The survey was conducted on the online platform *Qualtrics*. The experiment can be found in the AEA RCT Registry (AEARCTR-0002028). The reader can access the survey information sheet and interactively follow the survey at `http://ssd.az1.qualtrics.com/jfe/form/SV_8CVUQyyMcdITPHD`.

[25]Subjects who instead supported the law (N = 152) did not participate in the third part of the survey.

reasons to state that he is anti-minarets, and for this reason judge him less for expressing that view. However, a potential alternative interpretation of this result would be that participants might judge the Swiss person less negatively when a majority of Swiss people support the ban, *regardless of whether his support was expressed in public.* For example, it could be that participants feel that they cannot blame a person for privately holding a view if that person is surrounded by many other people who also hold that view and who could have influenced this person's convictions. With similar implications, participants might change their own opinion about minarets after learning that a majority of Swiss people are against them, and for this reason start judging the Swiss participant less negatively for privately holding these same views.

To explicitly rule out these possibilities, in the days immediately following wave 1, we conducted an experiment with a slightly modified version of the protocol. In this second wave, participants were informed about the fact that the 24-year-old male from Switzerland expressed his opinion in an *anonymous* survey. To make sure we could hire enough respondents, in this wave we recruited participants from the twelve states in which Hillary Clinton won the presidential election with the highest margin (California, Hawaii, Maryland, Massachusetts, New York, and Vermont as in wave 1, plus Connecticut, Delaware, Illinois, New Jersey, Rhode Island, and Washington).[26]

The design of this experiment was almost identical to the original version. Once again, we focus on subjects who reported to be against the introduction of the ban (N = 427).[27] The main difference with the original version is that we emphasized that the Swiss participant expressed his opinion anonymously. Both in the control and in the treatment conditions, instead of writing, as before, that "we matched you with a participant from another survey," in this version we wrote "we matched you with a participant from another anonymous survey." In our treatment groups we emphasized once again that the survey the Swiss person participated in was anonymous: "In our anonymous survey, like the one you just completed, he said he supports the prohibition of the building of minarets in Switzerland." We call this first treatment group the *anonymous anti-minarets* group. Finally, instead of writing "like 57.5% of Swiss respondents, the participant supports the prohibition of the building of minarets in Switzerland," in this case we wrote "According to numbers from 2009, 57.5% of Swiss respondents are in favor of prohibiting the building of minarets." We call this second treatment group the *anonymous anti-minarets, public support* group.[28]

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[26]As in the other experiments, MTurk workers with at least 80% approval rate could see our request, which in this case was described as a "4-5 minutes short survey" with a reward of $0.50. Each worker could participate in the survey only once, and only if he/she did not participate in our other experiment. Workers who clicked on the request were displayed detailed instructions about the task, and given access to links to the study information sheet and the actual survey. The survey was conducted on the online platform *Qualtrics*. The reader can access the survey information sheet and interactively follow the survey at `http://ssd.az1.qualtrics.com/jfe/form/SV_1S5OypQLiIhlsPj`.

[27]Subjects who instead supported the law (N = 138) did not participate in the third part of the survey.

[28]Our design also included a fourth group (N=136 in wave 1, and N=139 in wave 2), where participants were instead told: "Building minarets is illegal in Switzerland, following a 2009 referendum. Like 57.5% of Swiss respondents, the participant supports the prohibition of the building of minarets in Switzerland. However, he did not vote in the referendum since he was under legal voting age" in wave 1, and "In our anonymous survey, like the one you just completed, he said he supports the prohibition of the building of minarets in Switzerland. Building minarets is

D.1.3 Beliefs about the Swiss ban

At the end of the intervention, subjects in the control group were also asked about their beliefs regarding the share of the Swiss who supported banning the construction of minarets, and whether they believed the ban is legal in Switzerland. In the first wave we did not collect this information for individuals in the *anti-minarets* and *anti-minarets public support* groups. To check whether their beliefs about the share of the Swiss population supporting the ban are changed by the treatments, we included these questions for both the control group and the treatment groups in the second wave. The share of those thinking that a majority of the Swiss support the ban is almost identical in the control group and the *anti-minarets* group (respectively 20 and 25%, with a *p*-value for the test of equality of 0.301), but increases to 63% in the *anonymous anti-minarets public support* group (*p*-values of the test of equality are less than 0.001 for either groups). The median belief about the share of the Swiss population supporting the ban is 30% in both control and *anonymous anti-minarets* groups, and 55% in the *anonymous anti-minarets public support* group. This confirms that our experimental manipulation indeed shifted beliefs about the level of popular support for the ban in Switzerland.[29]

Participants across conditions were also asked whether they believed the construction of minarets is legal in Switzerland: in all three groups, a majority reported to think that constructing minarets was legal (88% in the control group, 77% in the *anti-minarets* group, and 74% in the *anti-minarets public support* group).[30]We can thus rule out that the effects are affected by the fact that the ban is enacted as law, and can thus isolate the role of pandering to the public opinion on participants' judgment of the Swiss player.

D.2 Results

Figure D1 displays the main findings from Experiment 2B. Panel A displays comparisons of average donations across groups. In the control condition, where participants were only told that they are matched with a 24-year-old male from Switzerland, we observe an average transfer to the

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illegal in Switzerland, following a 2009 referendum. According to numbers from 2009, 57.5% of Swiss respondents are in favor of prohibiting the building of minarets. However, the person you are matched with did not vote in the referendum since he was under legal voting age" in wave 2. This *anti-minarets, referendum* treatment was intended to test whether providing information a view that is not only held by a majority but is also *official* would further change the donation rates. We found no effect of this additional treatment relative to the second treatment group, neither in the original version nor in the anonymous version of Experiment 2B, suggesting that institutionalization/legitimacy also does not seem to play a role on the receiver's side.

[29]Here we report the numbers from the second wave of the experiment, since the first wave only asked beliefs for the control group. The numbers for this group are very similar across waves. In the first wave, 17% of control group participants believe a majority of Swiss people support the ban, compared to 20% in the second wave. The median belief is 30% for the control groups in both waves.

[30]While the beliefs are significantly different when comparing the control group with either of the two treatment groups (the *p*-values for the test of equality are 0.013 against the *anonymous anti-minarets* group and 0.002 against the *anonymous anti-minarets public support group*), there is no statistical difference between the two treatment groups (the *p*-value for the test of equality is 0.500).

Swiss participant of $1.03. The average transfer is substantially lower for subjects in the *anti-minarets* group, who are also told that this person supports the prohibition on building minarets in Switzerland: the average transfer for this group is $0.69. The effect of informing subject about the anti-Muslim views of the Swiss participant is statistically significant (p-value<0.001). However, the average transfer among subjects in the *anti-minarets, public support* group who are told that the majority of Swiss respondents are against minarets is $0.92, which is not statistically different from the average transfer in the control group (the p-value of the difference is 0.162) but is substantially higher than the average transfer in the *anti-minarets* group (p-value=0.013). The average donation in the *anonymous anti-minarets* group is identical to that in the *anti-minarets* group, at $0.69. The average donation in the *anonymous anti-minarets, public support* group is also very similar: $0.70. These two levels are significantly different from the average in the control group (p-value<0.001 in both cases). The average donation in the *anonymous anti-minarets, public support* group is also significantly lower than the one in the first wave version of the treatment (p-value=0.014).

Panel B compares the share of participants who do *not* share anything from their $3 endowment with the Swiss person. The percentage of participants deciding not to transfer anything to the Swiss respondent increases from 22% in the control group to 42% in the *anti-minarets* group (p-value<0.001), while only 27% of subjects in the *anti-minarets, public support* decide to keep all $3. This percentage is not statistically different from the one in the control group (p-value=0.370), but is substantially lower than the one for subjects in the *anti-minarets* group (p-value=0.013). Here again, the levels of the outcome variable in the two anonymous treatments are almost identical to the level in the *anti-minarets* group: 43% and 44%. Importantly, the share of participants not donating is significantly higher in the *anonymous anti-minarets, public support* group when compared to the non-anonymous version of the treatment (p-value=0.004).

Figure D1: **Experiment 2B: Donation Rates**
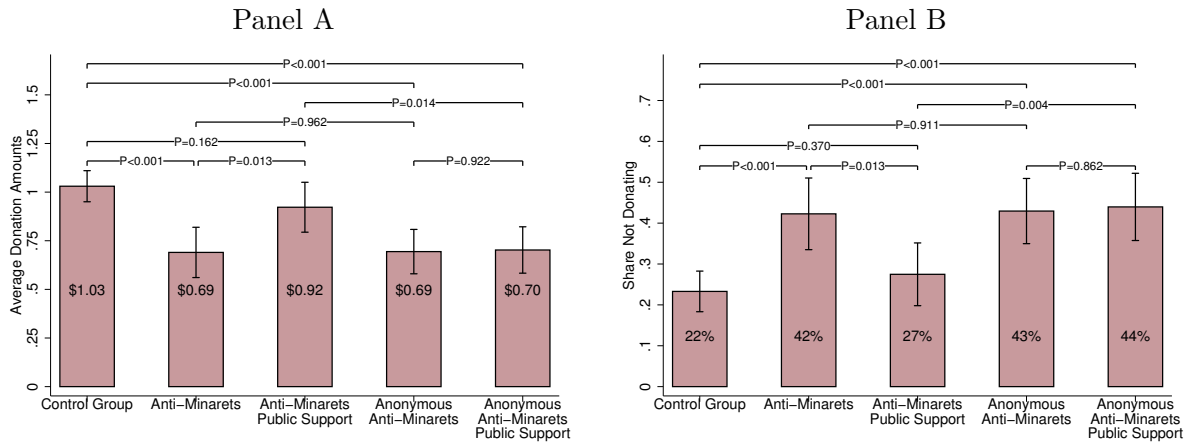
Notes: Panel A displays average donation amounts to the Swiss individual in the five experimental conditions: the control group (N = 279, pooling 142 observations from the first version of experiment 2 and 137 observations from the second anonymous version of experiment 2), the *anti-minarets* group (N=133), and the *anti-minarets public support* group (N=131), the *anonymous anti-minarets* group (N=149), and the *anonymous anti-minarets public support* group (N=141). Panel B displays the percent of subjects not making positive donations. Error bars reflect 95% confidence intervals. Top horizontal bars show *p*-values for *t* tests of equality of means between different experimental conditions.

E   Experiment 3: Expressing Islamophobia

E.1   Experimental Design

The design of Experiment 3 is very similar to Experiment 1: it uses donation decisions made either in a private or in a public condition to study the social acceptability of a view. The main difference with respect to Experiment 1 is that instead of varying the perceived local popularity of candidate Trump, we directly randomize the perceived local popularity of anti-Muslim sentiments. This allows us to test whether the effects documented in Experiment 1 are related to updates in the popularity of anti-immigration sentiments, or if instead the updates in the popularity of Donald Trump affect donation decisions through some other mechanism. Moreover, we also focus on the role of the legitimacy of a view in determining its social acceptability. One might also be concerned that, in Experiment 1A, participants might expect xenophobic policies to be institutionalized under Donald Trump's administration (and believe that such expectation is also shared by the surveyors). Such institutionalization/legitimacy could potentially increase the social acceptability of xenophobia. For this purpose, we include a treatment in which we inform subjects about the fact that a certain policy is unconstitutional.

Given our previous findings that the wedge between private and public donations to the *Federation for American Immigration Reform* had disappeared after the presidential election in the six originally studied states (and our overall concern that the social acceptability of xenophobia had increased in the country as a whole), we made three additional changes to the protocol in Experiment 1: we expanded the set of states in our recruitment of participants, referred to stronger xenophobic (here, Islamophobic) language, and included an organization with relatively more extreme views.[31]

Specifically, in early February 2017, we recruited participants (N = 574) from all the states in which Donald Trump won the presidential election. MTurk workers with at least 80% approval rate could see our request, which was described as a "5 minute survey" with a reward of $0.50. Each worker could participate in the survey only once. Workers who clicked on the request were displayed detailed instructions about the task, and given access to links to the study information sheet and the actual survey. The survey was conducted on the online platform *Qualtrics*.

After answering a number of demographic questions, a third of the participants were randomly informed about the fact that a large share of respondents of an anonymous online survey supported the ban of Muslims from public office (*public support information* condition):[32]

"In a recent anonymous survey we conducted online, we found that a **very large**

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[31]The experiment can be found in the AEA RCT Registry (AEARCTR-0001994). The reader can access the survey information sheet and interactively follow the survey at `https://ssd.az1.qualtrics.com/jfe/form/SV_beWUpftLZi3zW5f`.

[32]We used information from a previous anonymous survey we conducted on MTurk (N = 96) in which 42% of the respondents expressed support for that ban: to participate MTurk workers had to have an approval rate of at least 80% and to identify themselves as conservatives.

proportion of respondents think that Muslims should be prohibited from holding public office. This suggests that there is popular support for this type of ban."[33]

Another third were additionally informed about the fact that such a ban is unconstitutional and that Donald Trump would not be able to enact it (*unconstitutionality information* condition):

"Regardless of popular support, prohibiting Muslims from holding public office is **unconstitutional** and will not be enacted. The 5th and 14th Amendments imply that state and federal governments cannot discriminate against employees or job applicants on religious grounds. This means that President Donald Trump will not enact this type of ban."

The remaining third were not given any information (*control* condition).

Participants were then asked to predict the share of individuals who would they think would say in an anonymous online survey that they think Muslims should be prohibited from holding public office. This provides a measure of the perceived popularity of anti-Muslim policies.

In the next part of the intervention, we measured the perceived social acceptability of expressing strong anti-Muslim sentiment using a donation experiment with real stakes. Participants were first told that they would be given the opportunity to make a donation to a randomly drawn organization that could either be anti-Muslim or pro-immigration, to ensure that participants would not associate the experimenters with a specific political view. To maximize power and avoid direct deception, the randomization was such that more than 99% of participants (N=573) would get assigned the organization we were interested in: *ACT for America*.[34] To make sure that the participants were aware of the organization's very strong anti-immigration stance, a few more details about the organization and its founder were provided in the experiment:

ACT for America is the largest grassroots **anti-Muslim** organization in the U.S actively working to promote anti-Muslim legislation and opinion. The founder of ACT for America is Brigitte Gabriel, the author of a book titled 'They Must Be Stopped' and who argued that **Muslims should be prohibited from holding public office** because "a practicing Muslim, who believes in the teachings of the Koran, cannot be a loyal citizen of the United States." ACT for America believes that Muslims represent a threat to both national security and American values; its Thin Blue Line project comprehensively mapped the addresses of U.S. Muslim student associations and other Islamic institutions as sites of national security concern.

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[33]To avoid deception, we used the vague expression "very large proportion," which does not imply that a majority of respondents held that position.

[34]The pro-immigration organization was once again the *National Immigration Forum*.

Participants were then asked if they would like to authorize the researchers to donate $1 to that organization on their behalf. The money would not come from the subject's $0.50 payment for participation in the study. Moreover, the participant would also be paid an *extra* $1 (or about 1/6 of an hourly wage on MTurk) if he/she authorized the donation. Rejecting the donation would not affect the monetary payoffs to the participants in any way other than through the loss of this extra amount.

In addition to the original randomization of informing subjects about the popularity and unconstitutionality of the ban, we introduced a second layer of cross-randomization at the donation stage. Half of the participants were assured that their donation authorization would be kept completely anonymous, and that no one, not even the researchers would be able to match their decision to their name: we refer to this condition as the *private* condition. The other half of the subjects were instead informed, right before the donation question was displayed to them, that they might be personally contacted by the research team to verify their answers to the questions in the remaining part of the survey: this is what we refer to as the *public* condition.

E.2   Results

Appendix Figure E1 displays the main findings from Experiment 3. In the control condition, we observe, like in Experiment 1, a wedge between donation rates in private and in public: a drop from 40% in private to 29% in public (the p-value of a t test of equality is 0.099). Among individuals in the public support information condition, we observe no difference in private and public donation rates, which are 35% and 37%, respectively (p-value=0.757). These results are very similar to the results in Experiment 1 (although we use different population, organization, and treatment), and indicate that the information provided on the popularity of anti-Muslim sentiments causally increased the social acceptability of the action to the point of eliminating the original social stigma associated with it. Among individuals in the unconstitutionality information condition, we again observe no difference in private donation rates, which are 29% and 30% respectively (p-value=0.795).

However, we find a difference in private donation rates between the unconstitutionality information and control conditions (p-value=0.083), suggesting that the information is possibly decreasing privately-held support for the Islamophobic policy.

Both information conditions positively update average beliefs about the popularity of the anti-Muslim policy when compared to the control group. In the control group, the average guess was that 45% of respondents of an online anonymous survey would support the anti-Muslim policy. The average went up to 48% in the unconstitutionality information condition (p-value=0.183 against the control group) and to 52% in popular support information condition (p-value=0.004 when compared to the control group). This is consistent with subjects informed about the unconstitutionality of banning Muslims from public office also reducing their beliefs about the popularity of the policy.

Taken together, these results suggest that the positive update in the perceived popularity of

the Islamophobic policy reduces the wedge in private vs public donations and confirms that the channel of legality/institutionalization or other channels related to the popularity of Donald Trump but not to the popularity of xenophobic sentiments are not the main drivers of our findings.

Figure E1: **Experiment 3: Donation Rates**
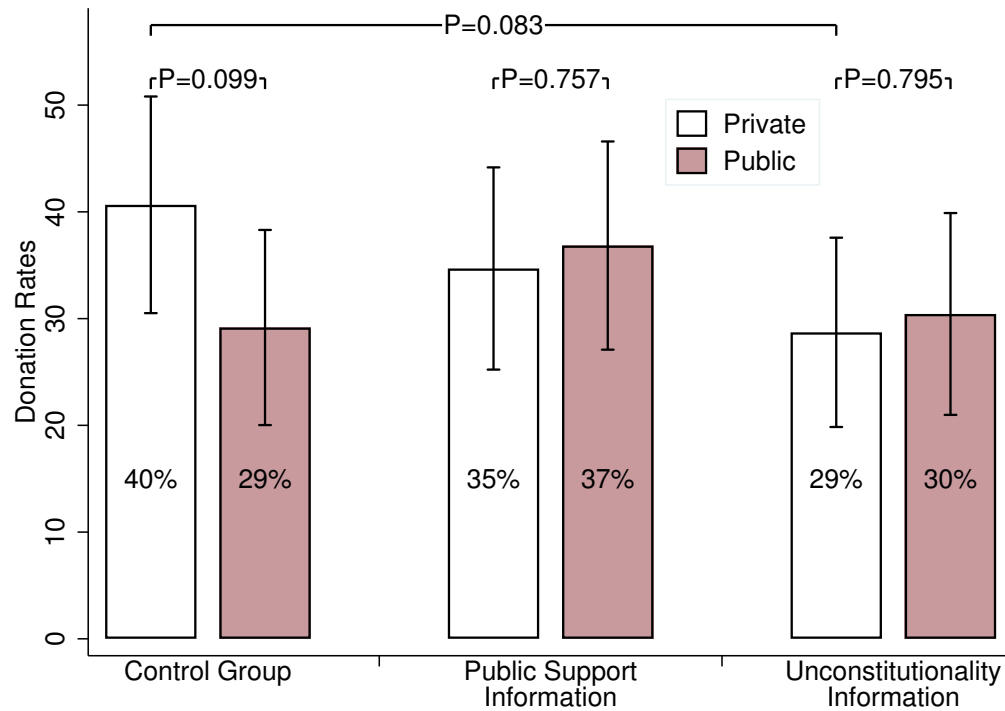
Notes: the two bars on the left display donation rates to the anti-Muslim organization for individuals in the private and public conditions in the *control* group (respectively N=91 and N=96), the two central bars display those in the *public support information* group (respectively N=98 and N=95), and the last two bars display those in the *unconstitutionality information* group (respectively N=101 and N=92). Error bars reflect 95% confidence intervals. Top horizontal bars show *p*-values for *t* tests of equality of means between different experimental conditions.