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2 **Supplementary Information for**

3 **Parochialism, Social Norms, and Discrimination Against Immigrants**

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7 **This PDF file includes:**

- 8 Supplementary text
- 9 Figs. S1 to S7
- 10 Tables S1 to S20
- 11 References for SI reference citations

12 Supporting Information Text

13 1. Materials and Methods

14 The full replication code that produces this report will be made available at the Penn Identity and Conflict Lab's webpage.

15 **Experimental design.** The experiment focuses specifically on exploring whether host populations reward immigrants for their
16 enforcement of social norms that are well-established in the host society, and whether such behavior is sufficient to offset the
17 discrimination towards immigrants that are driven by intergroup differences in ascriptive characteristics. We focus on the
18 willingness of the host population to offer assistance to immigrants in the context of common day-to-day interactions regarding
19 the enforcement of the littering norm. The setup and procedures are diagrammatically presented in Figure S1, shown below.

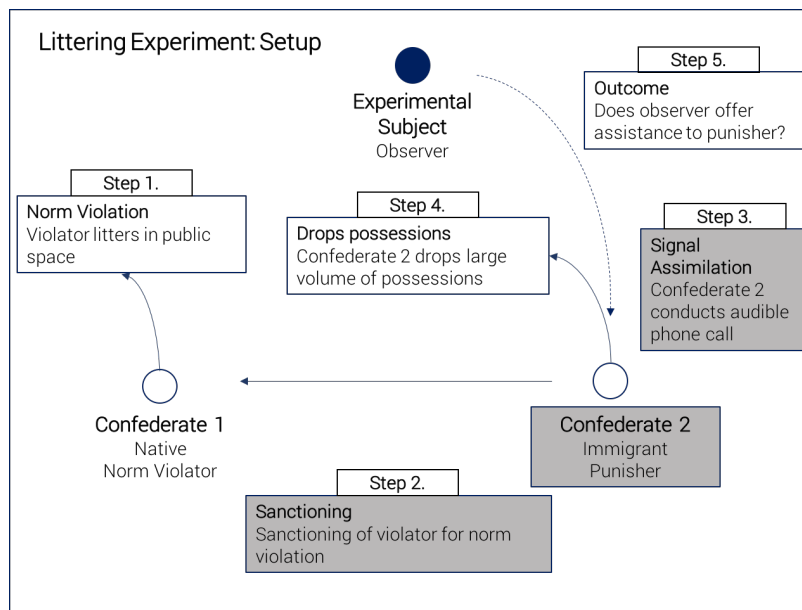


Fig. S1. Experimental setup

- 20
- **Step 1:** A German male confederate (the “violator”) is instructed to violate a widely shared norm against littering in a train station platform in front of unknowing experimental subjects, as in the closely related experiment by Balafoutas et al. (2016).
 - 21
 - 22
 - **Step 2:** A second female confederate sanctions the violator by politely, albeit firmly, asking the violator to pick up his trash. The violator picks up his trash and leaves the scene.
 - 23
 - 24
 - **Step 3:** The female confederate conducts an audible phone call within earshot of the experimental subject in either German or their mother tongue.
 - 25
 - 26
 - **Step 4:** In the midst of the phone call, the female confederate drops her possessions (a large volume of groceries that disperse and are hard to pick up) and appears to be in need of assistance.
 - 27
 - 28
 - **Step 5:** We observe in step 5 whether the punisher receives assistance from experimental subjects who have observed the sequence of events. The main behavioral outcomes of the study are (a) whether the female confederate receive *any* assistance from bystanders; and (b) the *proportion* of bystanders who offered assistance.
 - 29
 - 30
 - 31

32 **Treatment manipulation.** We experimentally manipulated two core dimensions of the intervention.

- 33
- **Dimension 1:** Ascriptive characteristics of female confederate (punisher).
 - 34 1. Immigrant confederate wearing a hijab
 - 35 2. Immigrant confederate wearing plain clothing without hijab
 - 36 3. Immigrant confederate wearing plain clothing with a Christian cross
 - 37 4. Native confederate (German)
 - **Dimension 2:** Enforcement of anti-littering norm. Figure S2 provides a diagrammatic representation of how treatment dimension 2 was manipulated.
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 - 39

1. Anti-littering norm is enforced by the female confederate (punisher) who is later in need of assistance.
2. Anti-littering norm is enforced by a different confederate (third party).

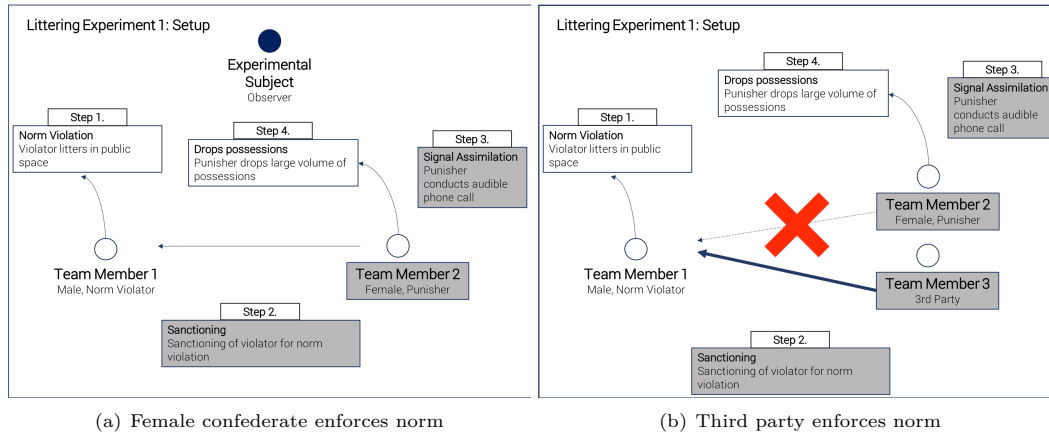


Fig. S2. Manipulation of treatment dimension 2: Norm enforcement

Pre-analysis plan. We filed a pre-analysis plan (PAP) for this paper with Evidence in Governance and Politics (ID 20180725AB at www.egap.org) on July 30, 2018. The date of filing *preceded* the commencement of data collection for the project other than the pilot test runs (rehearsals), which were conducted to acquaint the enumerators with the procedure and details of the intervention. None of the pilot test run data are used for the purpose of the analysis. We note that in line with the registered preanalysis plan, one additional treatment dimension (linguistic assimilation) was manipulated as a part of the experimental intervention. However, since the focus of this paper is on the effect of civic norms on discriminatory behavior, and we face length constraints in this manuscript, we omit discussion of the results on the additional treatment dimension and reserve them for another publication (in progress).

Outcomes. We are interested in measuring the level of assistance offered to the female confederate who drops her possessions (bag of oranges) in the intervention, as specified in our pre-analysis plan. Enumerators observing each iteration of the intervention collected the following information regarding the reaction of bystanders. *This information was collected at the level of the iteration, which constitutes our unit of analysis.*

- *bystander*: Total number of bystanders within a 3 meter radius of where the iteration is taking place (count)
- *bystander_fem*: Total number of female bystanders within the 3 meter radius (count)
- *bystanderHP*: Total number of bystanders with headphones or earphones (count)
- *help*: Whether any bystander offered assistance to the female confederate (dichotomous)
- *help_count*: The number of bystanders who offered assistance (count)
- *help_count_fem*: The number of female bystanders who offered assistance (count)

Using this information, we construct one main outcome and additional auxiliary outcomes that will be used for the empirical analyses. These outcomes are calculated at the iteration level.

- *help*: Did *any* bystander offer assistance by moving to pick up possessions that the confederate has dropped? (**main**)
- *pcthelp*: The *proportion* of bystanders who offered assistance by moving to pick up possessions that the confederate has dropped (**auxiliary**)
- *womenhelp*: Did *any female* bystander offer assistance? (**auxiliary**)
- *menhelp*: Did *any male* bystander offer assistance? (**auxiliary**)

Data was collected for additional treatments in this manuscript, in accordance with our pre-analysis plan. In this paper, we analyze only the set of outcomes that focus on the effect of civic norms on discriminatory behavior. We reserve the other results for discussion in other publications.

70 2. Logistics and Procedures

71 **Site selection.** The interventions were conducted at train stations across 31 medium to large-sized cities/towns in the German
72 states of North Rhine-Westphalia (NRW), Brandenburg, and Saxony. These states were not chosen at random; rather, we
73 arrived at the decision to conduct these interventions in the three states after carefully weighing a combination of state and
74 region-level sociodemographic factors that we believed would be of interest. The most obvious difference between North
75 Rhine-Westphalia and the two other states (Brandenburg, and Saxony) is that they fell under West and East Germany prior
76 to reunification. In addition, these two areas have been traditionally been exposed to very different levels of immigration in
77 Germany's post war history. Whereas NRW is considered one of the most ethnically diverse federal states, with the highest
78 proportion of foreign born populations in the country, the two other states have remained relatively ethnically homogeneous.
79 Furthermore, the recent refugee crisis rising as result of the protracted conflict in the Middle East has also had a differential
80 impact on the three states. The Königstein quota system, which combines state level tax revenues and population to assign
81 asylum seekers, has naturally resulted in a high influx of refugees into NRW, which also happens to be one of the most populous
82 and affluent states in Germany, and a low influx of refugees to Brandenburg and Saxony, which are sparsely populated and lag
83 behind western German states in terms of tax revenue. But perhaps most importantly, there is ample reason to suggest that
84 the level of racial resentment might vary significantly across the west (NRW) and the east (Saxony, Brandenburg); the level of
85 electoral support for the far-right Alternative für Deutschland (AfD), which primarily campaigned on an anti-immigration
86 agenda, in state and federal elections has been markedly higher in the East in comparison to the west. In some parts of Saxony,
87 the AfD managed to secure the party vote share.

88 The list of cities and the number of train platforms (in parentheses) at each of the train stations where data collection was
89 implemented is presented below.

- 90 • **North Rhine-Westphalia:** Münster (9), Bielefeld (8), Minden (5), Rheine (6), Köln (11), Köln Messe/Deutz (12),
91 Mönchengladbach (9), Neuss (8), Siegen (6), Bonn (5), Düsseldorf (20), Wuppertal (5), Dortmund (31), Duisburg (12),
92 Bochum (8), Gelsenkirchen (6), Hagen (16), Essen (13), Wanne-Eickel (8)
- 93 • **Saxony:** Leipzig (21), Görlitz (6), Chemnitz (14), Dresden (16), Zwickau (8)
- 94 • **Brandenburg:** Potsdam (7), Forst-Lausitz (5), Cottbus (10), Frankfurt-Oder (12), Brandenburg (6)

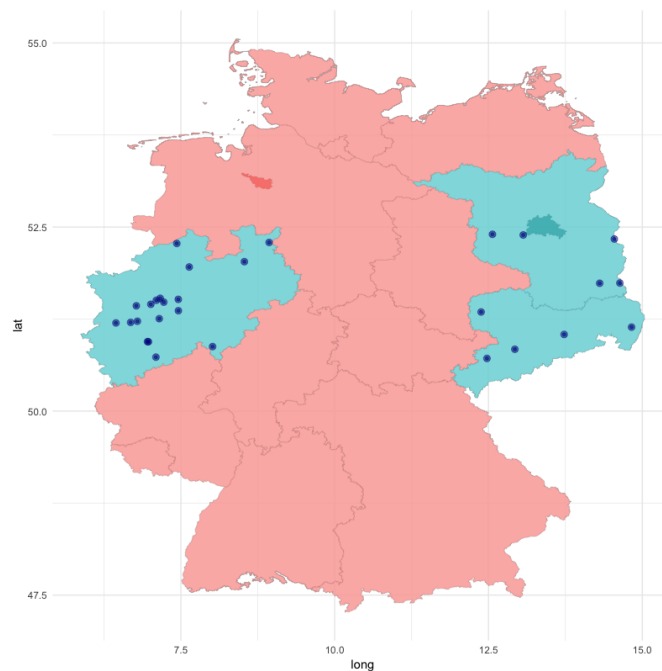


Fig. S3. Study sites – 29 train stations across 3 states in North Rhine-Westphalia, Saxony, and Brandenburg

95 **Team constitution.** We formed a total of seven confederate teams (three in North Rhine-Westphalia, two each in Saxony and
96 Brandenburg), with four to five confederates constituting each team (total of 34 confederates). In order to make sure that
97 we could cover all the roles required to implement the 14 different treatment conditions, we made sure that each team had
98 at least one white German male confederate (playing the violator), at least one female confederate of a immigrant minority
99 background (playing the female confederate), at least one white German female confederate (playing the control condition to
100 the immigrant female confederate). When recruiting the confederate to play the immigrant punisher, we took extra care to hire

101 women who were clearly identifiable by Germans as a member of the immigrant minority community based on their skin tone
102 and phenotype; we deliberately excluded those with the possibility of being mistaken as a native German. Of the seven women
103 recruited to play these roles, three were Turkish, two Egyptian, one Syrian, and one Kurdish in origin. We also made sure that
104 the confederate playing the violator were clearly identifiable as a white German male. In addition to filling these key roles, we
105 also hired at least one or two additional confederates who could play the role of third-party enforcer as well as serve as the
106 outcome coders. In order to mitigate ethnicity-independent characteristics of the actors to influence bystanders' behavior, we
107 decided to use a rather large number of actors of similar age and with similar attire for each confederate role. The make-up of
108 each team with key roles highlighted are listed below.

- 109 • **NRW 1** (5): Gesika (immigrant female), Tobias (norm violator), Martina, Helena, Merlyn
- 110 • **NRW 2** (5): Bahar (immigrant female), Mirko (norm violator), Maria, Rudolph, Fulden
- 111 • **NRW 3** (5): Nilay (immigrant female), Tassilo (norm violator), Stefanie, Florence, Emine
- 112 • **Saxony 1** (4): Zeynep (immigrant female), Franz (norm violator), Juliane, Luzie
- 113 • **Saxony 2** (5): Mirna (immigrant female), Timon (norm violator), Sarah, Charlotte, Vatan
- 114 • **Brandenburg 1** (5): Emel (immigrant female), Moritz (norm violator), Damla, Louise, Koray
- 115 • **Brandenburg 2** (5): Yasmin (immigrant female), David (norm violator), Helin, Judith, Kitty

116 **Training.** Before the beginning of the intervention in each state, the confederates and enumerators that would observe and code
117 the behavior of the bystanders participated in day-long training workshops led by the authors to ensure a consistently high
118 quality in the delivery of the intervention. These trainings focused on how to select the settings for the intervention, how to play
119 the different roles, how to ensure consistent performances across actors and across teams, and how to code bystander behavior
120 consistently. For the main outcome of the study, whether a bystander provided assistance, enumerators were instructed to code
121 any attempt to offer help in picking up oranges that consisted of a clear physical movement towards the oranges in an effort
122 to help as provision of help, i.e. a clear movement to signal willingness to provide help in picking up oranges was necessary.
123 In order to ensure consistent coding across enumerators and teams, different scenarios were discussed through role-playing
124 activities during the training sessions. These training workshops were followed by extensive test runs in actual train stations
125 with the authors. During the actual data collection, two enumerators independently observed the bystanders from different
126 positions in an effort to minimize measurement error.

127 We took numerous precautions and trained the confederates and enumerators extensively in procedures to select the sites
128 for the iterations in a way that minimizes the potential for bystanders to witness more than one iteration. First, the specific
129 sites on each train platform were chosen such that it was hard to see the interaction from other platforms (e.g., by making use
130 of walls and signs on the platform, timing the interaction such that stationary trains would block the sight). Second, platforms
131 and the specific sites on those platforms were selected to minimize the chance of repeated participation by the same bystanders.
132 After concluding one iteration on one platform, teams would switch to the platform farthest away from this one that had
133 passengers waiting on it (only train stations with at least four tracks were used). Furthermore, the specific site on that new
134 platform would be chosen to maximize the distance from the previous iteration (e.g., by going to the other end/side). Third,
135 the enumerators tasked with observing the bystanders and coding their behavior were trained to make note of the bystanders
136 for each iteration in order to avoid that—despite the other precautions—bystanders might witness more than one iteration (e.g.,
137 if passengers had stayed around after the departure of the train from that platform or had switched platforms). In the very
138 limited instances where the same team conducted interventions at the same train station on more than one day, we conducted
139 field work on different days of the week, choosing a business day and a weekend day in order to minimize chances of commuters
140 being exposed to more than one iteration. Furthermore, enumerators were instructed to begin on the opposite track/side of the
141 train station that during the prior day.

142 **A note on enumerator "blinding" as to the purpose of the project.** It was not possible to blind confederates to the general
143 purpose of the experiment. All the coders were intelligent students who were interested in learning about research, thus after
144 a few iterations the coders would have figured out that we were collecting data on bystander behavior across the different
145 treatment conditions. However, we took steps to reduce the risk that coding reflected demand effects and confederates who
146 acted out parts of the scene were expressly told to follow the script and to avoid behaviors that might be designed to elicit
147 specific responses from the bystanders. We did not share the PAP with the actors or coders so they did not know what our
148 prior expectations were for this experiment. They were given a script to follow during the intervention, were given detailed
149 instructions on how to act (e.g. they were told to be polite albeit firm when enforcing the norm; to speak in a normal voice;
150 and not to appear aggressive), and monitored during the iterations. Furthermore, most iterations were coded separately by two
151 enumerators. Finally, there was no normative content in the material we used for the training of confederates (e.g. we referred
152 to measuring assistance to confederates, rather than measuring discrimination and did not use loaded terms such as "bias" or
153 "racism").

154 **Ethical and safety considerations.** We took great care to minimize the potential risk to study participants. For a full discussion
155 of these measures, see the research protocol that was reviewed and approved by University of Pennsylvania's Institutional
156 Review Board (IRB Protocol #829824). Beyond our efforts to minimize potential risks to subjects participating in the study,
157 we also took a number of steps to ensure the safety of our research assistants (confederates and enumerators) during the study.
158 Prior to the onset of data collection, we consulted a number of German experts on how to minimize potential risks to our
159 RAs, esp. the norm violating confederates and the norm enforcing confederates. For example, we decided to pick only female
160 confederates for the role of norm enforcer in order to minimize the risk of a physical conflict between bystanders and the
161 confederate. Furthermore, the other confederates and the enumerators within each team closely monitored the bystanders
162 and stood by, ready to intervene, if necessary. During the training sessions, we discussed potential risks and safety strategies
163 extensively with the research assistants. RAs were instructed to stop the intervention if they felt unsafe at any point. The
164 authors were in constant contact with all teams during the data collection, monitoring their progress and potential safety issues
165 early-on. Last, the German train company, Deutsche Bahn, was instructed about research activities taking place at any given
166 train station on any given day.

167 **3. Bystander Composition and Scene Characteristics**

168 In this subsection, we present descriptive statistics and additional information on the composition of the bystanders and
169 other iteration characteristics. A minimum of 3 bystanders were required for each iteration. As discussed above, treatment
170 assignment was orthogonal to all bystander characteristics. Therefore, we should not expect these characteristics to affect
171 the results. To further demonstrate this empirically that, for example, the number of bystanders does not systemically affect
172 the results, we also report specification that have number of bystander fixed effects, where the proportion outcome is used
173 in the analysis. The estimates are virtually the same as without the fixed effects. We also include the full set of bystander
174 composition and scene characteristics in our regression based analyses reported in Table S5 and S6. As expected, the inclusion
175 of these additional covariates also do not change our original findings.

Table S1. Bystander composition and scene characteristics

| Statistic | N | Mean | St. Dev. |
|--|-------|--------|----------|
| Number of bystanders | 1,614 | 4.428 | 1.449 |
| Proportion of female bystanders | 1,614 | 0.542 | 0.258 |
| Proportion of bystanders w/ headphones | 1,614 | 0.071 | 0.130 |
| Hour of iteration | 1,614 | 12.887 | 2.753 |
| Iteration during rush hour (binary) | 1,614 | 0.170 | 0.376 |
| Temperature during iteration | 1,614 | 29.053 | 3.708 |

176 Unfortunately, we were not able to collect information about bystander immigration status or ethnicity, given the already
177 elaborate design. We do not think that poses a problem for our inferences. If bias is driven by ethnic or religious differences, as
178 previous literature suggests, then the larger number of immigrant bystanders, the smaller the degree of discrimination that we
179 should find. It follows that we could view our estimates as lower bounds of the true extent of native-immigrant discrimination,
180 which would have been higher if all bystanders were native. Furthermore, the research teams were instructed to avoid bystander
181 groups that were speaking in a foreign language or were clearly perceived as immigrants. These instructions were uniformly
182 applied across all treatment conditions, and therefore have no reason to believe that there are systematic differences in the
183 composition of the bystander pool in terms of their ethnicity or immigration status.

184 **4. Covariate Balance**

185 In this subsection, we present covariate balance statistics for our experimental treatment conditions. While covariate imbalance
 186 can arise due to chance, the randomization seems to have successfully obtained balance on each of the 6 pretreatment covariates
 187 we collected, both in the full sample as well as the samples disaggregated by state. Figures S2 and S3 present balance statistics
 188 for all statistical tests included in Figures 3 and 4 of the main text. Figure S4 presents the balance statistics for the hijab
 189 and native comparison by federal state. We include this balance table because we include analysis in the Supplementary
 190 Information regarding the hijab and native comparison in particular, disaggregated by state and region.

Table S2. Covariate balance for comparisons in Figure 3

| | Mean Treated | Mean Control | T test p-value | KS test p-value |
|---|--------------|--------------|----------------|-----------------|
| Native vs. immigrant with cross: column (1) vs (2) | | | | |
| Number of bystanders | 4.4301075 | 4.4625850 | 0.7807861 | 0.7854 |
| Proportion of female bystanders | 0.5431084 | 0.5293897 | 0.4679242 | 0.3018 |
| Proportion of bystanders w/ headphones | 0.0571796 | 0.0736300 | 0.0981795 | 0.1814 |
| Hour of iteration | 12.8064516 | 12.9551020 | 0.5227605 | 0.1472 |
| Iteration during rush hour (binary) | 0.1751152 | 0.1571429 | 0.5579957 | - |
| Temperature during iteration | 28.8234255 | 28.9428571 | 0.7041512 | 0.3412 |
| Joint F-statistic: 0.6241 (p-value = 0.7111) | | | | |
| Immigrant with cross vs. immigrant control: column (2) vs (3) | | | | |
| Number of bystanders | 4.4625850 | 4.3244980 | 0.1626622 | 0.0844 |
| Proportion of female bystanders | 0.5293897 | 0.5600671 | 0.0921786 | 0.2592 |
| Proportion of bystanders w/ headphones | 0.0736300 | 0.0698276 | 0.6593346 | 0.8978 |
| Hour of iteration | 12.9551020 | 12.9686747 | 0.9404746 | 0.8550 |
| Iteration during rush hour (binary) | 0.1571429 | 0.1855422 | 0.2603880 | - |
| Temperature during iteration | 28.9428571 | 28.9612490 | 0.9384094 | 0.9248 |
| Joint F-statistic: 1.042 (p-value = 0.3965) | | | | |
| Immigrant with cross vs. immigrant with hijab: column (2) vs (4) | | | | |
| Number of bystanders | 4.4625850 | 4.4243318 | 0.6961367 | 0.6902 |
| Proportion of female bystanders | 0.5293897 | 0.5398469 | 0.5211604 | 0.6566 |
| Proportion of bystanders w/ headphones | 0.0736300 | 0.0757804 | 0.8083094 | 0.9794 |
| Hour of iteration | 12.9551020 | 12.7075472 | 0.1767195 | 0.0404 |
| Iteration during rush hour (binary) | 0.1571429 | 0.1650943 | 0.7448717 | - |
| Temperature during iteration | 28.9428571 | 28.8490566 | 0.6984514 | 0.9398 |
| Joint F-statistic: 0.4641 (p-value = 0.8352) | | | | |
| Immigrant control vs. immigrant with hijab: column (3) vs (4) | | | | |
| Number of bystanders | 4.3244980 | 4.4243318 | 0.3001348 | 0.5102 |
| Proportion of female bystanders | 0.5600671 | 0.5398469 | 0.2872883 | 0.8126 |
| Proportion of bystanders w/ headphones | 0.0698276 | 0.0757804 | 0.5115495 | 0.8872 |
| Hour of iteration | 12.9686747 | 12.7075472 | 0.1692260 | 0.2560 |
| Iteration during rush hour (binary) | 0.1855422 | 0.1650943 | 0.4368234 | - |
| Temperature during iteration | 28.9612490 | 28.8490566 | 0.6511535 | 0.9642 |
| Joint F-statistic: 0.8374 (p-value = 0.5411) | | | | |
| Native vs. immigrant with hijab: column (1) vs (4) | | | | |
| Number of bystanders | 4.4301075 | 4.4243318 | 0.9597913 | 0.6530 |
| Proportion of female bystanders | 0.5431084 | 0.5398469 | 0.8682467 | 0.7282 |
| Proportion of bystanders w/ headphones | 0.0571796 | 0.0757804 | 0.0719134 | 0.1730 |
| Hour of iteration | 12.8064516 | 12.7075472 | 0.6789056 | 0.4798 |
| Iteration during rush hour (binary) | 0.1751152 | 0.1650943 | 0.7508337 | - |
| Temperature during iteration | 28.8234255 | 28.8490566 | 0.9365924 | 0.4436 |
| Joint F-statistic: 0.5481 (p-value = 0.7716) | | | | |

Table S3. Covariate balance for comparisons in Figure 4

| | Mean Treated | Mean Control | T test p-value | KS test p-value |
|---|--------------|--------------|----------------|-----------------|
| Native enforcer vs. native non-enforcer: column (1) vs (2) | | | | |
| Number of bystanders | 4.4466667 | 4.4159544 | 0.8723780 | 0.1078 |
| Proportion of female bystanders | 0.5343120 | 0.5506267 | 0.6030468 | 0.2386 |
| Proportion of bystanders w/ headphones | 0.0472388 | 0.0656761 | 0.2346577 | 0.4222 |
| Hour of iteration | 12.7100000 | 12.8888889 | 0.6523117 | 0.8228 |
| Iteration during rush hour (binary) | 0.1500000 | 0.1965812 | 0.3664944 | - |
| Temperature during iteration | 29.1793333 | 28.5192308 | 0.2186675 | 0.1334 |
| Joint F-statistic: 0.9079 (p-value = 0.4901) | | | | |
| Native non-enforcer vs. immigrant with hijab enforcer: column (2) vs (3) | | | | |
| Number of bystanders | 4.4159544 | 4.4802956 | 0.6446874 | 0.5332 |
| Proportion of female bystanders | 0.5506267 | 0.5633615 | 0.6368757 | 0.2036 |
| Proportion of bystanders w/ headphones | 0.0656761 | 0.0860165 | 0.1947927 | 0.0446 |
| Hour of iteration | 12.8888889 | 12.7931034 | 0.7667732 | 0.3188 |
| Iteration during rush hour (binary) | 0.1965812 | 0.1477833 | 0.2745965 | - |
| Temperature during iteration | 28.5192308 | 28.8801314 | 0.4276426 | 0.2440 |
| Joint F-statistic: 0.7331 (p-value = 0.6232) | | | | |
| Immigrant with hijab enforcer vs. Immigrant with hijab non-enforcer: column (3) vs (4) | | | | |
| Number of bystanders | 4.4802956 | 4.3729261 | 0.4248084 | 0.1332 |
| Proportion of female bystanders | 0.5633615 | 0.5182475 | 0.0642700 | 0.1822 |
| Proportion of bystanders w/ headphones | 0.0860165 | 0.0663781 | 0.1352747 | 0.1144 |
| Hour of iteration | 12.7931034 | 12.6289593 | 0.5427395 | 0.4346 |
| Iteration during rush hour (binary) | 0.1477833 | 0.1809955 | 0.3570004 | - |
| Temperature during iteration | 28.8801314 | 28.8205128 | 0.8674564 | 0.9682 |
| Joint F-statistic: 1.325 (p-value = 0.2446) | | | | |

Table S4. Covariate balance for hijab vs native comparison, by state

| | Mean Treated | Mean Control | T test p-value | KS test p-value |
|--|--------------|--------------|----------------|-----------------|
| Immigrant hijab vs native, North-Rhine Westfalia: | | | | |
| Number of bystanders | 4.6979167 | 4.5361635 | 0.3336713 | 0.3062 |
| Proportion of female bystanders | 0.5181347 | 0.5468327 | 0.3051481 | 0.8136 |
| Proportion of bystanders w/ headphones | 0.1018057 | 0.0717577 | 0.0496565 | 0.0880 |
| Hour of iteration | 12.9776786 | 13.0471698 | 0.8402304 | 0.7416 |
| Iteration during rush hour (binary) | 0.1741071 | 0.2075472 | 0.4778560 | - |
| Temperature during iteration | 28.6406994 | 28.8407233 | 0.6771188 | 0.4688 |
| Joint F-statistic: 1.02 (p-value = 0.4124) | | | | |
| Immigrant hijab vs native, Saxony: | | | | |
| Number of bystanders | 4.3011551 | 4.5087719 | 0.3579043 | 0.1188 |
| Proportion of female bystanders | 0.5718711 | 0.5777436 | 0.8724649 | 0.4322 |
| Proportion of bystanders w/ headphones | 0.0370442 | 0.0307018 | 0.6709330 | 0.8744 |
| Hour of iteration | 12.6336634 | 12.5964912 | 0.9402578 | 0.6668 |
| Iteration during rush hour (binary) | 0.1881188 | 0.1578947 | 0.6293403 | - |
| Temperature during iteration | 29.6580858 | 29.3877193 | 0.5790738 | 0.7930 |
| Joint F-statistic: 0.2955 (p-value = 0.9383) | | | | |
| Immigrant hijab vs native, Brandenburg: | | | | |
| Number of bystanders | 3.9309764 | 4.1388889 | 0.3185076 | 0.5840 |
| Proportion of female bystanders | 0.5563023 | 0.4992384 | 0.1731315 | 0.3290 |
| Proportion of bystanders w/ headphones | 0.0564137 | 0.0565122 | 0.9965654 | 0.8542 |
| Hour of iteration | 12.1717172 | 12.5555556 | 0.3835939 | 0.8012 |
| Iteration during rush hour (binary) | 0.1212121 | 0.1296296 | 0.8822794 | - |
| Temperature during iteration | 28.4951178 | 28.1938272 | 0.6742378 | 0.5794 |
| Joint F-statistic: 0.7176 (p-value = 0.636) | | | | |

191 **5. Regression-based Presentation of Treatment Effects**

Table S5. Hijab versus native comparisons 1: Discrimination is consistently observed using both a binary measure of help and the share of bystanders offering help

| | Hijab versus native | | | | | | | | | |
|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------------------|----------------------|----------------------|----------------------|----------------------|
| | Any help? | | | | | % of bystanders helped? | | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Hijab (vs. Native) | -0.120*** (0.036) | -0.123*** (0.035) | -0.119*** (0.035) | -0.118*** (0.036) | -0.124*** (0.038) | -0.065*** (0.020) | -0.067*** (0.020) | -0.064*** (0.019) | -0.068*** (0.019) | -0.066*** (0.020) |
| Constant | 0.783*** (0.027) | | | | | 0.316*** (0.016) | | | | |
| State FE | No | Yes | No | Yes | Yes | No | Yes | No | Yes | Yes |
| Team FE | No | No | Yes | No | No | No | No | Yes | No | No |
| Bystander FE | No | No | No | Yes | Yes | No | No | No | Yes | Yes |
| Other Controls | No | No | No | No | Yes | No | No | No | No | Yes |
| Observations | 666 | 666 | 666 | 666 | 641 | 666 | 666 | 666 | 666 | 641 |
| R ² | 0.015 | 0.029 | 0.072 | 0.058 | 0.066 | 0.016 | 0.027 | 0.084 | 0.110 | 0.115 |

Note: *p<0.1; **p<0.05; ***p<0.01

192 Comparisons between immigrant hijab condition and native condition, pooling across norm enforcement dimension. Outcomes
 193 examined are our dichotomous measure of whether any bystander helped (Columns (1)–(5)) and the percentage of bystanders
 194 who helped (Columns (6)–(10)). Columns (1) and (6) report the average treatment effect (ATE) without any controls, while
 195 columns (2) and (7) report the ATE with state fixed effects. Columns (3) and (8) report the ATE with team fixed effects.
 196 Columns (4) and (9) report the ATE with both state and number of bystanders fixed effects. Columns (5) and (10) report the
 197 ATE with state and number of bystander fixed effects, as well as the full set of pretreatment controls (proportion of female
 198 bystanders, proportion of bystanders with headphones, hour of day, rush hour dummy, temperature at time of iteration).
 199 Constant terms for columns (1) and (6)—the baseline specifications—are the means for the control group (native category).
 200 Robust standard errors are reported in parentheses.

Table S6. Hijab versus native comparisons 1, clustered standard errors

| | Hijab versus native | | | | | | | | | |
|--------------------|----------------------|----------------------|----------------------|----------------------|----------------------|-------------------------|---------------------|---------------------|---------------------|---------------------|
| | Any help? | | | | | % of bystanders helped? | | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) | (10) |
| Hijab (vs. Native) | -0.120*** (0.043) | -0.123*** (0.043) | -0.119*** (0.042) | -0.118*** (0.043) | -0.124*** (0.045) | -0.065** (0.030) | -0.067** (0.029) | -0.064** (0.027) | -0.068** (0.030) | -0.066** (0.031) |
| Constant | 0.783*** (0.027) | | | | | 0.316*** (0.022) | | | | |
| State FE | No | Yes | No | Yes | Yes | No | Yes | No | Yes | Yes |
| Team FE | No | No | Yes | No | No | No | No | Yes | No | No |
| Bystander FE | No | No | No | Yes | Yes | No | No | No | Yes | Yes |
| Other Controls | No | No | No | No | Yes | No | No | No | No | Yes |
| Observations | 666 | 666 | 666 | 666 | 641 | 666 | 666 | 666 | 666 | 641 |
| R ² | 0.015 | 0.029 | 0.072 | 0.058 | 0.066 | 0.016 | 0.027 | 0.084 | 0.110 | 0.115 |

Note: *p<0.1; **p<0.05; ***p<0.01

201 Table S6 replicates Table S5 with *robust standard errors clustered at the study site level (train station)*.

Table S7. Hijab versus native comparison, by region: Discrimination is larger in former East Germany

| | Hijab versus native | | | | | |
|--------------------|----------------------|---------------------|-------------------------|----------------------|---------------------|--------------------|
| | Any help? | | % of bystanders helped? | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Hijab (vs. Native) | -0.162*** (0.053) | -0.087* (0.047) | -0.082*** (0.029) | -0.093*** (0.029) | -0.052* (0.027) | -0.045* (0.027) |
| Constant | 0.759*** (0.041) | 0.807*** (0.037) | 0.302*** (0.024) | | 0.330*** (0.022) | |
| Region | East | West | East | East | West | West |
| Bystander FE | No | No | No | Yes | No | Yes |
| Observations | 313 | 353 | 313 | 313 | 353 | 353 |
| R ² | 0.027 | 0.009 | 0.026 | 0.109 | 0.010 | 0.106 |

Note:

*p<0.1; **p<0.05; ***p<0.01

202 Comparisons between immigrant hijab condition and native condition, pooling across norm enforcement dimension, but
203 disaggregated by region (Former East Germany and West Germany). Outcomes examined are 1) our dichotomous measure
204 of whether any bystander helped and 2) the percentage of bystanders who helped. Columns (1) and (2) report the average
205 treatment effect (ATE) on our dichotomous main outcome, while columns (3) – (6) report the ATE using the percentage of
206 bystanders who helped. Columns (4) and (6) report specifications with number of bystanders fixed effects. Constant terms for
207 columns (1), (2), (3), and (5)—the baseline specifications—are the means for the control group (native category). Robust
standard errors are reported in parentheses.

Table S8. Hijab versus native comparison, by region, clustered standard errors

| | Hijab versus native | | | | | |
|--------------------|----------------------|---------------------|-------------------------|----------------------|---------------------|-------------------|
| | Any help? | | % of bystanders helped? | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) |
| Hijab (vs. Native) | -0.162*** (0.049) | -0.087 (0.070) | -0.082*** (0.030) | -0.093*** (0.033) | -0.052 (0.050) | -0.045 (0.050) |
| Constant | 0.759*** (0.030) | 0.807*** (0.045) | 0.302*** (0.022) | | 0.330*** (0.038) | |
| Region | East | West | East | East | West | West |
| Bystander FE | No | No | No | Yes | No | Yes |
| Observations | 313 | 353 | 313 | 313 | 353 | 353 |
| R ² | 0.027 | 0.009 | 0.026 | 0.109 | 0.010 | 0.106 |

Note:

*p<0.1; **p<0.05; ***p<0.01

208 Table S8 replicates Table S7 with *robust standard errors clustered at the study site level (train station)*.
209

Table S9. Hijab versus native comparison, by state: Discrimination is largest in the state of Saxony

| | Hijab versus native | | | | | | | | |
|-------------------|---------------------|----------------------|---------------------|---------------------|-------------------------|----------------------|----------------------|---------------------|-------------------|
| | Any help? | | | | % of bystanders helped? | | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Hijab(vs. Native) | -0.087* (0.047) | -0.217*** (0.070) | -0.105 (0.080) | -0.052* (0.027) | -0.045* (0.027) | -0.119*** (0.041) | -0.148*** (0.041) | -0.044 (0.040) | -0.049 (0.044) |
| Constant | 0.807*** (0.037) | 0.825*** (0.051) | 0.691*** (0.063) | 0.330*** (0.022) | | 0.337*** (0.034) | | 0.266*** (0.033) | |
| State | NRW | Sachsen | Bburg | NRW | NRW | Sachsen | Sachsen | Bburg | Bburg |
| Bystander FE | No | No | No | No | Yes | No | Yes | No | Yes |
| Observations | 353 | 159 | 154 | 353 | 353 | 159 | 159 | 154 | 154 |
| R ² | 0.009 | 0.050 | 0.011 | 0.010 | 0.106 | 0.054 | 0.174 | 0.008 | 0.084 |

Note:

*p<0.1; **p<0.05; ***p<0.01

210 Comparisons between immigrant hijab condition and native condition, pooling across norm enforcement dimension, but
 211 disaggregated by federal state (North Rhine-Westphalia, Brandenburg, and Saxony). Outcomes examined are 1) our dichotomous
 212 measure of whether any bystander helped, and 2) the percentage of bystanders who helped. Columns (1)–(3) report the average
 213 treatment effect (ATE) on our dichotomous main outcome, while columns (4)–(9) report the ATE using the percentage of
 214 bystanders who helped. Constant terms for columns (1), (2), (3), (4), (6), and (8)—the baseline specifications—are the means for the control group (native category). Robust standard errors are reported in parentheses.

Table S10. Hijab versus native comparison, by state, clustered standard errors

| | Hijab versus native | | | | | | | | |
|-------------------|---------------------|----------------------|---------------------|---------------------|-------------------------|----------------------|----------------------|---------------------|-------------------|
| | Any help? | | | | % of bystanders helped? | | | | |
| | (1) | (2) | (3) | (4) | (5) | (6) | (7) | (8) | (9) |
| Hijab(vs. Native) | -0.087 (0.070) | -0.217*** (0.054) | -0.105 (0.070) | -0.052 (0.050) | -0.045 (0.050) | -0.119*** (0.039) | -0.148*** (0.042) | -0.044 (0.034) | -0.049 (0.035) |
| Constant | 0.807*** (0.045) | 0.825*** (0.031) | 0.691*** (0.034) | 0.330*** (0.038) | | 0.337*** (0.028) | | 0.266*** (0.017) | |
| State | NRW | Sachsen | Bburg | NRW | NRW | Sachsen | Sachsen | Bburg | Bburg |
| Bystander FE | No | No | No | No | Yes | No | Yes | No | Yes |
| Observations | 353 | 159 | 154 | 353 | 353 | 159 | 159 | 154 | 154 |
| R ² | 0.009 | 0.050 | 0.011 | 0.010 | 0.106 | 0.054 | 0.174 | 0.008 | 0.084 |

Note:

*p<0.1; **p<0.05; ***p<0.01

215 Table S10 replicates Table S9 with *robust standard errors clustered at the study site level (train station)*.
 216

Table S11. Immigrant (hijab + control) versus native comparisons

| | Immigrants (hijab + control) versus native | | | | |
|--------------------------|--|---------------------|-------------------------|----------------------|----------------------|
| | Any help? | | % of bystanders helped? | | |
| | (1) | (2) | (3) | (4) | (5) |
| Immigrants (vs. Natives) | -0.070** (0.031) | -0.070** (0.031) | -0.050*** (0.018) | -0.051*** (0.018) | -0.053*** (0.018) |
| Constant | 0.783*** (0.027) | | 0.316*** (0.016) | | |
| State FE | No | Yes | No | Yes | Yes |
| Bystander FE | No | No | No | No | Yes |
| Observations | 1,098 | 1,098 | 1,098 | 1,098 | 1,098 |
| R ² | 0.004 | 0.018 | 0.008 | 0.019 | 0.092 |

Note: *p<0.1; **p<0.05; ***p<0.01

217 Comparisons between immigrant hijab and immigrant control conditions versus native condition, pooling across norm
 218 enforcement dimension. Outcomes examined are 1) our dichotomous measure of whether any bystander helped (our main
 219 outcome), and 2) the percentage of bystanders who helped. Columns (1) and (2) report the average treatment effect (ATE)
 220 on our dichotomous main outcome, while columns (3)–(5) report the ATE using the percentage of bystanders who helped.
 221 Columns (1) and (3) report the average treatment effect (ATE) without state fixed effects, while columns (2) and (4) report
 222 the ATE with state fixed effects. Column (5) includes state fixed effects and number of bystanders fixed effects. Constant
 223 terms for columns (1) and (3)—the baseline specifications—are the means for the control group (native category). Robust
 standard errors are reported in parentheses.

Table S12. Immigrant (hijab + control) versus native comparisons, clustered standard errors

| | Immigrants (hijab + control) versus native | | | | |
|--------------------------|--|---------------------|-------------------------|---------------------|---------------------|
| | Any help? | | % of bystanders helped? | | |
| | (1) | (2) | (3) | (4) | (5) |
| Immigrants (vs. Natives) | -0.070* (0.036) | -0.070** (0.035) | -0.050** (0.025) | -0.051** (0.025) | -0.053** (0.026) |
| Constant | 0.783*** (0.027) | | 0.316*** (0.022) | | |
| State FE | No | Yes | No | Yes | Yes |
| Bystander FE | No | No | No | No | Yes |
| Observations | 1,098 | 1,098 | 1,098 | 1,098 | 1,098 |
| R ² | 0.004 | 0.018 | 0.008 | 0.019 | 0.092 |

Note: *p<0.1; **p<0.05; ***p<0.01

224 Table S12 replicates Table S11 with robust standard errors clustered at the study site level (train station).
 225

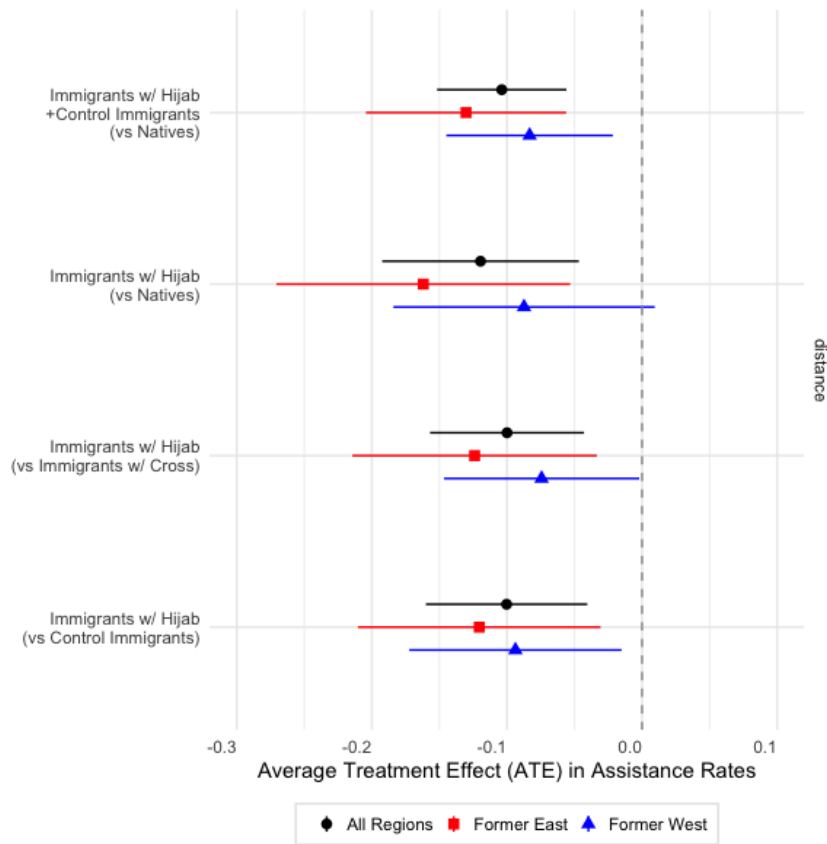


Fig. S4. ATEs for ascriptive differences

226 Figure S4 reports the average treatment effects (ATE) for ascriptive characteristics. The circle, square and triangle
 227 correspond to the point estimate of the ATE in the full sample and the iterations conducted in former East and West Germany
 228 respectively. The lines represent 95 percent confidence intervals for the point estimates. The vertical axis reports the treatment
 229 conditions compared.

Table S13. Norm enforcement effects among immigrants

| | Norm enforcer vs non-enforcer | | | | |
|----------------------------------|-------------------------------|--------------------|-------------------------|-------------------|--------------------|
| | Any help? | | % of bystanders helped? | | |
| | (1) | (2) | (3) | (4) | (5) |
| Norm enforcer (vs. Non-enforcer) | 0.052** (0.024) | 0.052** (0.024) | 0.023* (0.012) | 0.023* (0.012) | 0.027** (0.012) |
| Constant | 0.707*** (0.017) | | 0.258*** (0.008) | | |
| State FE | No | Yes | No | Yes | Yes |
| Bystander FE | No | No | No | No | Yes |
| Observations | 1,388 | 1,388 | 1,388 | 1,388 | 1,388 |
| R ² | 0.003 | 0.015 | 0.003 | 0.014 | 0.078 |

Note: *p<0.1; **p<0.05; ***p<0.01

230 Comparison of the level of assistance offered to immigrants who enforce the anti-littering norm and immigrants who do not
 231 enforce the norm, pooling across ascriptive differences dimension. Outcomes examined are 1) our dichotomous measure of
 232 whether any bystander helped (our main outcome), and 2) the percentage of bystanders who helped. Columns (1) and (2) use
 233 the dichotomous measure as the outcome, whereas (3)–(5) use the percentage measure. Columns (1) and (3) are specifications
 234 without state fixed effects, while columns (2) and (4) are specifications with state fixed effects. Column (5) report specifications
 235 with both state and bystander fixed effects. Constant terms for columns (1) and (3)—the baseline specifications—are the
 means for the control group (non-enforcers). Robust standard errors are reported in parentheses.

Table S14. Norm enforcement effects among immigrants, clustered standard errors

| | Norm enforcer vs non-enforcer | | | | |
|----------------------------------|-------------------------------|--------------------|-------------------------|-------------------|--------------------|
| | Any help? | | % of bystanders helped? | | |
| | (1) | (2) | (3) | (4) | (5) |
| Norm enforcer (vs. Non-enforcer) | 0.052** (0.023) | 0.052** (0.023) | 0.023* (0.013) | 0.023* (0.012) | 0.027** (0.012) |
| Constant | 0.707*** (0.022) | | 0.258*** (0.015) | | |
| State FE | No | Yes | No | Yes | Yes |
| Bystander FE | No | No | No | No | Yes |
| Observations | 1,388 | 1,388 | 1,388 | 1,388 | 1,388 |
| R ² | 0.003 | 0.015 | 0.003 | 0.014 | 0.078 |

Note: *p<0.1; **p<0.05; ***p<0.01

236 Table S14 replicates Table S13 with *robust standard errors clustered at the study site level (train station)*.
 237

Table S15. Norm enforcement effects by region

| | <i>Dependent variable</i> | | | |
|----------------------------------|---------------------------|---------------------|-------------------------|---------------------|
| | Any help? | | % of bystanders helped? | |
| | (1) | (2) | (3) | (4) |
| Norm enforcer (vs. Non-enforcer) | 0.080** (0.037) | 0.028 (0.030) | 0.049*** (0.017) | 0.001 (0.017) |
| Constant | 0.643*** (0.026) | 0.762*** (0.022) | 0.220*** (0.011) | 0.291*** (0.012) |
| Region | East | West | East | West |
| Observations | 639 | 749 | 639 | 749 |
| R ² | 0.007 | 0.001 | 0.012 | 0.00000 |

Note: *p<0.1; **p<0.05; ***p<0.01

238 Comparison of the level of assistance offered to immigrants who enforce the anti-littering norm and immigrants who do not
 239 enforce the norm, pooling across ascriptive differences dimension, disaggregated by region. Outcomes examined are 1) our
 240 dichotomous measure of whether any bystander helped (our main outcome), and 2) the percentage of bystanders who helped.
 241 Columns (1) and (2) report the average treatment effect (ATE) on our dichotomous main outcome, while columns (3) and (4)
 report the ATE using the percentage of bystanders who helped. Robust standard errors are reported in parentheses.

Table S16. Norm enforcement effects by region

| | <i>Dependent variable</i> | | | |
|----------------------------------|---------------------------|---------------------|-------------------------|---------------------|
| | Any help? | | % of bystanders helped? | |
| | (1) | (2) | (3) | (4) |
| Norm enforcer (vs. Non-enforcer) | 0.080* (0.041) | 0.028 (0.024) | 0.049*** (0.007) | 0.001 (0.018) |
| Constant | 0.643*** (0.021) | 0.762*** (0.025) | 0.220*** (0.005) | 0.291*** (0.022) |
| Region | East | West | East | West |
| Observations | 639 | 749 | 639 | 749 |
| R ² | 0.007 | 0.001 | 0.012 | 0.00000 |

Note: *p<0.1; **p<0.05; ***p<0.01

242
 243 Table S16 replicates Table S15 with *robust standard errors clustered at the study site level (train station)*.

Table S17. Language effects among immigrants

| | <i>Dependent variable</i> | | | |
|-----------------------------|---------------------------|-------------------|-------------------------|------------------|
| | Any help? | | % of bystanders helped? | |
| | (1) | (2) | (3) | (4) |
| German(vs Foreign Language) | -0.016 (0.024) | -0.011 (0.024) | 0.004 (0.012) | 0.006 (0.012) |
| Constant | 0.740*** (0.017) | | 0.267*** (0.008) | |
| State FE | No | Yes | No | Yes |
| Observations | 1,388 | 1,388 | 1,388 | 1,388 |
| R ² | 0.0003 | 0.011 | 0.0001 | 0.011 |

Note: *p<0.1; **p<0.05; ***p<0.01

244 In addition to the two main treatment dimensions—ascriptive characteristics and norm enforcement—our research design
 245 manipulated a third dimension—language used by the confederate in the phone call. This was based on the theoretical
 246 discussion presented by Hopkins (1), which argued that language would be a salient dimension through which ingroup outgroup
 247 differences are perceived. The intuition for the analysis presented in this Table S18 is to compare the level of assistance offered
 248 to immigrants who speak German during the phone call versus those that use a foreign language unintelligible to the host
 249 population. Columns (1) and (2) report the average treatment effect (ATE) on our dichotomous main outcome, while columns
 250 (3) and (4) report the ATE using the percentage of bystanders who helped. The findings reported in columns (1)-(4) suggest
 251 that linguistic assimilation has no discernible impact on how immigrants are treated by the host population. Robust standard
 errors are reported in parentheses.

Table S18. Language effects among immigrants

| | <i>Dependent variable</i> | | | |
|-----------------------------|---------------------------|-------------------|-------------------------|------------------|
| | Any help? | | % of bystanders helped? | |
| | (1) | (2) | (3) | (4) |
| German(vs Foreign Language) | -0.016 (0.018) | -0.011 (0.018) | 0.004 (0.010) | 0.006 (0.010) |
| Constant | 0.740*** (0.022) | | 0.267*** (0.012) | |
| State FE | No | Yes | No | Yes |
| Observations | 1,388 | 1,388 | 1,388 | 1,388 |
| R ² | 0.0003 | 0.011 | 0.0001 | 0.011 |

Note: *p<0.1; **p<0.05; ***p<0.01

252 Table S18 replicates Table S17 with *robust standard errors clustered at the study site level (train station)*.
 253

254 **6. Additional manipulation checks**

255 **Manipulation checks regarding the perception of confederate ethnicity.** In order to support our claim that discrimination
256 against our immigrant confederates is driven by religious but *not* ethnoracial (phenotypical) differences, we must show that
257 German host populations perceive our confederates to be of immigrant minority background (in the control condition when
258 they are not wearing a hijab). We therefore conducted a new follow-up survey on Clickworker.com, an online crowdsourcing
259 work platform similar to Amazon’s M-Turk to recruit adult German respondents to evaluate our confederate’s photos and
260 report their perceived country of origin. We conducted this survey on a sample of 208 German adults above 19 years of age.
261 Each evaluation question presented a photo of our confederate, and then asked “in your best guess, where do you think this
262 person is from?” Respondents were then asked to choose from "German" versus four other countries (Turkey, Egypt, Iraq,
263 and Syria), which were the real countries of origin for our immigrant confederates. All respondents evaluated a total of 15
264 confederate photographs (all seven of our immigrant confederates, and roughly 1/2 of the total German native confederates
265 that participated in the intervention of the experiment). This yields a total of 3,120 evaluations across all photos.

270 **Table S19. Proportion of respondents identifying confederate as a German native**

| | Native Confederates | Immigrant Confederates | Difference | P-Value |
|----------------------|---------------------|------------------------|------------|---------|
| Experimental weights | 82.97% | 15.38% | 67.59%p | < 0.001 |

266 It is clear that respondents are able to draw stark distinctions in the country of origin of our German native confederates
267 versus immigrant confederates. On average, respondents correctly identify German native confederates as Germans between
268 82–83% of the time. In stark contrast, only 15–16% of respondents mistakenly categorize our immigrant minority confederates’
269 country of origin as Germany. The difference is consistently in excess of 65% points, and is statistically distinguishable at
270 $p < 0.001$. These manipulation checks provide strong evidence that our immigrant confederates were sufficiently different in
271 terms of their ethnic attributes (phenotype, skin tone) to German native confederates, and bystanders in our main experiment
272 are highly likely to have perceived our immigrant control confederates as immigrants or Germans with an immigrant background.
273 As with every survey, it is possible to consider different ways of presenting the survey questions. For example, a longer list of
274 countries could have been provided to respondents to choose from; other countries (beyond Germany) with majority Christian
275 population could have been included; or responses could have been left open-ended. Nonetheless, the evidence in this survey is
276 so stark as to suggest that these slight modifications would not impact our conclusions from the manipulation checks.

277 **7. Additional survey evidence on perceptions regarding the anti-littering norm in Germany**

278 In this section, we present results from a survey that was conducted on a sample of 316 German respondents across Germany
279 regarding their attitudes towards littering. Online samples have been used extensively in political science research in American
280 Politics and other areas of the discipline. We used a stratified sample to ensure representation from the cities where the
281 experiment was fielded. The survey is not intended to provide definitive results that are representative of public opinion
282 in Germany. We could not identify an existing survey-based source on the question of interest, so we decided to pursue a
283 triangulation strategy and conducted a media analysis using publicly available information (see results below) as well as a new
284 online survey that we designed specifically to collect information on whether Germans care about the norm of non-littering (an
285 uncontroversial assumption in our view).

286 The survey allows us to test the premise that Germans share strong norms against littering and that they believe that
287 immigrants, especially those who are not culturally integrated in German society, would be more likely to litter than German
288 natives. We provide suggestive evidence in support of these premises via a survey administered on an online sample recruited
289 through Clickworker.com. The survey included a battery of questions designed to probe the *strength* of the norms against
290 littering amongst German host populations, as well as their perceptions regarding which demographic groups are more likely to
291 violate the norm.

292 **Norms against littering in German populations are strongly held among German host populations.** In order to establish that
293 norms against littering are strongly held and shared by a broad majority of Germans, we presented a short three second video
294 clip of a person throwing litter on a train platform. We followed by asking two questions to the respondents regarding their
295 reactions to the video clip. First, we asked the respondents to evaluate the extent to which they would find it upsetting if they
296 saw someone littering in a public space. Respondents were asked to respond on a five point scale, ranging from 1 (“it would
297 not upset me at all”), and 5 (“it would upset me very much”). Samples of the screen presented to respondents are shown below
298 in Figure S5.

299 Responses to this survey item demonstrate that norms against littering are widely held. On a five point Likert scale (1-5),
300 86% of responses were either 4 or 5, meaning that Germans find violations of the anti-littering norm to be highly upsetting. A
301 mere 0.6% responded that they do not find littering to be upsetting at all.

302 We followed this question with a survey item that asked what actions respondents would take when confronted with a
303 situation in which they observed someone littering in a public space. The options presented included “I would tell the person
304 to pick up the trash”, “I would pick up the trash myself”, “I would see how other people near me respond and would point it
305 out to them, where appropriate”, “I would call the police”, and “I would not care.” As presented in the fourth bar (row) in



Wie sehr würde es Sie aufregen, wenn jemand vor Ihnen einfach seinen Abfall auf den Boden wirft?



Fig. S5. Screen capture of survey item on how much littering would be upsetting

306 Figure S6, of the 316 respondents, only 4.7% said that they “would not care.” This means that 95.3% of all respondents replied
 307 that they would take some form of action to sanction and correct the norm violation.

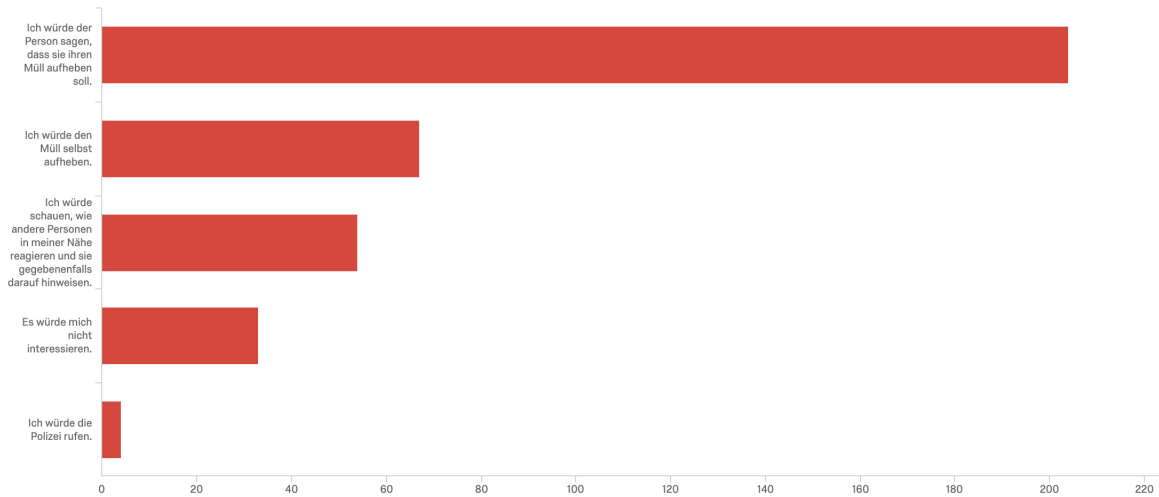


Fig. S6. Responses to “what would you do in a situation in which someone litters?”

308 **Germans expect immigrants and foreigners to litter more than Germans.** In addition to the items to probe the strength of the
 309 anti-littering norm, we also included items in the survey aimed at understanding whether German host populations expect
 310 immigrant minorities to be less respectful of the norm, and hence litter more frequently than native Germans. Specifically, we
 311 presented respondents with a photo of a littered street, and asked “In many German cities, people simply discard waste (such
 312 as coffee mugs, empty bottles, or packaging material) onto the street. Who do you think does this most often, Germans or
 313 immigrants and refugees?” We phrased the question item in a direct manner, fully acknowledging the possibility of social

314 desirability bias to work against respondents answering “immigrants and refugees.”

Table S20. "Germans versus immigrants/refugees litter more"

| | "Immigrants and refugees litter more" | "Germans litter more" | Difference | P-Value |
|----------------------|---------------------------------------|-----------------------|------------|---------|
| Experimental weights | 61.99% | 38.01% | 23.98%p | 0.0011 |

315 Responses to this item are presented in Table S20. In calculating the means of responses, we apply the same approach
316 we used for the manipulation checks and use weights based on the distribution of the observations in our main experimental
317 sample, although the results remain substantively unchanged without the weights. Despite the concern that social desirability
318 would bias against respondents' choosing the “immigrants and refugees” answer, 62% of respondents said that immigrants are
319 more likely to litter than Germans. This means that only 38% of respondents said that Germans are more likely to litter than
320 immigrants. This difference is statistically significant at the $P < 0.01$ level. Given that social desirability bias is likely to work
321 against there being a difference, we see this differential to be a lower bound.

322 This expectation that immigrants and foreigners litter more than Germans is also often expressed by politicians in the
323 public discourse. In fact, newspapers regularly cover complaints about immigrants littering in public spaces. The mayor of
324 Duisburg Sören Link, for example, claims that the increase in immigration in recent years has led neighbors to feel “strongly
325 bothered by piles of garbage, noise, and rat infestation”¹.

326 In a similar vein, the prominent former Senator for Finance for Berlin, Thilo Sarrazin, claims that “the [city’s] cleaning
327 department clears up 20 tons of mutton leftovers from the Tiergarten [park] every Monday left by the Turkish community”².
328 Such perceptions are shared by politicians across the political spectrum: even politicians from the progressive Green party,
329 such as the former Berlin state assembly member Claudia Hämmerring, who concludes that “this is how people behave who
330 have never fully arrived here.”³

331 The crucial importance of complying with the anti-littering norm for the integration of immigrants is a common theme in the
332 rhetoric of German politicians. For example, the former mayor of Neukölln, the Berlin borough with the highest concentration
333 of immigrants, Heinz Buschkowsky claims: “A man with Turkish background does not have to prove his willingness to integrate
334 by wearing lederhosen, drinking beer only by the liter or eating weisswurst for breakfast. Accepting the principles of our
335 constitution as elements for his life and the life of his family is enough. . . . [It is enough,] if he sends his children to school and
336 if he carries his trash to the trashcan instead of throwing it from the balcony.”⁴

337 While such positions are expressed by politicians from all major parties, they are particularly common on the far right. The
338 president of the far-right NPD party in North Rhine-Westphalia, Claus Cremer, for example, provocatively asks, “What do you
339 say to such “cultural enrichers,” [immigrants “enriching the German culture”] who first need to be taught not to poop on other
340 people’s properties and to throw garbage in trash cans and not simply on the street?”⁵. The same party warns residents in
341 Berlin (in the Rudow neighborhood) that, if asylum seeker accommodations are to open in their neighborhood, they will have
342 to prepare for “being long-term neighbors with asylum seekers, with all the negative side effect, such as frequent noise, litter,
343 and criminality.”⁶ Similarly, AfD politician Matthias Niebel goes as far as saying that proper handling of trash “belongs ... to
344 the core area of good German culture.”⁷

345 **Why Germans expect immigrants to litter more than Germans.** As a follow up to the previous survey item, we asked respondents
346 who said that immigrants are more likely to litter than Germans to provide an open-ended justification for their answer. We
347 present a collection of these comments, after translation into English, through a wordcloud in Figure S7.

348 Respondents most frequently cited the “lack of norms or rules regarding littering in the home country” of the immigrants as
349 the reason why immigrants are likely to litter more than Germans. For example, one respondent explicitly mentioned that
350 “there are no rules on waste disposal in their homelands”. Another respondent claimed that immigrants and refugees “may
351 come from a country where the rules (against littering) are less strict. All in all, out of a total of 100 meaningful recorded
352 responses, 22 invoked the differences in home country norms and rules, with some respondents invoking a “lack of culture”
353 against littering in immigrant home countries.” Including the number of respondents who claimed that immigrants litter more
354 than Germans because of their “habit,” this number increases to 30. A relatively substantial number of respondents attributed
355 their expectations to what they perceived as a “lack of respect among immigrants for Germany and German traditions.” There
356 were a total of 11 responses that invoked the term “respect”, making up the second largest category of responses.

¹“Rasanter Anstieg beim Kindergeld alarmiert Städte”, T-Online, August 10, 2018

²“Sarrazin ist nah dran und doch daneben”, Tagesspiegel, Oct. 8, 2009

³“Die Affäre Hammelbein”, Zeit, August 20, 2009

⁴“Die bittere Wahrheit über unsere Schulen”, Bild, September 19, 2012

⁵“Kapitulationserklärung: Polizisten aus Rumänien und Bulgarien sollen in NRW für Ordnung sorgen”, NPD Bochum, October 22, 2013

⁶“Ein Asylbewerberheim in Rudow? Nicht mit uns!”, NPD Neukölln, October 16, 2012

⁷“Presseerklärung Müllentsorgung tägliche PHV. Stadtrat Matthias Niebel wundert sich”, Alternative-heidelberg.de, November 25, 2015

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