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The Muted Consequences of Correct Information about Immigration*

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Abstract

Previous research shows that people commonly exaggerate the size of minority populations. Moreover, as theories of inter-group threat would predict, the larger people perceive minority groups to be, the less favorably they feel toward these groups. Here, we investigate whether correcting Americans’ misperceptions of one such population — immigrants — affects attitudes toward this group. We confirm that non-Hispanic Americans over-estimate the percentage of the population that is foreign-born or that is in the U.S. without authorization. However, in four separate survey experiments, we find that providing accurate information does little to affect attitudes toward immigration. This is true even when people’s misperceptions are explicitly corrected. These results call into question a potential cognitive mechanism that could underpin inter-group threat theory. Misperceptions of the size of minority groups may be a consequence, rather than cause, of attitudes toward those groups.

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Introduction

How do people form attitudes about ethnically or racially inflected issues? According to theories of “power threat” or “inter-group threat,” a key ingredient is the prevalence of racial and ethnic groups in the broader environment, whether that environment is a neighborhood or a country (e.g. Glaser, 1994; Quillian, 1995; Wong, 2007). As the prevalence of these groups increases, so does the sense of threat among other groups. In turn, this heightened threat can both reduce support for policies benefiting these groups and provoke actions intended to mitigate the political power of these groups (Key, 1949; Blalock, 1967; Dancygier, 2010).

Even so, people’s perceptions of the racial composition of their surrounding environment are often incorrect. In particular, people tend to overestimate the numerical strength of minority racial groups. Moreover, in a variety of realms, misperceptions are associated with people’s policy preferences. In fact, people’s misperceptions about group prevalence may have more influence on political attitudes than does the actual prevalence of these groups (Wong, 2007; Wong et al., 2012). If so, then perceptions of threat and related attitudes may hinge on the false perception that there are more members of minority groups than there really are.

This raises the question we investigate in this paper: what are the consequences of providing correct information about the prevalence of minorities in the United States? We focus on information about immigrants. Existing literature has established a correlation between correct perceptions and attitudes: those who more accurately estimate the percentage of immigrants in their country have more positive views of immigration (Sides and Citrin, 2007). However, this finding cannot establish whether accurate perceptions actually cause attitudes. It may be that people develop attitudes about immigration for other reasons, and then report estimates of prevalence that rationalize these attitudes. People who opposes immigration may then report a higher estimate of immigrant numbers because it
seems consistent with their general antagonism to immigration or hostility to the
main immigrant groups.

For this reason, we examine the consequences of providing correct information
via a series of four original survey experiments. The experiments all randomly
assign respondents to receive or not receive accurate information about the preva-
ience of immigrants before reporting attitudes about immigrants and immigration
policy. Overall, we find that correct information has little impact on attitudes.
Even among those who substantially overestimate the prevalence of immigrants,
correct information does not lead them to have different—and, in particular, more
positive—attitudes toward immigrants or immigration. This pattern holds for
respondents whose misperceptions were explicitly corrected as well as those who
were simply exposed to accurate information.

One implication of these findings is that innumeracy about immigrants may
be more a consequence than a cause of attitudes toward immigration. Our find-
ings therefore support the idea that attitudes toward immigration may be largely
symbolic in nature (Sears, 1993; Hainmueller and Hopkins, 2014) and therefore
grounded in stable psychological predispositions that enable people to resist in-
formation that challenges their existing beliefs. We supply additional evidence that
new information—and correct factual information—may not influence immigration-
related attitudes in particular or political attitudes in general.

Our findings also call into question a potential cognitive mechanism underlying
group threat theory. Group threat theory suggests that the sheer size of an out-
group triggers a corresponding perception of its size, which in turn triggers a sense
of threat and a corresponding defense of the in-group. However, if learning the
actual size of a group does not change one’s group-related attitudes, then outgroup
attitudes may not depend strongly on the size of the group itself or perceptions of
its size.
Prior Research

The classic statements of racial or power threat theory argue that the increasing prevalence of an outgroup will induce competition for scarce resources and thus hostility toward the outgroup (Key, 1949; Blalock, 1967). Subsequent literature has debated and elaborated on this theory (Giles and Buckner, 1993). For example, some studies argue that the relationship between outgroup prevalence and hostility may be conditional, whether on inequality (Branton and Jones, 2005; Gay, 2006) or on the outgroup’s political power (Glaser, 1994; Dancygier, 2010). Other studies have sought to pin down the mechanism that connects outgroup prevalence to hostility, such as political or economic competition (Glaser, 2002; Bobo and Hutchings, 1996). Still others have criticized the theory (Voss, 1996) or argued that socioeconomic contexts may be more important than racial contexts (Oliver and Mendelberg, 2000).

Power threat theory has been tested extensively as it relates to immigration. Generally, there is mixed evidence about whether the prevalence of immigrant groups is associated with opposition to immigration. Studies have found that living near immigrants or heavily immigrant ethnic groups increases hostility toward immigrants (Dancygier, 2010; Stein, Post and Rinden, 2000), increases hostility only under specific conditions (e.g. Campbell, Wong and Citrin, 2006; Ha, 2010; Hopkins, 2010; Oliver and Wong, 2003; Newman, 2013), has no apparent impact (e.g. Cain, Citrin and Wong, 2000; Wong et al., 2012), and even decreases hostility (Hood and Morris, 1997). A rare field experiment, which increased the prevalence of immigrant populations by exposing Boston commuters to Spanish speakers, found that hostility increased (Enos, 2014).

One possible reason for these mixed findings is that people do not accurately perceive the prevalence of minority groups. In general, Americans tend to overestimate the prevalence of minority groups, including racial and ethnic groups (Nadeau, Niemi and Levine, 1993) and immigrants (Citrin and Sides, 2008). This
is true even at relatively low levels of aggregation, such as neighborhoods (Chiricos, Hogan and Gertz, 1997; Wong, 2007; Wong et al., 2012). Moreover, these (mis)perceptions of local contexts are powerful: they are a much stronger predictor of national perceptions than actual local contexts (Wong, 2007). Wong notes how this finding complicates power threat theory:

The findings presented here raise important questions for the research on racial threat and racial context, particularly with regard to the relationship between “objective” indicators and individuals’ perceptions of the racial breakdown of the local area. One cannot assume that larger numbers of blacks, for example, lead to greater anti-black prejudice among whites, because whites actually perceive and feel threatened by the size of their outgroup. (19)

This raises the question of whether and how subjective perceptions might themselves drive attitudes. Such a relationship is implied by group threat theories of ethnic hostility (e.g. Bobo, 1983). From this perspective, perceptions of threat depend on perceptions of an outgroup’s size and strength. If people erroneously overestimate the size of outgroups, as previous literature suggests, then these overestimates could exacerbate the majority’s sense that the minority group is a threat to its interests and values. Majorities would respond to this heightened threat with stronger in-group solidarity and outgroup hostility.

Existing literature demonstrates this hypothesized correlation between estimates of minority population size and hostility toward minority groups (Nadeau, Niemi and Levine, 1993; Sides and Citrin, 2007). The central challenge, however, is whether this correlation proves that perceptions of size actually cause hostility. The relationship “may be one of cause or effect,” write Nadeau et al. (343). Wong similarly notes that “psychological factors, like a fear of outgroups that could lead one to inflate an outgroup’s numbers... explain people’s perceptions of racial groups” (2001:6-7). Hochschild (2001, pg. 318) also doubts perceptions of
outgroup numbers lead to hostility in the case of affirmative action. There is, to
our knowledge, only one experimental investigation of correcting misperceptions
of outgroup numbers, and it bears out Hochschild’s skepticism (e.g. Lawrence and
Sides, 2014).

In short, the existing literature confronts two challenges. On the one hand, the
relationship between attitudes toward minority groups and their actual prevalence
is unclear, and one reason may be that people do not perceive their prevalence
correctly at any level of aggregation, whether national or local. On the other hand,
people’s misperceptions could be as much a function of their attitudes as a cause
of those attitudes. Both challenges complicate our ability to determine how the
prevalence of minority groups might influence hostility toward those groups.

**Research Design**

Our research design addresses these challenges by assessing the causal impact of
correct information about the size of one important minority group: immigrants.
Specifically, we fielded experiments embedded in four separate national surveys
between 2006 and 2010: the 2006 Cooperative Congressional Election Survey, a
2008 national survey conducted by Knowledge Networks (now GfK), the 2010
Cooperative Congressional Election Survey, and a separate 2010 national survey
conducted by Knowledge Networks. Given both Hispanics’ population share and
their particular connection to contemporary immigration, we remove self-identified
Hispanics from all analyses.

The experiments included different combinations of four basic treatments. In
the first treatment, respondents were simply asked to provide their best estimate of
the size of the foreign-born population. In the two 2010 experiments, the question
read: “Out of every 100 people living in the United States, how many do you
think were born outside of the country?” In the second treatment, respondents
were asked to provide that estimate and then were immediately told the correct
estimate by reading: “We are interested in whether you’ve heard about a story that has been in the news. The story is: the Census Bureau has estimated that about 12 out of every 100 people living in the United States are immigrants who were born outside of the U.S. Have you heard about this story?” By embedding the information within a question about a news story, we aimed to reduce respondents’ sense that they were being explicitly corrected. But given that even this more subtle corrections could provoke a backlash (Nyhan and Reifler, 2010), our third treatment simply provided accurate information, either with the same question about having seen a news story or with a statement that conveyed the information on its own.\(^1\) A fourth control group was exposed to no information and asked to do no guessing; its members simply answered questions about their attitudes toward immigration.

To measure immigration attitudes, we use subsets of three measures. One captures overall attitudes toward legal immigration and has been included on the National Election Study since 1992: “Do you think the number of immigrants from foreign countries who are permitted to come to the United States to live should be increased a lot, increased a little, remain the same, decreased a little, or decreased a lot?” Immigration attitudes are commonly supposed to stem from economic and socio-cultural threats (Burns and Gimpel, 2000; Sniderman, Hagendoorn and Prior, 2004; Sides and Citrin, 2007; Dancygier, 2010; Malhotra, Margalit and Mo, 2013; Hainmueller and Hopkins, 2014), so the other two dependent variables measure those aspects of immigration: “How likely is it that the immigrants currently coming into the U.S. will take jobs away from people already here?” and “How likely is it that current and future immigration will threaten the American way of life?” We also combine the three measures into a single index of immigration attitudes.

\(^1\)In the 2008 study, the text read: “As you might be aware, as of 2000 the Census Bureau estimated that 12% of the U.S. population was foreign born.”
Results

Figure 1 presents the effects of each experimental treatment chronologically, with dots indicating the average support for restricting immigration. The bottom of the figure uses small vertical lines to show the distribution of responses in the 2010 experiments across the five categories of this measure.

The first two experiments offer potentially contradictory results. In the 2006 experiment, the correction increased support for restrictive immigration policy. On average, respondents who guessed the size of the foreign-born population fell at 3.51 on this scale, where a 1 is someone who wants to increase immigration a lot and a 5 is someone who wants to decrease it a lot. Respondents who were corrected averaged 3.74. These results are depicted at the top of Figure 1, with the dots indicating the average in each experimental condition and the lines indicating 95% confidence intervals. The associated regression coefficient for the correction treatment is 0.24 (SE=0.12, p=0.05).

The 2008 experiment indicates the opposite: that information might reduce support for a restrictive policy. People who only guessed scored an average of 3.83, while those who read the correct information scored 3.53. The regression coefficient for being assigned to information is -0.29 (SE=0.14, p=0.03). At first glance, these two findings seem to contradict one another. In one case, people who guessed and then were corrected became more restrictive, while in the other, people exposed to accurate information moved in the opposite direction. But the two experiments were not identical: perhaps being corrected induces a backlash, even when done subtly. Our subsequent experiments thus explicitly tested that possibility.

In the fall of 2010, we ran parallel experiments using both Knowledge Networks (KN) and YouGov. In these experiments, we incorporated four treatments: a control condition with no information, a “guess” condition employed in both earlier experiments, a correction condition similar to that in the 2006 experiment, and an
information condition similar to that in the 2008 experiment. In the Knowledge Networks experiment, we had 957 non-Hispanic respondents; in the YouGov experiment, the figure was 906. In the 2010 KN experiment, information increased support for restrictive policies relative to guessing. The coefficient is 0.23 with a standard error of 0.11 (p=0.04), as Figure 1’s third cluster of results shows.²

Still, that finding runs counter to the KN 2008 experiment and did not replicate in the 2010 YouGov experiment, as the fourth cluster of results in Figure 1 demonstrates.³ Unsurprisingly, this treatment effect is also more muted when we combine the two 2010 experiments, which the bottom group of results in Figure 1 depicts. There, the coefficient for the information treatment is 0.10 with a standard error of 0.07 (p=0.18). The overall pattern is one of inconsistent and substantively small effects. Whether delivered as a statement or a correction, information about the actual share of immigrants in the U.S. does little to change attitudes as compared to guessing or being in the control group.

²To calibrate this effect size, consider that in the 2010 KN study, someone whose education increased by four years is expected to fall 0.46 on the scale. Moving from a strong Republican to a strong Democrat is associated with a drop of 0.58.

³In that case, the coefficient for the information condition relative to guessing is 0.04 with a standard error of 0.10.
Figure 1: This figure depicts the effects of the different experimental treatments on respondents’ support for increasing or decreasing levels of legal immigration. The dots indicate mean effects, while the horizontal lines show 95% confidence intervals. The vertical lines at bottom present the raw distribution of the dependent variable.
Similar results emerge when analyzing the three-item index of immigration attitudes. (Here, we must drop the 2006 CCES experiment because it didn’t include all of the relevant questions.) The results—shown in Figure 2—illustrate that the information treatment dampens anti-immigration attitudes relative to guessing in the 2008 KN experiment. Yet it appears to have the opposite effect in the 2010 KN experiment, and little effect in the 2010 CCES.\textsuperscript{4} Overall, Figure 2 indicates that the effects are generally small, with no clear pattern emerging.

\textbf{Misperceptions and Treatment Effects}

People have different perceptions of the immigrant population initially, which means that accurate information could depend on those initial perceptions. In particular, we might expect correct information to have a larger impact among those with larger misperceptions. To test this, we combined the two 2010 experiments. We then defined four groups based on the quartile in which their guesses fell: below 10\%, meaning that they underestimated the share of the population that is foreign born; between 10\% and 20\%, which is roughly accurate; between 20\% and 35\%; and above 35\%. We estimated whether the effect of the correction varied based on people’s guesses for the 671 respondents to either of the 2010 surveys who were assigned to the “guess” or “correction” conditions. As Figure 3 makes clear, the treatment effects on the anti-immigration index differ little across the four quartiles. For example, people in the third quartile—those who over-estimate the immigrant population to be between 20\% and 35\%—report more anti-immigration attitudes when corrected, by 0.57 on the 11-point scale. But the standard error of that difference is 0.44, making it far from statistically significant. Overall, the effect of being corrected does not change as people’s initial estimates increase.

\textsuperscript{4}In 2008, the associated coefficient is -0.74 (SE=0.34). In the 2010 KN experiment, the coefficient is 0.51 (SE=0.28). In the 2010 CCES experiment, the coefficient is 0.19 (SE=0.26).
Figure 2: This figure shows the effects of each experimental treatment on an index of anti-immigration attitudes constructed from three variables: an assessment of overall immigration levels, agreement that immigrants take jobs from native-born Americans, and agreement that immigration threatens the American way of life. The index varies from 3 to 13, and its raw distribution is provided at the bottom of the Figure.

Local versus National Information

Thus far, we have shown that accurate information about the number of immigrants in the U.S. does not affect immigration attitudes. But it may be that people are more sensitive to the size of the local immigrant population, something which
Figure 3: This figure shows the effects of two experimental treatments—guessing and being corrected after guessing—when broken out by the estimates respondents offered.

is arguably more salient in their day-to-day experiences and which is connected to attitudes during moments of intense debate about the issue (Hopkins, 2010). And although levels of innumeracy about minority populations are lower when thinking locally as opposed to nationally (Wong, 2007), there are still significant, local-level misperceptions. Even if providing concrete information about the national immigrant population does not shape attitudes, perhaps more localized information will.

To assess that possibility, we conducted an experiment in the 2008 KN study in which 310 respondents either were asked to guess the share of immigrants in their ZIP code or else were explicitly told the figure. Specifically, they were told whether the share of immigrants in their ZIP was less than 3%, between 3% and 9%, or above 9% as of 2000. Respondents in both groups were then asked their
preferred level of immigration. Here again, there was little discernible impact of receiving accurate information about one’s ZIP code (see Figure 4). The treatment effect of receiving information is 0.05 (SE=0.13).

Figure 4: This figure shows that providing information about the size of the immigrant population in the respondent’s ZIP code did not affect attitudes. The vertical lines at bottom present the raw distribution of the dependent variable (Source: 2008 KN study; N=310).

Unauthorized Immigration

This analysis has focused on attitudes toward authorized immigration. But of course, debates about unauthorized immigration are among the most salient and divisive (see also Wright, Levy and Citrin, 2015). It is plausible, then, that our results are limited because of the mismatch between the information provided (which is about the total immigrant population) and the information likely to
motivate attitudes (which is about unauthorized immigration).

We are able to test that possibility using another experiment embedded in the 2006 CCES, in which a separate group of 470 respondents were asked to guess the size of the unauthorized population nationwide. The mean estimate in this case was approximately 21%; the median estimate was 10%. Although there is no reliable census of illegal immigrants, in 2006 the Pew Hispanic Center estimated that approximately 3 percent of those living in the US came here illegally (Passel, 2006). If this is roughly accurate, then the mean estimate of 21% in the CCES is off by a factor of 7.

Randomly chosen respondents were then corrected using a question about a news story similar to those above, one which tells respondents that about 3% of U.S. residents are unauthorized immigrants. The control group’s members were asked if they had seen a news story about illegal immigration, but without any reference to the estimated share of the population here without authorization. Respondents were then asked five questions about their preferred policy toward unauthorized immigration (see the appendix for question wording). These were combined into a 0-5 index. Once more, correct information did not affect attitudes, as Figure 5 shows. There is no discernible difference in immigration attitudes between the two experimental conditions, and the treatment effect for receiving the correction is a tiny 0.056, with a standard error of 0.128.

**Conclusion**

Americans are prone to exaggerate the size of the foreign-born population—much as they exaggerate the size of many minority groups—and these misperceptions are linked to unfavorable views of immigration. Our question is whether correcting

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5 Specifically, the question read: “[w]e are interested in whether you’ve heard about a story that has been in the news lately. The story is: researchers have estimated that about 3 out of every 100 people living in the United States entered this country illegally. Have you heard about this story?”

6 The question read: “We are interested in whether you’ve heard about a story that has been in the news lately. The story is about a new report on illegal immigration in the United States. Have you heard about this story?”
Figure 5: This figure shows the results of being corrected versus guessing on an index of policy attitudes related to unauthorized immigration. The dependent variable is depicted on the x-axis, and it varies from 0 to 4. N=470 from 2006 CCES.

Those misperceptions reduces threat and thus opposition to immigration, as power threat theory suggests.

Across these survey experiments, there is no consistent evidence that people exposed to correct information about the size of the immigrant population had different attitudes about immigration. This was true no matter whether the information was simply presented to them or directly corrected prior misperceptions, whether the information was about the national or local immigrant population, or whether the information pertained to the size of the authorized or unauthorized immigrant population. Moreover, this was true even though the information was presented in a way that was difficult to ignore—a feature of the design that Kuklinski et al. (2000) refer to as hitting respondents “right between the eyes.”
Overall, the literature on whether factual information can change policy attitudes is mixed, with some studies finding effects (e.g. Gilens, 2001; Sides, 2016) and some not (e.g. Kuklinski et al., 2000; Berinsky, 2007). Our findings support previous research that factual information about the size of minority groups does not change attitudes about policies affecting those groups (Lawrence and Sides, 2014).

Our findings also suggest that attitudes toward immigration—like many political attitudes (see Hochschild and Einstein, 2015)—are grounded in stable values and predispositions, often established early in life and reinforced by later socialization, that render these attitudes resistant to information that challenges existing beliefs. This also accords with a wide variety of evidence (Hainmueller and Hopkins, 2014). One implication is that perceptions of immigrant populations may be more a consequence than a cause of attitudes toward immigration.

A second implication concerns the cognitive mechanism underpinning power threat theory. Power threat theory posits a connection between an outgroup’s numbers and perceptions that the outgroup poses a threat—a connection that could depend on subjective perceptions of that outgroup’s numbers. Some research has already noted the weak connection between objective numbers and subjective perceptions (Wong, 2007). Our contribution is to show that correcting subjective misperceptions of outgroup numbers does not appear to alter attitudes about the outgroup. This does not necessarily cast doubt on power threat theory writ large. It simply suggests that other mechanisms are needed to explain why people to perceive an outgroup as threatening based on its presence in a particular geographic context.

With respect to experimental research methods, our research offers a cautionary tale. The first two experiments were inspired by the same hypothesis, but they differed slightly in their design, and their results seemed to point in opposite directions. It was only by conducting four separate experiments across different survey samples and years did the overall pattern—one of consistently weak findings—
become clear. Repeated survey experiments with different samples and conditions can be critical in identifying the stability and importance of a treatment effect.

Of course, we are mindful of the inherent limitations of the evidence presented here. Our treatments were simple and direct, but may not have done enough to create an environment in which people would be receptive to factual corrections, such as by affirming individuals’ self-worth (Nyhan and Reifler, 2016). We also focused on only one group—immigrants—and we presented only one kind of information—percentage of the population. It may be that similar information would have a larger impact on attitudes toward other groups (although see (Lawrence and Sides, 2014)). It may be that other kinds of information could be more persuasive, such as factual information about how immigrants do integrate into American culture (Citrin et al., 2007). This information might speak more directly to the cultural and economic threats that stem from immigration in the minds of many Americans.
References


Appendix: Survey Questions

Unauthorized Immigration Questions, 2006 CCES

• How serious of a problem do you think the issue of illegal immigration is for the country right now?

• Which of the following two statements comes closer to your point of view?
  1) Illegal immigrants in the long-run become productive citizens and pay their fair share of taxes; 2) Illegal immigrants cost the taxpayers too much by using government services like public education and medical services. Do you feel strongly or not so strongly about that?

• One proposal would allow illegal immigrants who have been living and working in the United States for a number of years, and who do not have a criminal record, to start on a path to citizenship by registering that they are in the country, paying a fine, getting fingerprinted, and learning English, among other requirements. Do you support or oppose this proposal?

• Another proposal is to toughen immigration laws by making it a felony to be in the United States illegally. It also establishes mandatory prison sentences for reentering the United States illegally after having already been deported. Do you support or oppose this?

• Now that you have heard some of the immigration legislation proposed by some members of Congress, which would you prefer: 1) An approach that only focuses on tougher enforcement of immigration laws; OR 2) An approach that includes both tougher enforcement of immigration laws and also creates a guest worker program that allows illegal immigrants to work legally in the U.S. on temporary visas.