Status threat, not economic hardship, explains the 2016 presidential vote

Diana C. Mutza a,b,1

*Department of Political Science, University of Pennsylvania, Philadelphia, PA 19104; and bAnnenberg School for Communication, University of Pennsylvania, Philadelphia, PA 19104

Edited by Jennifer A. Richeson, Yale University, New Haven, CT, and approved March 26, 2018 (received for review October 16, 2017)

This study evaluates evidence pertaining to popular narratives explaining the American public’s support for Donald J. Trump in the 2016 presidential election. First, using unique representative probability samples of the American public, tracking the same individuals from 2012 to 2016, I examine the “left behind” thesis (that is, the theory that those who lost jobs or experienced stagnant wages due to the loss of manufacturing jobs punished the incumbent party for their economic misfortunes). Second, I consider the possibility that status threat felt by the dwindling proportion of traditionally high-status Americans (i.e., whites, Christians, and men) as well as by those who perceive America’s global dominance as threatened combined to increase support for the candidate who emphasized reestablishing status hierarchies of the past. Results do not support an interpretation of the election based on pocketbook economic concerns. Instead, the shorter relative distance of people’s own views from the Republican candidate on trade and China corresponded to greater mass support for Trump in 2016 relative to Mitt Romney in 2012. Candidate preferences in 2016 reflected increasing anxiety among high-status groups rather than complaints about past treatment among low-status groups. Both growing domestic racial diversity and globalization contributed to a sense that white Americans are under siege by these engines of change.

Significance

Support for Donald J. Trump in the 2016 election was widely attributed to citizens who were “left behind” economically. These claims were based on the strong cross-sectional relationship between Trump support and lacking a college education. Using a representative panel from 2012 to 2016, I find that change in financial wellbeing had little impact on candidate preference. Instead, changing preferences were related to changes in the party’s positions on issues related to American global dominance and the rise of a majority–minority America: issues that threaten white Americans’ sense of dominant group status. Results highlight the importance of looking beyond theories emphasizing changes in issue salience to better understand the meaning of election outcomes when public preferences and candidates’ positions are changing.

Author contributions: D.C.M. designed research, performed research, analyzed data, and wrote the paper.

The author declares no conflict of interest.

This article is a PNAS Direct Submission.

This open access article is distributed under Creative Commons Attribution-NonCommercial-NoDerivatives License 4.0 (CC BY-NC-ND).

Data deposition: The data and code are available at the website of the Institute for the Study of Citizens and Politics: iscap.upenn.edu/studies/one-nation-under-siege.

1 Email: mutz@upenn.edu.

This article contains supporting information online at www.pnas.org/lookup/suppl/doi:10.1073/pnas.1718155115/-/DCSupplemental.

Published online April 23, 2018.
study used individual issue attitudes measured in 2011 to predict presidential preferences in 2012 and 2016. The motivation for using 2011 attitudes is said to be eliminating concerns regarding endogeneity: that is, the “possibility that people changed their attitudes to match their candidate preference” (3); however, methodologists concur that “lag identification is almost never a solution to endogeneity problems in observational data” (4). This particular interpretation requires the assumption that voters’ opinions did not change from 2011 to 2016; instead, what changed was the salience attached to various issue opinions. If one assumes unchanged issue opinions since 2011, then the increased salience of race, religion, and immigration attitudes accounts for the shift toward Trump. This interpretation is different from suggesting that people’s opinions on these issues changed over time or that Trump positioned himself closer than other candidates to where the average voter was on these issues. This analysis assumes that voters’ issue positions are largely stable and that the major party candidates occupy roughly the same positions from one election year to the next. The study also suggests that economic stress was more salient in 2016 than in 2012. In another study attempting to explain Trump support, racial and gender attitudes were found to factor more heavily in 2016 voter preferences than in 2012 preferences (5). This cross-sectional analysis found no evidence that economic dissatisfaction played a role in vote choice.

Evidence that altered issue salience is responsible for vote change is difficult to distinguish from evidence that change is due to learning the issue positions of candidates and/or from changes in issue opinions (6). When analyzed appropriately, panel data make it possible to distinguish these processes. If people’s issue opinions are stable over time and these issue opinions predict preferences more strongly in one election year than in another, then evidence points to increased issue salience. However, if issue opinions change over time, or the major party candidates reposition themselves on these issues, then evidence suggesting that increased issue salience is responsible for changes in vote choice is easily confounded with other theoretical explanations for changes in candidate preference. Neither of the two previous studies of the 2016 election have disentangled these possibilities.

Pocketbook Voting. The left behind thesis fits most squarely within the rational choice or “pocketbook” theoretical camp, arguing that voters reward the party that has benefitted them financially and punish the party that did not. Thus, easily accessible information about one’s personal financial wellbeing was the assumed basis for a referendum on the party in office. Consistent with this theme, the “rust belt” of the Northeast and the Midwest played an unexpected role in Trump’s victory, contributing to the widespread claim that economic hardship was largely responsible for Trump’s success (2). Interestingly, this explanation is being popularly embraced by liberals as well as conservatives. As summarized in a recent article in The Atlantic, “Perhaps the clearest takeaway from the November election for many liberals is that Hillary Clinton lost because she ignored the working class” (7). Polling data from throughout the campaign made it clear that less educated whites were indeed Trump’s staunchest supporters, but precisely why this demographic favored him remains unclear. There are two reasons for skepticism regarding the assumption that personal economic hardship drove Trump support. First and foremost, over many decades of scholarship, evidence of voters politicizing personal economic hardship has been exceedingly rare (8). Although aggregate-level evidence has been suggestive of a public that blames incumbents for general economic downturns and rewards incumbents for economic gains, these relationships seldom hold up at the level of individual economic hardship. For example, those who recently lost jobs are unlikely to blame government policy for their personal circumstances (9), and those who have personally suffered financially under a given administration are no more likely to vote against the incumbent (10, 11). Across a wide range of issues, scholars have found that citizens seldom form policy or candidate preferences on the basis of their family’s personal economic self-interest. This is not to suggest that citizens never do so, but the conditions under which this occurs are very rare (12, 13). Even membership in groups with economic interests that have been helped or hurt seldom changes political preferences (14).

A second reason for skepticism regarding the left behind thesis involves timing. Trump’s victory took place in the context of an economic recovery. Throughout the year preceding the election, unemployment was falling, and economic indicators were on the upswing. Likewise, the dramatic drop in US manufacturing jobs took place during the first decade of the 21st century; since 2010, manufacturing employment in the United States has actually increased somewhat (15). Research on economic voting suggests that recent economic events are most influential for voting (16, 17). Given all of the positive economic indicators, why would 2016 be ripe for an economic backlash? The most common explanation is that it is precisely those who did not recover from the Great Recession of 2008 who elected Trump, those who were left behind by virtue of ongoing joblessness and/or stagnant wages.

Perceived Status Threat. One way to understand the surprising public acceptance of openly disrespectful statements about women, minorities, and foreigners is as manifestations of preexisting racist and sexist views; in other words, the 2016 election raised the salience of people’s preexisting views on these topics, so that they mattered more to presidential vote choice in 2016 (5). However, as with the economic hardship thesis, the timing of Trump’s rise to power is curious. How is it that the same American public that elected an African American to two terms as US President subsequently elected a president known to have publicly made what many consider to be racist and sexist statements?

A possible explanation is dominant group status threat. When members of a dominant group feel threatened, several well-established reactions help these groups regain a sense of dominance and wellbeing. First, perceived threat makes status quo, hierarchical social and political arrangements more attractive (18). Thus, conservatism surges along with a nostalgia for the stable hierarchies of the past. Perceived threat also triggers defense of the dominant ingroup, a greater emphasis on the importance of conformity to group norms, and increased outgroup negativity (19, 20). It is psychologically valuable to see one’s self as part of a dominant group; therefore, when group members feel threatened, this prompts defensive reactions. It is precisely this form of group threat that may have motivated Trump supporters (21).

Two forms of group status threat are especially prominent in the United States today. For the first time since Europeans arrived in this country, white Americans are being told that they will soon be a minority race (22). The declining white share of the national population is unlikely to change white Americans’ status as the most economically well-off racial group, but symbolically, it threatens some whites’ sense of dominance over social and political priorities. Furthermore, when confronted with evidence of racial progress, whites feel threatened and experience lower levels of self-worth relative to a control group. They also perceive greater antiwhite bias as a means of regaining those lost feelings of self-worth (23).

Second, Americans feel threatened by the increasing interdependence of the United States on other countries. As recent headlines have warned, “The era of American global dominance is over” (24, 25). Whether such headlines are true remains debatable (26), but the perception of a threat to US
global dominance is very real. For example, in 2011, 38% of Americans endorsed the view that “[the US stands above all other countries in the world” (27); by 2014, that same percentage was down to 28% (27). This drop has been most precipitous among Republicans. The “China threat” in particular looms large in many American minds (28).

Although economists see globalization as mutually beneficial to countries that participate, Americans increasingly feel that they are not getting their fair share. For example, roughly one-half of Americans view trade as something that benefits job availability in other countries at the expense of jobs for Americans (29). To the extent that the public views the global economy in zero-sum terms, the rise of countries, such as China and India, represents a threat to America’s dominant status. Interestingly, whites’ perceptions of antiblack and antiwhite bias also are also zero sum: that is, the less antiblack bias that whites perceive in a given decade, the greater the antiwhite bias that is perceived (30).

Racial status threat and global status threat are technically separable, but they are difficult to distinguish in practice. Because white male Christians are seen as most prototypically “American” (31), they have the most to lose psychologically if they perceive America and/or whites to be no longer dominant. Given this, the 2016 election featured discussions of perceived threats from religious minorities, racial minorities, and foreigners, this generalized sense of threat is likely to have spilled over into multiple arenas. For white Americans, the political consequences of racial and global status threat seem to point in similar directions with respect to issue positions: opposition to immigration, rejection of international trade relationships, and perceptions of China as a threat to American wellbeing.

For two of these three issues—trade and China—trends in public opinion clearly support the thesis of increased threat between 2012 and 2016 (32, 33). For immigration, however, multiple sources instead suggest increasingly supportive attitudes among Republicans and Democrats alike (34). Likewise, to the extent that immigration is perceived as threatening by Americans, scholars find that it is due to the increased economic burden Americans believe immigrants place on the social welfare system rather than a threat to white status (35). Nonetheless, it remains possible that the heightened salience of immigration contributed to Trump’s victory without increasing actual opposition to immigration, consistent with previous findings attributing preference changes to the increased salience of immigration (3).

How plausible is status threat—whether from a sense of declining racial or global status—as an explanation for changes in voting behavior in 2016? With respect to global status threat, the received wisdom from decades of research has long been that “voting ends at water’s edge.” In other words, outside of foreign wars, international affairs are assumed to have little if any electoral importance (36). However, economic globalization has gained prominence in recent years (37). Racial status threat makes perfect sense occurring immediately after 8 y of leadership by America’s first African American president. It is not racism of the kind suggesting that whites view minorities as morally or intellectually inferior, but rather, one that regards minorities as sufficiently powerful to be a threat to the status quo. When members of a dominant group experience a sense of threat to their group’s position, whether it is the status of Americans in the world at large or the status of whites in a multiethnic America, change in people’s sense of their group’s relative position produces insecurity.

Despite multiculturalism’s ostensibly goal of inclusion, experimental studies suggest that it is experienced by whites as a form of status threat that produces more negative attitudes toward outgroups of all kinds (38). Simply reminding whites about their impending loss of majority status produces feelings of threat in experimental studies (39), particularly among those who think of the “American way of life” as being white (40). Consequences of exposure to information about impending majority–minority status have included increased conservatism and greater identification with the Republican Party (41) and the Tea Party (42), increased opposition to diversity (43), greater explicit and implicit racial bias, and a stronger preference for interacting with one’s own race (43). In one study, reminding participants about the upcoming racial shift also produced increased support for Trump among both Democrats and Republicans in a white convenience sample (44).

**Research Design**

A nationally representative panel survey was used to evaluate two central hypotheses. First, does being left behind with respect to personal financial wellbeing predict change in the direction of Republican support in 2016? Second, did issue positions reflecting perceived status threat, whether racial or global, increase the likelihood of shifting toward the Republican presidential candidate in 2016? The panel study includes identical questions asked of the same individuals in both October 2012 and 2016, thus making it possible to examine both whether these opinions weighed more heavily in vote choice in 2016 and/or whether change over time in issue opinions corresponds to change over time in Republican vs. Democratic candidate support. By analyzing both processes simultaneously, I eliminate the potential for confounding these two explanations.

To test these hypotheses, I constructed two dependent variables, both coded in the direction of support for the Republican candidate. They included (i) feeling thermometer advantage for the Republican candidate relative to the Democratic candidate (that is, the relative feelings of warmth vs. coldness toward the two candidates as assessed by questions asking how warm or cold they feel toward each) and (ii) Republican vs. Democratic vote choice (that is, the respondent’s self-reported vote choice specifically among those who voted for the major party candidates and who were independently verified to have voted in 2016) (**Panel Survey**).

To assess the left behind thesis, I include change over time in family income, whether the respondent is looking for work, and their subjective perceptions of family finances. To the extent that Trump gained support from those left behind, those experiencing either personal economic decline or increases that do not keep pace with the nation as a whole should be more likely to shift in the Republican direction in 2016. An additional left behind question asked whether the respondent believes that trade in particular has influenced his or her family financial situation in a positive or negative direction.

Each person was matched to the percentage civilian unemployment, percentage manufacturing employment, and median income based on current zip code. Those in areas dominated by manufacturing with low median incomes and high unemployment should be most drawn to Trump on the basis of community economic hardship.

Although the panel does not include repeated measures asking directly about racial status threat—and such measures might be susceptible to social desirability bias in any case—it included a short form of the social dominance orientation (SDO) scale (45), tapping individual differences in support for hierarchy over equality. Psychologists most often use it as an indicator of a stable personal trait indicating animus toward outgroups, but those high in SDO also are known to oppose trade and foreign direct investment out of a desire to dominate other countries (29). Most importantly, individual levels of SDO are known to increase when people feel threatened (46–48) and to decline when they feel less threatened (49). Thus, increasing levels of SDO indicate increasing group status threat.
To tap the extent to which people feel threatened by the world beyond national borders, questions were asked in both presidential election years about support for international trade, support for immigration, and whether the US relationship with China is a threat or an opportunity. In addition to asking for respondents’ own opinions on these issues using seven-point scales, they also were asked for their perceptions of where the Republican and Democratic candidates stood on these issues. Perceived distance measures were created by taking the absolute value of the difference between the self-placement and the candidate placement in both 2012 and 2016. This allowed the over-time analysis simultaneously to take into account changes in personal issue opinions from 2012 to 2016 as well as shifts in where the Republican and Democratic candidates were perceived on these same scales.

With issue placements of this kind, in cross-sectional analyses, there is a risk that respondents will assimilate the positions of the candidate that they prefer and/or contrast the views of the opponent (50). Assimilation/contrast renders the perceived distance of candidates endogenous to candidate preferences. Fortunately, this issue is less problematic with repeated measure analyses of panel data. Because each respondent is compared with himself or herself at a previous point in time, any tendency to assimilate or contrast will occur at both points in time, thus canceling itself out when looking at the difference in distances from candidates from one election to the next.

Notably, all three of these issues capture potential racial and global status threat. For example, immigration captures the perceived threat of allowing those who are racially different into one’s country. Trade opposition captures Americans’ fear of takeover by more dominant economic powers as well as racial opposition based on resentment of “others,” including foreigners and businesses in countries that are racially different (51). Prejudicial attitudes toward domestic minorities predict trade attitudes more strongly than the vulnerability of a person’s occupation or industry of employment (52). Finally, China can be considered an outgroup threat both racially and with respect to threatening American global dominance.

Fixed effects panel analyses provide the most rigorous test of causality possible with observational data. Because the goal is understanding what changed from 2012 to 2016 to facilitate greater support for Trump in 2016, I estimate the effects of time-varying independent variables to determine whether changes in the independent variables produce changes in candidate choice without needing to fully specify a model including all possible influences on candidate preference. Significant coefficients thus represent evidence that change in an independent variable corresponds to change in the dependent variable at the individual level. In addition, the net change over time in these independent variables must be in the direction helping to explain increased support for Trump.

To examine whether heightened issue salience accounts for changing preferences, I include in the models measures of respondents’ pre-Trump opinions on these measures interacted with a dichotomous wave variable. These independent variables by wave interactions should be significant to the extent that the salience of these issue opinions was increased by the 2016 campaign, so that they weighed more heavily in individual vote choice in 2016 than in 2012. For example, if those who shifted toward Trump in 2016 were people who already opposed trade in 2012 and Trump simply exploited those preexisting views for electoral advantage, this would be confirmed by a significant interaction between SDO and wave.

To the extent that changes in issue salience are responsible for changing presidential preferences, the interaction coefficients should be significant; to the extent that changing public opinions and/or changing candidate positions also account for changing presidential vote preferences, the coefficients corresponding to these independent variables will be significant. For the continuous outcome, Republican feeling thermometer advantage, I use ordinary fixed effects regression. For the dichotomous measure of Republican candidate preference, I use an ordered logit fixed effects model.

Fixed effects analysis of panel data provides a stringent test of these hypotheses for two reasons. First, these models produce conservative estimates of effects due to larger SS. Second, because party identification is known to account for most of the variance in candidate preference, by including it in the model and allowing it to vary over time, there is very little change in the dependent variable left to be explained by other factors.

Results

Party identification contributes stability to the two-party vote, and 2016 was no exception. Overwhelmingly, most voters simply voted for the candidate of the same party in both 2012 and 2016. (If one considers only those voters who reported voting for one of the major party candidates in both years, party loyalty seems quite strong, with 92% of panelists who voted for Barack Obama in 2012 also voting for Clinton in 2016. Among those who voted for the Democratic candidate as opposed to any other candidate in both years, 86% of those who voted for Obama in 2012 also voted for Clinton in 2016.) Despite the fact that 2016 is widely considered a nontraditional election, party loyalty was as important as ever. More to the point, party identification sets a very high bar for explaining any remaining variance in vote choice.

Change over Time in Opinions and Perceptions. The assumption that respondents’ views were essentially stable over time is incorrect (Table S1). Consistent with the hypothesis that threat leads to greater conservatism, the average party identification for Americans shifted in a slightly but significantly more Republican direction from 2012 to 2016. Also consistent with the threat thesis, the American public became significantly more negative in its views of international trade from 2012 to 2016, and this declining support was especially severe among Republicans (Table S1). SDO rose significantly from 2012 to 2016, indicating an increased perception of threat to dominant groups.

However, in contrast to an increased sense of threat from immigration but consistent with other surveys, the average American became more supportive of a path to citizenship between 2012 and 2016 (34). This change occurred among people identifying with both parties, but it was especially pronounced among Democrats (Table S1). Levels of perceived threat from China did not change significantly over this 4-y period. China was already viewed as threatening in 2012, and levels of threat did not increase in the population as a whole or among members of either party.

Beyond opinion change among the mass public, Fig. 1 illustrates the particularly large shifts that occurred over time in how the Republican and Democratic presidential candidates were perceived on these issues (Table S1). For example, in 2012, the two parties’ candidate positions on trade as well as the average American’s position were all indistinguishable, directly in the middle of the seven-point scale. However, by 2016, the distance between the Democratic placement and that of the average American became more than twice the distance between the Republican candidate and the average American. In other words, the Democratic position on trade became far less tenable for the average American than the Republican position. For perceptions of China as a threat, the Republican candidates’ positions remained the same distance from the average American, but the Democratic position became increasingly distant from the average American. Immigration attitudes became more polarized, with Republican candidate position perceived as more antimigration and the Democratic position perceived as slightly more positive.
Predicting Change in Candidate Support. Table 1 presents the central fixed effects findings, including two independent analyses: one predicting change in Republican thermometer advantage, and a second analysis predicting vote choice among the two major candidates. In each case, a single regression equation is used to evaluate both the impact of changes in issue salience and candidate issue positions. The extent to which within-person change over time in a given independent variable predicts an individual’s likelihood of change in the dependent variable is shown in columns 2 and 6 in Table 1. Columns 4 and 8 in Table 1 tap the extent of issue salience effects (that is, the extent to which preexisting views on a given issue were weighted to a greater or lesser extent in 2016 relative to 2012). Both dependent variables are coded in the direction of higher relative thermometer ratings for the Republican presidential candidate or greater probability of Republican vote in the fixed effects logit regression in Table 1.

Not surprisingly, the shift toward greater identification with the Republican Party from 2012 to 2016 predicted greater support for the Republican candidate in both analyses. Although many suspected that party identification mattered less in 2016 than in 2012, the analyses of issue salience show that this was not the case. The most obvious finding in Table 1 is that, contrary to conventional wisdom, there is little to no evidence that those whose incomes declined or whose incomes increased to a lesser extent than others’ incomes were more likely to support Trump. Even change in subjective assessment of one’s own personal financial situation had no discernible impact on evaluations of Trump or on change in vote choice. Likewise, those who lost a job between 2012 and 2016 were no more likely to support Trump. Table 1 further suggests that change over time in the extent to which a person perceived that trade had influenced his or her family financial situation made no difference to candidate attitudes or preferences.

Across all relevant predictors, Table 1 also provides no evidence that the increased salience of personal economic considerations played a role in increasing Trump’s support relative to Romney. Furthermore, respondents’ immediate geographic context, including unemployment and manufacturing concentration, made no difference, with the sole exception that living in an area with a high median income positively predicted Republican vote choice to a greater extent in 2016; this is precisely the opposite of what one would expect based on the left behind thesis. To examine the possibility that the impact of change in personal financial indicators was masked by including other sources of change in these analyses, I reestimated these models and included only the economic predictors (Table S3). Results reaffirmed the findings in Table 1.

Changes over time in indicators tied to racial/global status threat were far more influential as predictors of change toward greater Republican thermometer advantage and as predictors of greater likelihood of Republican vote choice. As shown in Table 1, increases in SDO significantly predicted changes in Republican vote choice as well as Republican thermometer advantage. When a person’s desire for group dominance increased from 2012 to 2016, so did the probability of defecting to Trump. However, as shown by the insignificant interaction between SDO and wave in both analyses, there is no evidence that those high in preexisting SDO were especially likely to defect to Trump, thus countering the idea that SDO was made more salient in 2016. Instead, it is the increase in SDO, which is indicative of status threat, that corresponded to increasing positivity toward Trump.

Mass opinion changes on status threat-related issues were not, by themselves, the driving force in increasing affinity for the Republican candidate. Instead, increasing relative distance from the Democratic candidate on threat-related issues, such as immigration and China, consistently predicted Trump support in a positive direction, whereas decreasing relative distance from the Republican candidate on trade and China also predicted change in the direction of voting for Trump. These consistently significant coefficients indicate that change over time in the candidates’ perceived positions relative to those of individual respondents had a significant impact in increasing support for Trump. The pattern in Table 1 makes it clear that it was change in how the candidates positioned themselves on status threat-related issues combined with smaller changes in public issue opinions that predicted increasing support for the Republican candidate in 2016.

The greater the distance from the Democratic candidate on trade, immigration, and China relative to that same distance in 2012, the more likely they were to defect toward Trump; the more the distance from the Republican candidate increased on these same issues, the less likely they were to shift toward Trump. Thus, changing respondent opinions in combination with realignments by the candidates on these same issues combined to make them important to changing candidate preferences. The large significant coefficient associated with perceived change in the national economy is consistent with the idea that those perceiving the economy as improving were less likely to defect toward the Republicans; however, national economic perceptions are well-known to be rationalized from candidate preferences, thus raising serious suspicions about endogeneity (53).

The analyses in the presidential vote choice columns in Table 1 show what changed in predictors of vote choice among those validated to have actually voted in 2016 who reported voting for one of the two major party candidates. These voters are obviously most important to what happened in 2016. In addition to shifting party identification, which fueled shifts toward the Republican candidate, voters who shifted to become Trump voters

![Table 1](https://www.pnas.org/cgi/doi/10.1073/pnas.1718155115)
between the two elections seem to have done so because of increasing distance between their own views and those of the Democratic candidate on trade, immigration, and China as well as due to the decreasing distance between their own views and those of the Republican candidate. These large significant coefficients suggest that these issues were important engines of change. In addition, those whose SDO level increased, indicating a rising sense of threat to the dominant group's status, were particularly likely to shift in support of Trump.

What is perhaps most interesting about Table 1 is what it reveals about the appropriate theoretical model for understanding shifting vote preferences from one election to the next. The dominant theoretical model for understanding electoral changes has long been that campaigns change vote choice not so much by changing opinions but by making some issues more salient than others, thus advantaging one candidate over another. However, based on Table 1, this does not seem to be the case. A quick glance down the columns representing the issue salience results (that is, the interactions between 2012 values of these predictors and wave) provides no evidence that changes in vote choice from 2012 to 2016 were a function of changing issue salience. The only significant coefficient suggests that areas higher in percentage manufacturing employment were less likely to shift toward Trump.

**Net Change.** Estimating effect sizes using fixed effects analysis is more complex, because one must take into account not only the size of the fixed effects coefficients representing the effects of change on change but also, the extent to which the amount and direction of over-time change in a given variable are ones that help to explain increases as opposed to decreases in support for the Republican candidate. **Table S1** summarizes the extent and direction of change over time in each of the independent variables. For example, party identification shifted slightly in the Republican direction, consistent with the idea that threat

---

### Table 1. Predicting change in presidential support from 2012 to 2016: Fixed effects analysis

<table>
<thead>
<tr>
<th>Change in predictors</th>
<th>Model 1: Thermometer advantage</th>
<th>Model 2: Vote choice among validated voters</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Effects of change in</td>
<td>Effects of change in</td>
</tr>
<tr>
<td></td>
<td>Republican</td>
<td>2012 predictors on change in</td>
</tr>
<tr>
<td></td>
<td>thermometer advantage</td>
<td>Republican thermometer advantage (predictor</td>
</tr>
<tr>
<td></td>
<td>coefficient</td>
<td>z Value</td>
</tr>
<tr>
<td>Party identification (Democrat)</td>
<td>–0.686</td>
<td>–2.870**</td>
</tr>
<tr>
<td>Personal economic hardship</td>
<td>–0.004</td>
<td>–0.080</td>
</tr>
<tr>
<td>Household income</td>
<td>0.006</td>
<td>0.010</td>
</tr>
<tr>
<td>Looking for work</td>
<td>–0.032</td>
<td>–0.190</td>
</tr>
<tr>
<td>Personal finances (better)</td>
<td>–0.303</td>
<td>–1.850</td>
</tr>
<tr>
<td>Personal effects of trade (better)</td>
<td>–0.037</td>
<td>–0.290</td>
</tr>
<tr>
<td>Own issue opinions</td>
<td>–0.170</td>
<td>–1.490</td>
</tr>
<tr>
<td>On trade</td>
<td>0.190</td>
<td>1.640</td>
</tr>
<tr>
<td>On immigration</td>
<td>0.120</td>
<td>1.140</td>
</tr>
<tr>
<td>On China</td>
<td>0.199</td>
<td>2.000**</td>
</tr>
<tr>
<td>On China</td>
<td>0.392</td>
<td>3.840***</td>
</tr>
<tr>
<td>Perceived distance of Democratic</td>
<td>–0.213</td>
<td>–2.280*</td>
</tr>
<tr>
<td>candidate on issues</td>
<td>–0.010</td>
<td>–0.110</td>
</tr>
<tr>
<td>On immigration</td>
<td>–0.206</td>
<td>–2.340*</td>
</tr>
<tr>
<td>SDO</td>
<td>0.184</td>
<td>2.570*</td>
</tr>
<tr>
<td>National economy</td>
<td>–0.583</td>
<td>–3.730***</td>
</tr>
<tr>
<td>Economic context</td>
<td>–0.035</td>
<td>–0.520</td>
</tr>
<tr>
<td>Unemployed, %</td>
<td>0.018</td>
<td>0.900</td>
</tr>
<tr>
<td>Manufacturing, %</td>
<td>–0.007</td>
<td>–1.160</td>
</tr>
<tr>
<td>Median income</td>
<td>–0.007</td>
<td>–1.160</td>
</tr>
<tr>
<td>Wave (2012–2016)</td>
<td>0.811</td>
<td>0.620</td>
</tr>
<tr>
<td>Constant</td>
<td>12.710</td>
<td>10.590***</td>
</tr>
<tr>
<td>R²/pseudo-R²</td>
<td>0.65</td>
<td>0.78</td>
</tr>
<tr>
<td>Sample size (n)</td>
<td>1,088</td>
<td>793</td>
</tr>
</tbody>
</table>

Note that results are based on single fixed effects models for thermometer advantage (columns 2 through 5) and vote choice among validated voters (columns 6 through 9) using robust SEs, and incorporating tests of both priming and change in attitudes over time. Fixed effects ordinary least squares regression was used to analyze change in Republican thermometer advantage; fixed effects logit regression was used to analyze Republican versus Democratic vote. *P < 0.05; **P < 0.01; ***P < 0.001.

Information on economic context by zip code was available only once during this period, thus preventing estimation of the impact of changes in conditions over time.
generally leads to more conservative views. Economic changes are consistent with what one would expect during an economic upturn. Thus, even if changes in pocketbook variables had predicted change in Republican candidate support (which they did not), their net impact would have been decreasing Republican candidate support.

Drawing on the analysis of vote choice among validated voters in model 2 in Table 1, I estimated total net change due to each significant independent variable for the model predicting changing vote choice from 2012 to 2016. To assess net effects, I computed the predicted probabilities of change using the fixed effects model and then evaluated the impact of the average extent of change between 2012 and 2016 in each of these independent variables while holding all other variables at their wave 0 means. The difference between the wave 0 and wave 1 probabilities provides the marginal impact of one variable (Table S2). These estimates represent how the predicted probabilities change as one variable of interest goes from its wave 0 to wave 1 mean value. It takes into account both the extent of change in that variable that occurred on average, and the strength of change in this variable in predicting change in Republican vote choice. For ease of interpretation, Fig. 2 combines the two candidate distance estimates for each issue.

Although the extent of change due to any one variable is limited, the candidates’ changing relative positions on trade account for the greatest net impact on Trump support. By 2016, the Democratic candidate had become much farther away from the average American on this issue. This increasing distance combined with a large coefficient indicating its impact on change in vote choice meant that trade views increased the probability of voting for Trump by almost 0.05. China threat also increased the Republican candidate’s advantage to a lesser extent, roughly one-half the magnitude of trade’s impact. Not surprisingly, immigration hurt Republican vote choice more than it helped, mainly because relative to Democratic candidates, Trump moved farther away from voters whose more moderate positions on this issue were closer to those of Romney in 2012 than Trump in 2016. The marginal effect of shifting party identification accounted for another 0.01–0.02 increase in the predicted probability of voting for the Republican candidate. Although these few issues are not intended to account for all changes between 2012 and 2016 that might have brought about a change in vote choice, given the narrow margins of victory in many states, their effects could have substantial consequences.

Rising SDO accounted for another 0.01 increase in the probability of voting for the Republican candidate. It is also possible that it had indirect effects on people’s issue positions, since opposition to trade and perceptions of China as a threat are known to be fueled by levels of and increases in SDO (29, 51, 52). In short, perceptions of Republican candidate issue positions in 2016 were altered in what were more appealing, status threat-defensive directions for the average voter. The shift toward an antitrade stance was a particularly effective strategy for capitalizing on a public experiencing status threat due to race as well as globalization.

Replication and Extensions

To replicate key findings and address unanswered questions, I used an independent cross-sectional survey from October 2016, a representative national probability sample collected by the National Opinion Research Center (NORC) at the University of Chicago (Cross-Sectional Survey). Despite the inherent limitations of cross-sectional data for causal inference, results largely reinforced the interpretations suggested by the panel analyses.

Pocketbook Voting. To what extent are these results convincing with respect to the lack of effects from personal economic hardship? Could Trump’s popularity be due to anticipated future financial difficulties rather than a referendum on what had already occurred? Cross-sectional analyses allowed me to examine the possibility that economic anxiety about the future was related to Trump support. Three questions explicitly asked respondents about their concern over (i) not having saved enough for retirement, (ii) not being able to pay medical bills, and (iii) not being able to pay for educational expenses. As shown in Table S4, whether using the sample as a whole or whites only, the results are the same. Concern about future expenses does not predict greater support for Trump. In addition, Trump supporters favor a smaller safety net, contradicting expectations that they are concerned about those facing economic hardship. Consistent with panel evidence, there is little support for the left behind thesis from the cross-sectional indicators of past economic hardship or anticipated hardship.

Perceived Status Threat. Another limitation in the panel analyses is that I do not provide direct evidence that dominant groups feel threatened. Instead, I infer this from rising SDO and changing issue attitudes that suggest hunkering down in a protective manner. To address this shortcoming, the cross-sectional data illustrate how dominant group membership affected Trump support as well as whether those who reported that dominant groups were threatened were more likely to support Trump. Table S4 further confirms that whites and men were more likely to support Trump. More to the point, feeling that “the American way of life is threatened” is a consistent predictor of Trump support. In addition, respondents were asked to what extent various groups in America were discriminated against, including Christians, Muslims, men, women, whites, blacks, and Hispanics. If threat to dominant group status is an underlying cause of Trump support, the extent to which people perceive dominant social groups, such as men, Christians, and whites, as discriminated against more than lower status groups should predict support for Trump. Table S4 shows that perceived discrimination against high-status groups does indeed have a substantial impact on the likelihood of supporting Trump, even in a fully saturated model. Largely, the same individuals who perceive whites as more discriminated against than minorities also see Christians and men as experiencing greater discrimination than Muslims and women, despite the former groups’ dominant status. The status threat explanation is thus consistent with others’ interpretations emphasizing gender, race, and religion (3, 5). Furthermore, indicators that were present in both datasets, such as SDO, opinions on trade, and threat from China, produced similar results, adding confidence to this interpretation.

Fig. 2. Net change in predicted probability of Republican vs. Democratic vote, 2012–2016. Note that bars represent change in predicted probability of voting for the Republican in 2016 vs. 2012 among validated voters. Calculations were based on predicted values from the regression model (Table 1) when setting the variable of interest at its wave 0 and wave 1 means (Table S1) and calculating the difference in probabilities of a Republican vote while holding all other variables at their wave 0 means. Positive values indicate increasing probabilities of a Republican vote choice.
The Meaning of Education. The cross-sectional survey replicates the strong relationship with education shown throughout the election. More importantly, it provides a better understanding of what precisely education represents. In Table S5, model 1, I replicate the strong relationship between lack of college education and Trump support using only demographics as predictors. In model 2, I examine what happens to education’s predictive power when measures of personal economic wellbeing are also included in the model. Finally, in model 3, I drop the economic variables and instead, include indicators corresponding to status threat toward dominant groups. As summarized in Fig. 3, regardless of which outcome measures I examined, including indicators of economic status did not eliminate the impact of education. It reduced education’s impact somewhat for the feeling thermometer measure, but for Trump/Clinton vote, the impact of education remained constant. However, after the relationship between Trump support and perceived status threat is taken into account, even lack of a college education no longer predicts Trump support for any of the measures. These findings strongly suggest that group-based status threat was the main reason that those without college educations were more supportive of Trump.

Threats to Causal Inference

The overall consistency of these two sets of findings from two independent surveys lends strong support to the conclusion that the 2016 election was not about economic hardship. Instead, it was about dominant groups that felt threatened by change and a reason that those without college educations were more supportive of Trump for other reasons, one could argue that opinion leadership by Trump induced opinions on these issues to become more like his positions. In other words, change in candidate preference drove change in issue opinions. Although evidence of elite opinion leadership is common, it generally occurs because people change opinions toward the opinions held by the party and elites that they have long supported. The leaders of one’s party espouse issue positions that rank and file party members subsequently adopt. I am unaware of evidence of opinion leadership by outparty leaders. Respondents would need to have changed their minds to support Trump both for unrelated reasons and well in advance of him being able to exercise opinion leadership over them. Strong commitments facilitate opinion leadership, but nascent, weak commitments are unlikely to do so.

Perhaps the most compelling evidence against interpreting this evidence as opinion leadership by Trump comes from the panel findings themselves. Only for trade is there evidence of the public shifting in the same direction as Trump (Fig. 1 and Table S1). For China, mass opinions did not change at all among either partisan group, and for immigration, they changed in the direction opposite of Trump’s views. In addition, as illustrated in Table 1, change over time in individuals’ issue opinions did not correspond to change over time in support for the Republican candidate. If opinion leadership was occurring, these two changes over time should certainly covary, yet they do not. Instead, it is the combination of changing personal opinions and independently assessed changing perceptions of the positions of the party leadership that combined to alter vote choice.

One exception is SDO, where it is plausible that increasing levels of SDO produce shifts in favor of Trump as well as that becoming a Trump supporter could cause increased SDO. Again, change in candidate preference from 2012 to 2016 would need to have occurred for reasons unrelated to this model, and Trump’s popularity would need to have subsequently caused increased SDO specifically among new Trump supporters. Whether this is a more plausible explanation than group status threat increasing support for a candidate emphasizing protectionist and predominant status group policies remains to be seen. To date, SDO has been documented to increase strictly when group boundaries are made salient and people’s group status is threatened (46–48).

Contrary to one previous study, I do not find that the increased salience of immigration (3) or that changing opinions on immigration fueled additional Trump support. Although mass surveys, as others, show that immigration views are correlated with racial animus and SDO, status threat is not the usual form of prejudice or stereotyping that involves looking down on outgroups who are perceived to be inferior; instead, it is borne of a sense that the outgroup is doing too well and thus, is a viable threat to one’s own dominant group status. As a highly visible indicator of racial progress, a well-educated, Harvard Law-trained African American president is indeed threatening to dominant white status (54, 55), whereas immigrants arriving with nothing but the clothes on their backs apparently are not. For a dominant group to be threatened by an outgroup, the outgroup needs to be perceived as powerful. Traditional racial stereotypes of poor, uneducated, or unintelligent minority groups do not fuel the sense that one’s dominant group status is being challenged. As a result, immigration is unlikely to trigger dominant group status threat, particularly in a country with relatively few new immigrants. However, a sense of threat is triggered by racial progress in a majority–minority America; an increasingly powerful country, such as China; or an America that is no longer the dominant economic superpower. The rising sense of racial and global threat in the United States could not be more opportune for a candidate seeking to capitalize on status threat-based issues.

Conclusion

Narratives are important, because they structure people’s understanding of what has occurred and why. They also guide the
behavior of elected representatives in deciding how to represent their constituencies. When the people have spoken, the post-election narrative decides what it is they have said. Based on these results, it would be a mistake for people to understand the 2016 election as resulting from the frustration of those left behind economically. Instead, both experimental evidence and panel survey evidence document significant political consequences from a rising sense of status threat among dominant groups in the United States.

Lack of a college education was persistently noted as the strongest predictor of Trump support. This pattern led journalists with limited data toward economic explanations. However, education is also the strongest predictor of support for international trade, a relationship that is not tied to income or occupation so much as ethnocentrism (52). Negative attitudes toward racial and ethnic diversity are also correlated with low levels of education. In this election, education represented group status threat rather than being left behind economically. Those who felt that the hierarchy was being upended—with whites discriminated against more than blacks, Christians discriminated against more than Muslims, and men discriminated against more than women—were most likely to support Trump.

Why does it matter whether Trump’s support was driven by being left behind economically as opposed to a sense that one’s status in the domestic or international hierarchy has suffered? Some workers obviously have suffered financially, even if the general trend is toward improvement. However, these losses were not politicized when it came to voting in 2016. Trump’s victory may be viewed more admirably when it is attributed to a groundswell of support from previously ignored workers than when it is attributed to those whose status is threatened by minorities and foreign countries. More importantly, elected officials who embrace the left behind narrative may feel compelled to pursue policies that will do little to assuage the fears of less educated Americans. Furthermore, Trump’s “us vs. them” rhetoric does little to lead whites and minorities or Americans and foreigners to view one another in less threatening ways, and it calls to whites’ attention the fact that they are already doing quite well relative to minority groups and relative to those in the countries that they often find threatening.

The left behind thesis has focused attention on economically beleaguered voters’ trade-related job loss. While this group certainly deserves public support, misunderstanding the election narrative still has potentially negative consequences. Most manufacturing job loss is not related to trade (56). Furthermore, Trump’s supporters largely oppose strengthening the safety net for those left behind (Table S4). Those concerned with leftbehind sectors are likely to be disappointed if they expect the current administration and its supporters to prioritize the economically beleaguered manufacturing sector.

The 2016 election was a result of anxiety about dominant groups’ future status rather than a result of being overlooked in the past. In many ways, a sense of group threat is a much tougher challenge for politicians than income inequality or perceived occupational threat is. In the United States, income inequality was felt by nearly all, but the threat of being left behind economically was felt by just the 30% of the population in the lowest quintile (56). Income inequality is also the strongest predictor of Trump support. This pattern led journalists to believe that Trump was a popular candidate because of his policies, which are now being realized in the form of lower taxes and increased military spending.

Most critically, these results speak to the importance of group status in the formation of political preferences. Political uprisings are often about downtrodden groups rising up to assert their right to better treatment and more equal life conditions relative to high-status groups. The 2016 election, in contrast, was an effort by members of already dominant groups to assure their continued dominance and by those in an already powerful and wealthy country to assure its continued dominance.

Materials and Methods

The representative national probability surveys used in this study were approved by the Institutional Review Board at the University of Pennsylvania. All data are available at iscap.asc.upenn.edu/sites/default/files/uploads/Mutz_PNAS_Replication_Data_and_Code.zip. Both waves of panel data were collected online by GK Ltd., formerly known as Knowledge Networks. The need for a separate informed consent procedure was waived, because the company administers a consent procedure when people initially join the panel. Those recruited for the sample who lacked online access were given free internet access to ensure that all had the same initial probability of being included in the sample. Voter validation for panel respondents was purchased from Catalyst, LLC after the election. The panel survey included just over 1,200 participants who responded in both waves.

Cross-sectional data were gathered by Ameriprise of the NORC at the University of Chicago from October 14 to 28, 2016 (n = 3,214). Interviews were conducted in English and Spanish either online or by telephone depending on respondent preference. Current Population Surveys data on area median income, unemployment, and percentage manufacturing employment were supplied by the vendor and matched to each respondent’s zip code under a Data Use Agreement between the NORC and the University of Pennsylvania.

Acknowledgments

I thank the American Politics Working Group at the University of Pennsylvania for their suggestions. Robin Pamenter and Hye-Yon Lee provided editorial and data analysis assistance. Dan Hopkins and Seth Goldman contributed to data collection costs. This research was supported by the Institute for the Study of Citizens and Politics at the University of Pennsylvania.

31. Theiss-Morse E (2009) Political Science and Social Science