Diploma Divide: Educational Attainment and the Realignment of the American Electorate

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Abstract: Educational attainment has become a critical determinant of partisanship. The divide between college graduates and non-college graduates is a crucial political cleavage in contemporary American politics. In this paper, I document the rise of the diploma divide on the micro and macro levels. First, I use ANES and CES data to assess the relationships between educational attainment, partisanship, and vote choice. I find that post-2000, educational attainment is an increasingly strong predictor of partisanship and, in turn, vote choice. I then show that the increasing political salience of education at the individual level has reshaped macro-level political alignments. Next, I demonstrate that between 2000 and 2020, the percentage of a county's population with a BA is one of the strongest predictors of changes in vote share, with highly educated counties becoming more Democratic and less educated counties becoming more Republican. Finally, I demonstrate that county-level educational context shapes the effect of degree-holding on individual-level behavior. Having a BA is a stronger predictor of Democratic partisanship in counties' where a larger proportion of the population holds a college degree. Overall, these results demonstrate the diploma divide is one of the dominant political cleavages in contemporary American politics.

Joe Biden's victory in the 2020 presidential elections is often framed as a return to normalcy. Biden, the longtime Senator, vice-president to Barack Obama, and committed institutionalist, defeated the incumbent president, populist billionaire Donald Trump in a contentious election. While Biden might embody a "normal politician," Biden's path to victory was anything but ordinary. Many thought Biden was a viable candidate because he would appeal to working-class Whites and ethnic and racial minorities. However, Biden could not improve upon the Democrats' previous performances among the White working class and even lost some ground among some ethnic and racial minority groups—Latinos in particular.[1] Perhaps unexpectedly, Biden exhibited considerable strength among professional class Whites. Biden won mainly because he markedly improved upon Hillary Clinton's margins in a wide range of suburban areas, both in traditionally blue and traditionally red states.

It was once common wisdom that the GOP was the party of affluent, White college graduates (Stonecash 2000, pgs. 101-107). Flanigan and Zingale's (1998, pg. 90) classic political behavior text states, "Typically, lower-status people, those with less education, those with low incomes, recently immigrated ethnic groups, racial minorities, and Catholics are more likely to vote Democratic. Higher status people, the college-educated, those with high incomes, whites of northern European stock, and Protestants are more likely to vote Republican." Republicans dominated America's suburban areas while the Democrats were strong in the urban core and many rural areas. However, these stereotypes are badly outdated. Biden's strength in many of the nation's most well-to-do suburban areas is the product of the American electorate's ongoing education-based realignment, which is at least two decades in the making.

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[1] https://www.documentcloud.org/documents/20537484-equis_post-mortem_part_one__public_deck_

There is a growing gap between college graduates and non-graduates on a variety of attitudinal dimensions. The economic fortunes of college graduates are increasingly diverging from those who do not hold a degree. The divides are stark. College graduates live in different types of places than non-graduates, work in other sectors of the economy, exhibit different levels of religiosity, and hold different attitudes about racial and ethnic minorities, immigration, sexuality and gender, and a host of other cultural issues. The increasing proportion of the population with a degree combined with the attitudinal differences between educational groups combined with these attitudes' increasing salience now divides the electorate in a heretofore unprecedented way—along educational lines. The diploma divide is one of the dominant political cleavages nationally and *the* dominant cleavage between White Americans.

I use a combination of individual-level and county-level data to demonstrate the micro and macro foundations of America's educational realignment. On the micro-level, I use the Cooperative Election Study (CES) data spanning 2006-2020 and American National Election Study (ANES) data spanning 1972-2016 to show that education is an increasingly strong predictor of individual-level partisanship and vote choice. White Americans have seen the most significant increase in explanatory power, though the change is not limited only to Whites. On the macro level, I use a combination of US Census and county-level election return data spanning 2000 to 2020 to show there has been a massive county-level realignment along educational lines. Most American politics scholarship does not place education on the same lines as race or religion when explaining political behavior on the individual level or patterns of election returns on the aggregate level. I show that it is past time we revisit this assumption.

1. Education and Partisanship in American Politics

1.1 Education, Participation, and Attitudes

Scholars have long recognized that education levels are positively associated with political participation (Wolfinger and Rosenstone 1980; Hillygus 2005; Kam and Palmer 2008). The authors of The American Voter recognized people with higher levels of education are more civically active sixty years ago (Campbell et al. 1960, pg. 477). They noted that the highly educated were more likely to participate in politics, both showing up at the polls and working on campaigns, interest groups, and other types of advocacy. Moreover, Burden (2009, pg. 545) demonstrates the correlation between education and turnout has increased post-1980. College graduates have long been more likely to turn out than those with less education, but the gap between the groups has become more extreme in recent decades. Perhaps unsurprisingly, college graduates also have higher average levels of political sophistication, though it is not clear the link is causal (Luskin 1990).

While it is clear that there is a link between education and civic participation, we know less about the relationship between education and political partisanship. Scholars have long regarded education as a remedy for intolerance, political and otherwise (Bobo and Licari 1989). Many studies have found positive relationships between education and support for politically liberal attitudes such as freedom of expression, ethnic diversity, gay and lesbian rights, and non-traditional gender roles (Marshall 2019, pg. 70). All of these issues are strongly associated with the Democratic Party. On the other hand, college graduates are more economically affluent than non-graduates. This increase in earnings capacity might lead individuals to oppose economic redistribution through taxation (Marshall 2019). There is some evidence that this is the case (Mendelberg, McCabe, and Thal, 2017). Opposition to taxes has been the central plank in the Republican Party's platform for decades (Goren 2013, pgs. 21-22). Thus, higher levels of education have the potential to pull Americans in opposite partisan directions. However, for

many years the relationship between education levels and vote choice was weak—educational attainment did not strongly predict support for one party over the other.

So what changed? Why has education suddenly become such a stark dividing line both in the United States and abroad? Over the past several decades, we have seen the rise of populist movements across the globe, including the Tea Party and Donald Trump in the United States, the Brexit movement in the UK, Bolsonaro in Brazil, Duarte in the Philippines, and numerous other far-right populist movements in Europe and elsewhere. Several common themes unite these movements: anti-elitism, skepticism of experts, support for the traditional gender hierarchy, distrust of multiculturalism, and a view that divides society into a homogenous in-group and predatory outgroup(s) (Norris and Inglehart 2019, pg. 72). Norris and Inglehart (2019) tie the rise in these populist movements to the "silent revolution" in values. Younger generations are more ethnically diverse, better educated, and more socially liberal. These liberal values became dominant as a function of generational replacement. Norris and Inglehart view the rise of populism across the globe as a backlash against this "silent revolution." Typically, the people leading this backlash are older, Whiter, and less educated than the Millennials, who are at the leading edge of this transformation (Norris and Inglehart 2019, pg. 259).

The rise in populism and the backlash against the "silent revolution" has triggered a realignment along educational lines. While Trump's populist movement was certainly unique in many ways, I argue that education was becoming more politically relevant well before Trump's emergence. There were already growing economic and geographic divisions between college-educated and not. The rise of the globally integrated knowledge economy heightened the salience of globalization, free trade, and immigration. Positions on these issues correlate with educational attainment. Hainmueller and Hiscox (2006) demonstrate college graduates are much more

favorable towards international trade and globalization than those without a degree. In a cross-national study, Bekhuis et al. (2014) found that the effect of increasing globalization on nationalist attitudes was conditional upon education. People with higher levels of education were less likely to experience an increase in nationalistic attitudes in response to higher levels of immigration. Cavaille and Marshall (2019) used compulsory schooling reforms as a natural experiment to show that increased levels of schooling caused more positive attitudes towards immigrants and lower levels of support for anti-immigrant political parties (also see Maxwell 2019). Similarly, Mocan and Pogorelova using expansions in compulsory education to show higher levels of education are associated with lower levels of religiosity. In turn, lower levels of religiosity are associated with higher levels of trust in science and scientists (McPhetres and Zuckerman, 2018; Eichengreen, Aksoy, and Saka 2021) and the types of cultural attitudes that have become more salient in recent years (Castle 2019; Layman 2001).

A look at the ANES data is revealing. Table 1 displays the differences between White college graduates and White non-college graduates across a variety of dimensions. The top two rows show indexes of economic and social attitudes. The economic index combines items regarding government-guaranteed jobs, health insurance, and aid to the poor. The social index combines abortion, gay rights, and the importance of traditional values (see Zingher and Flynn 2018). Higher values on these scales reflect higher levels of conservativism. The tables also display the racial resentment and authoritarianism scales prominent in the recent literature (Hetherington and Weiler 2009; Mutz 2018; Wronski et al. 2018; Reny, Collingwood, and Valenzuela, 2019; Zingher 2020). Many, starting with Lipset (1959), have argued that educational attainment is strongly related to levels of outgroup hostility and authoritarian attitudes. Likewise, positive values reflect higher levels of racial resentment and

authoritarianism. Lastly, I include an ordinal measure of immigration attitudes. This item takes on three values, reduce the number of immigrants (3), keep the number of immigrants the same (2), and increase the number of immigrants (1).

Table 1A: Summary Statistics for White, non-College Graduates

Variable	N	Mean	SD	Min	Max
Economic Attitudes	11256	0.20	0.90	-3.23	3.21
Social Attitudes	11256	0.11	0.97	-3.76	3.03
Racial Resentment	5747	0.30	0.77	-2.02	1.40
Authoritarianism	4896	0.09	0.74	-1.55	0.96
Immigration	5719	2.50	0.63	1.00	3.00

Table 1B: Summary Statistics for White College Graduates

Variable	N	Mean	SD	Min	Max
Economic Attitudes	4879	0.19	1.05	-2.82	3.23
Social Attitudes	4879	-0.44	0.98	-3.18	2.96
Racial Resentment	3281	-0.18	0.93	-2.08	1.40
Authoritarianism	2934	-0.46	0.82	-1.83	0.96
Immigration	3319	2.19	0.71	1.00	3.00

As the tables clarify, we see sizeable gaps between those with a college degree and those without a diploma. College-educated Americans are more socially liberal—the means for the two groups are half a standard deviation apart. Likewise, the two groups are more than half a standard deviation apart on the racial resentment and authoritarianism scales. The divide on the immigration question is just under one-half of a standard deviation. College-educated Americans are more liberal on social issues, more likely to believe white/black inequality is rooted in structural factors, and express fewer rigid attitudes regarding child-rearing preferences.

Interestingly, we see no evidence of a gap when it comes to economic perspectives—the two groups have nearly identical means. This evidence, while descriptive, suggests that the increasing salience of social, cultural, and racial issues may be to blame for the growing divide between college and non-college-educated Americans. We saw little polarization between the educational groups when economic issues were dominant. This lack of polarization makes sense, given the two groups are indistinguishable on economic matters. However, "culture war" issues polarize the two groups. The rise of the culture wars corresponds with an increasingly partisan split along educational lines. I argue the two trends are closely related.

These changes were afoot well before Trump ran for president. Populist, anti-elite, anti-expert sentiments are always present. Anti-intellectualism has a long history in American politics (Hofstadter 1963). According to Motta (2018, pg. 468), one form of anti-intellectualism is the "distrust, and perhaps dislike, for individuals who claim to have superior knowledge and wisdom about a subject matter." Trump did not invent something new. In many ways, these themes were natural extensions of the far-right and arguably ethno-nationalist Tea Party movement from a decade prior (Barreto and Parker 2014, pgs. 85-89). He simply turned up the volume. Trump cast doubt on the scientific consensus on anthropogenic climate change, vaccines, hurricane predictions, and strategies for COVID mitigation (Aldy 2017; Hornsey et al. 2020). Trump worked to sow distrust of experts in a variety of ways. Thus, it makes sense that anti-expert messaging does not resonate who view themselves as having expertise in a particular subject, generally people with formal educational credentials. An analysis by Oliver and Rahn (2016) demonstrated distrust of experts correlated with support for Donald Trump in the 2016 election. Thus, Trump attacking experts as untrustworthy likely increased the political relevance of formal educational qualifications.

The recent rise in anti-elitism dovetails with the heightened salience of race and identity in American politics. Donald Trump made explicit racial appeals part of his campaign (Valentino, Neuner, and Vandenbroek 2018). Trump's first real sustained political venture was as leader of the "Birther" movement, where he questioned whether Barack Obama, the first African American president, was an American citizen. He attacked high-profile Black athletes like LeBron James and Collin Kaepernick. Trump's racialized campaign strategy sparked a backlash. Incidents of police brutality sparked the rise of the Black Lives Movement, which brought racial issues even more to the forefront. The heightened salience of race and diversity, more generally, has further divided the electorate along educational lines. The Trump presidency coincided with the so-called "Great Awokening" of White Liberals. An analysis by Sean McElwee of Data for Progress showed that White liberals adopted sharply more liberal racial attitudes throughout the Trump administration. Education shapes racial, and outgroup attitudes, more generally.[2]

Thus on the individual level, There are multiple reasons to suspect that educational differences are more powerful predictors of political attitudes and behavior than they once were. Gallup's long-running "What Do You Think Is the Most Important Problem Facing This Country Today?" polling revealed that American's identified "Dissatisfaction with government" and "Immigration" as the two most pressing issues facing the country. Immigration attitudes, as we have seen, vary as a function of education levels and opposition to immigration unites populist movements across the globe. Likewise, "dissatisfaction with the government" fell squarely within Donald Trump's anti-elite, anti-technocrat "Drain the swamp" messaging. Overall, Trump's rise is part of a broader, worldwide rise in populism—a movement that has worked to

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[2] https://www.nytimes.com/2018/05/23/opinion/democrats-race.html

bring social and cultural issues to the political forefront—both in the United States and abroad (Solobewska and Ford 2020). It just so happens educational attainment strongly influences peoples' positions on these increasingly salient issues.

1.2 The Political Geography of Educational Attainment

As the previous section illustrated, education influences what people think, and changes in the political context heighten the importance of these differences. Yet, educational credentials are becoming a more important determinant of political behavior for reasons other than attitudes on social and cultural issues. Recently, levels of educational inequality have increased, as have the economic returns from education (Bloome et al. 2018). These changes have led to more disparity between people with a college degree and those without (Baum et al., 2013). Education also influences where people choose to live. However, this geographic divide is a relatively recent phenomenon.

As Jonathan Rodden notes in his 2019 book "Why Cities Lose," college graduates were once roughly evenly distributed across US counties (pgs. 78-82). While there was undoubtedly variation from county to county, the distribution was not skewed. This pattern has changed in recent years. The emergence of the knowledge economy has caused college graduates to cluster in a more limited number of metros, such as Boston, Washington DC, and California's Bay Area. The economies of these urban knowledge economy hubs have boomed in recent decades. College graduates, especially those with postgraduate degrees, are responsible for nearly all of the growth in income in recent decades.[3] Rodden reports 15 metro areas produced half of all US patents between 2000 and 2015 (2019, pg. 79).

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[3] https://www.brookings.edu/wp-content/uploads/2020/06/Final-Report_Education-Middle-Class-Status-1.pdf

Conversely, many rural areas are experiencing a brain drain, where children from these areas go off to college and then do not return after they graduate. The transformation to the knowledge economy has left these places out when it comes to economic growth. Wages for high school graduates have remained flat or even decreased when controlling for inflation (Lemieux 2006). The result is more uneven dispersion of college graduates across the country and more economic polarization between highly educated urban hubs and the surrounding countryside.

We have already seen the education influences attitudes. This geographic and economic polarization introduces the possibility the effects of education on political attitudes vary from place to place. A wide swath of political science literature demonstrates behavior is context-dependent. The same individuals will exhibit different behaviors when placed in various racial (Enos 2016; Anoll 2018), electoral (Horowitz 2000; Norris 2004), or economic contexts (Green and McElwee 2018). The existence of these contextual effects raises the possibility that educational context shapes attitudes and behaviors as well. Living around a large number of college graduates might reinforce the norms, beliefs, and political preferences typical of college-educated professionals. Likewise, the effect of educational attainment on attitudes might be weaker in places where there are few college graduates. These places could be less likely to enforce the values and norms college graduates typically hold—other studies reach similar conclusions. Gimpel et al. (2020) found that living in an urban or rural area shaped political attitudes even when controlling for a host of other variables that vary as a function of urbanization. They attribute these findings to differences in socialization across geographies (pg. 1363). This possibility implies that education matters, but how it matters is likely conditional upon the broader context.

1.3 Compositional Changes in Educational Attainment

A comprehensive set of emerging issues—globalization, immigration, race, and the new fronts on the culture war, such as trans rights-divide the electorate along educational lines. The electorate is geographically divided along educational lines, too. Yet, these are not the only significant education-related changes. There is a compositional change afoot, too. More Americans have access to higher education than ever before. In 1970, roughly one in 10 Americans had completed college. By 1990, that number had risen to 21 percent. Today, 36 percent of adults have completed a bachelor's degree. Education's increasing political relevance compounds this three-and-a-half-fold increase in the degree-holding portion of the population. White college graduates comprised 10 percent of the population in 1972. That number had increased to 21 percent in 2016 (Zingher 2019). White college graduates are an even larger share of the electorate, given that college graduates turn out at a higher rate than the general population (Leighley and Nagler, 2014). Exit polls and academic analyses have revealed a growing divide between college graduates and non-college graduates over the last several election cycles, with college graduates increasingly favoring Democrats and non-graduates favoring Republicans.[4] This recent trend is a departure from the traditional sociological division between the parties, which saw college graduates gravitate towards the Republican Party and high school graduates favor the Democrats.

I argue that the increasing political salience of educational credentials combined with the growing size of the college graduate population realigned the electorate. Academic credentials are more powerful predictors of partisanship and vote choice on the individual level, and macro-level vote shifts reflect these changes. Figure 1 displays the relationship between the percentage of a state's population with a Bachelor's degree and Democratic vote share in the 2000 and 2020

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[4] https://www.washingtonpost.com/politics/2021/04/14/trump-didnt-bring-white-working-class-voters-republican-party-data-suggest-he-kept-them-away/

elections. As the figure clarifies, the relationship's magnitude has increased significantly over the past two decades. The coefficient of the regression line was .75 in 2000. In 2020, it was 1.47, nearly double what it was 20 years prior. Likewise, the r^2, the percentage of the variation in the dependent variable explained by the independent variable, moved from .14 to .54. Thus, both the magnitude of the effect and the strength of the relationship have increased markedly. Post-2000, the most educated states have moved sharply towards the Democratic Party (Colorado and Virginia are striking examples) while the less educated have become markedly more Republican (e.g., Iowa and Ohio).

Interestingly, nearly all the 2020 swing states (PA, WI, MI, AZ, NC, TX, GA & FL) were within a point or two of the median education level, 30.9 percent of the population with a BA or higher. Therefore, a state's education level explains a lot more about how it voted in 2020 compared to 2000. Obviously, this evidence is descriptive and does not account for other factors, but it is powerful, nonetheless.

Figure 1: The Relationship between the Percentage of a State's Population with a Bachelor's Degree and Democratic Presidential Vote Share, 2000 & 2020
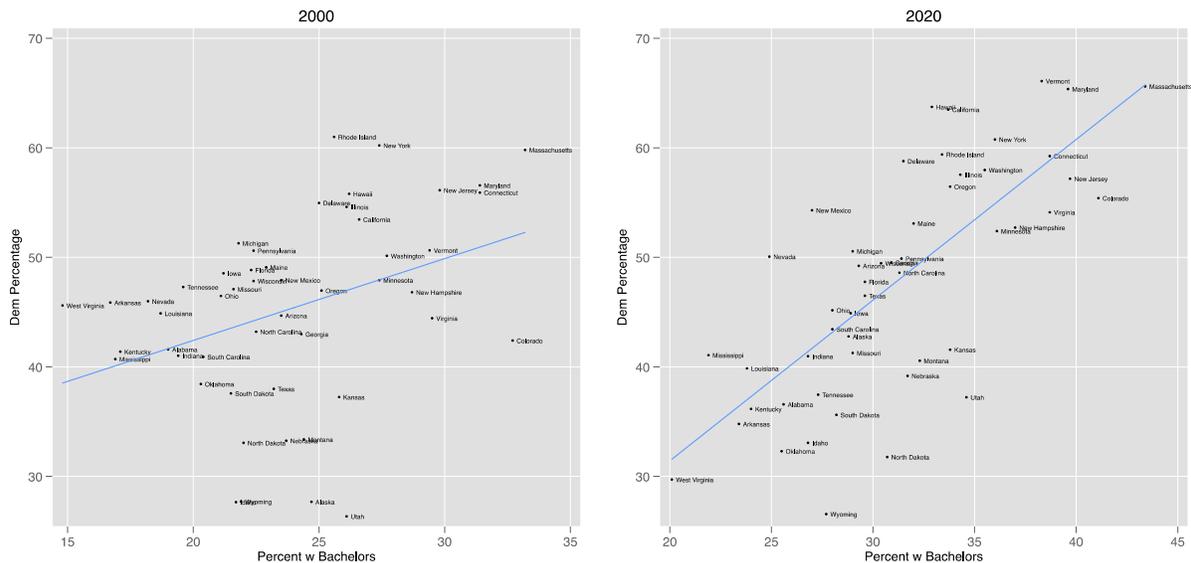
1.4 Hypotheses

I contend that educational credentials, particularly holding a college degree, are stronger

predictors of political attitudes and behaviors than they once were. Moreover, I argue that the

effect of educational attainment is context-dependent—living in an area with many other college

graduates amplifies the impact of having a degree on the likelihood of supporting the Democratic

Party while living with fewer graduates mitigates it. In turn, I argue this shift on the individual

level has produced a realignment on the mass level. These expectations lead to the following

three hypotheses

H1: *In comparing individuals, college graduates are more likely to identify with and vote for the Democratic Party than non-college graduates. I posit this relationship has grown stronger over time.*

H2: *In comparing individuals, college graduates who live in counties with a higher percentage of college graduates are more Democratic than college graduates who live in less educated counties.*

H3: *In comparing counties, the Democratic vote share will increase as a function of the percent of the county's population that holds a college degree. I posit this relationship has grown stronger over time.*

In the next section, I present a series of tests designed to test these three hypotheses.

2. Data

My analyses rely on individual and county-level data. The individual-level data come from two

gold-standard long-running political surveys, the American National Election Study (ANES) and

the Cooperative Election Study (CES, formerly CCES). I use these two individual-level datasets

to assess the relationship between education and policy attitudes, partisanship, and vote choice

on the individual level. The CES and ANES have different strengths, which allow me to test my

individual-level hypotheses in various ways. The CES survey is fielded in each year beginning in

2006 and contains extensive samples of respondents, which range from 60 thousand in election

years to 20 thousand in off years. The ANES, on the other hand, is only administered in presidential election years and contains a much smaller number of respondents. However, the ANES spans a much more extended period (going back to 1948) and includes a more expansive battery of policy questions, which allows me to tease out why education has become such an important determinant of political attitudes and behaviors

In the aggregate level analysis, I examine the relationship between county demographics, including the percentage of the county's adult population that holds a college diploma and presidential voting patterns. First, I obtain county-level demographic data from the US Census. The Census's American Community Survey releases yearly estimates of the percentage of each county's population that holds a college degree and a host of other demographic variables such as racial composition, median income, and poverty. Second, I obtain county-level election results for 2000-2016 from MIT's Election and Data Science Lab. The 2020 results were hand collected by the author.

2.1 Individual-Level Analytic Approach

I theorize that education has become a stronger predictor of political attitudes and behaviors. To demonstrate this point empirically, I assess how public opinion varies across educational levels and then determine how the relationship between educational attainment and partisanship has evolved. I begin with a simple model that uses the standard 7-point measure of partisanship as the dependent variable, and educational attainment is the independent variable. Partisanship is a longstanding psychological attachment to a political party (Campbell et al. 1960). Some even go so far as to describe partisanship as a standalone group identity (Green, Palmquist, and Shickler 2002). Next, I measure educational attainment as whether someone has a college degree or not. In addition, I include controls for age, race, religion, income, gender, and union membership. I

also include year fixed effects. Finally, I interact educational attainment with year to test whether the impact of education has increased in recent years. Equation 1 displays the core theoretical model.

Equation 1:

In addition, I also assess how holding advanced educational credentials affects presidential and congressional vote choice, which are more variable behavioral manifestations of partisan attachments. Here, the theoretical equation is nearly identical, only I add party identification as an additional control variable and use Democratic vote choice (1/0) as the dependent variable. I specify this vote choice model as a logit.

The next step is to establish how education shapes partisanship. As I mentioned, there is considerable evidence that social and cultural attitudes are essential predictors of partisanship and vote choice and have become more important in recent years. Moreover, there is evidence that education shapes several different policy and cultural attitudes and that these same attitudes have recently become more salient. Thus, there are many potential paths through which education could shape political attachments. I briefly explore these possibilities at the end of this section.

2.2 County-Level Analytic Approach

Individual-level changes aggregate up to influence macro-level outcomes. For example, the increasing importance of education at the individual level manifests in changing vote patterns at the county level. I expect that more highly educated counties have become more Democratic, while less educated counties have become more Republican. To model this, I use Democratic vote share as the dependent variable and the lagged percentage of the county's population with a Bachelor's degree or above as the independent variable. This specification tests whether a

county's level of education explains year-to-year changes in vote share. I also control for the previous Democratic vote share, the county's racial demographics, income, and urbanization. In addition, I also include controls for changes in these variables from time t-4 to time t. This setup helps distinguish between realignment effects (demographics stay the same but voting behavior changes) and compositional effects (voting behavior remains constant within groups, but the ratio of groups within counties changes). I outline the theoretical model below.

Equation 3

3.1 Individual-Level Analysis

I begin my analysis by regressing party identification (1-7 scale, with seven being Strong Republican) on a binary measure of education (B.A./no B.A.), a battery of demographic control variables, and year dummy variables. I also interact education with the year variables to account for the possibility that educational credentials have become more powerful determinants of partisanship. These regression tables are long, so instead of the tables, I present the substantive results in figure 2 and the corresponding regression tables in the appendix (Tables A1 and A2). Here, I display the effect of holding a Bachelor's degree on partisanship by year. The left-hand panels contain the results of the CES analyses (2006-2020), while the right-hand panels display the ANES results (presidential years spanning 1972-2016). The top panels contain the results from the complete sample analysis. The bottom panels are the results when I restrict the analysis to White respondents only.

As the figures clarify, holding a Bachelor's degree has become a stronger predictor of Democratic partisanship. Both the CES and ANES analyses speak to this fact in different ways. The CES analysis reveals that holding a Bachelor's degree has been a significant predictor of Democratic partisanship in each year since 2008. Perhaps more importantly, the effect of holding

a degree increased markedly starting in 2014. The impact of having a college degree on Democratic partisanship doubled between 2013 and 2020, with degree holders being nearly .75 points more Democratic along the seven-point scale. The relationship between party identification and educational attainment is similar in the entire sample and White subsample analyses. However, the association is marginally stronger when I restrict the analysis to Whites.

The ANES models expand the scope of the analysis backward in time a great deal, though I estimate these effects with less precision than the CES estimates due to the much smaller sample sizes. However, the extended timeframe highlights some interesting patterns not apparent in the CES data. Namely, The ANES analysis reveals the direction of the relationship between holding a college diploma and partisanship has reversed over the past 40 years. In 1972, holding a college degree was a significant predictor of Republican partisanship (reflected by the positive coefficient), confirming the assertions of some older works on political behavior (e.g., Flanigan and Zingale, 1998). This coefficient generally remained positive through the 1990s (though not significantly different than zero) before slightly drifting towards the Democrats post-2000. The most significant jump occurred in 2016, when degree holders' partisanship became much more Democratic, even when controlling for other variables. This finding lines up with a great deal of popular commentary that argues Donald Trump's presidency helped trigger an education-based realignment.

Figure 2: The Relationship between Holding a College Degree and Party Identification in the CES (2006-2020) and ANES (1972-2016) Data
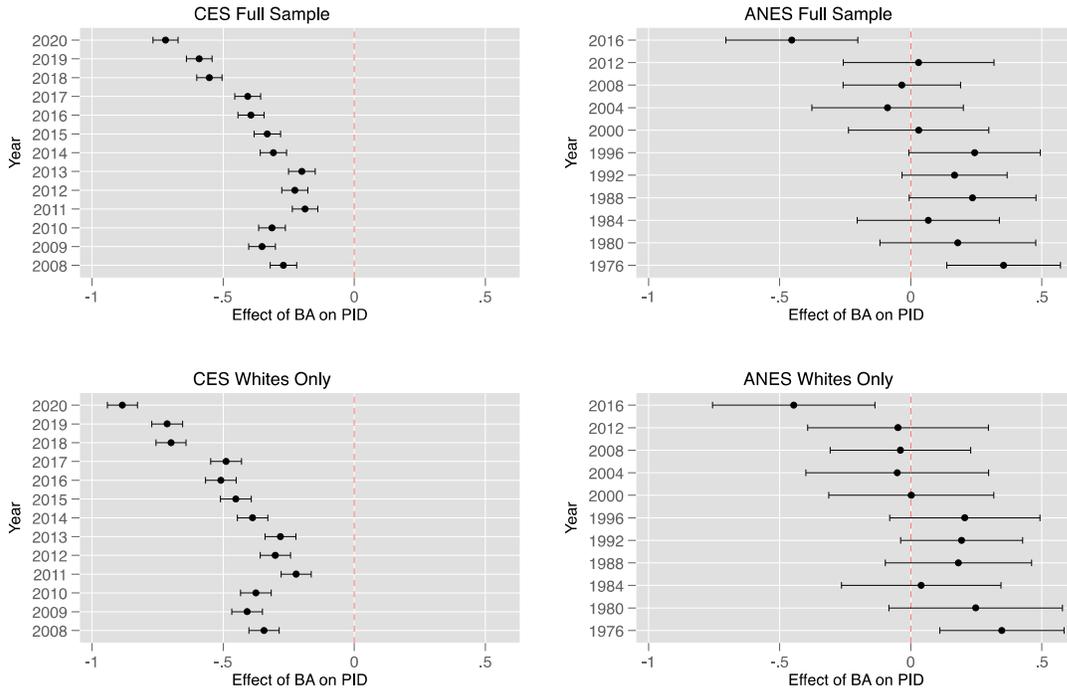
The next question whether this realignment extends to vote choice? I address this question in Figure 3 (Appendix Tables A3 and A4 contain the full results). The results in Figure 3 might seem counterintuitive at first blush. The CES results reveal that holding a Bachelor's degree is associated with a roughly 5 percent increase in the odds of voting for the Democratic candidate in presidential elections. The effect is consistent across the four presidential elections included in the CES sample. However, it is crucial to keep in mind that this is while controlling for partisanship and a host of other variables. The ANES results are more variable, which perhaps is not surprising given the much broader timeframe. Here, the relationship between degree-holding and Democratic vote choice grows stronger over time. Like with partisanship, we saw the most potent effect in 2016. These findings raise the question, "relative to partisanship, why do we not see a similar pattern in the CES data and a weaker pattern in the ANES when it comes to vote

choice?" The answer to this question is these effects are while controlling for partisanship, which mediates the relationship between education and vote choice.

Figure 3: The Relationship between Holding a College Degree and Presidential Vote Choice in the CES (2006-2020) and ANES (1972-2016) Data
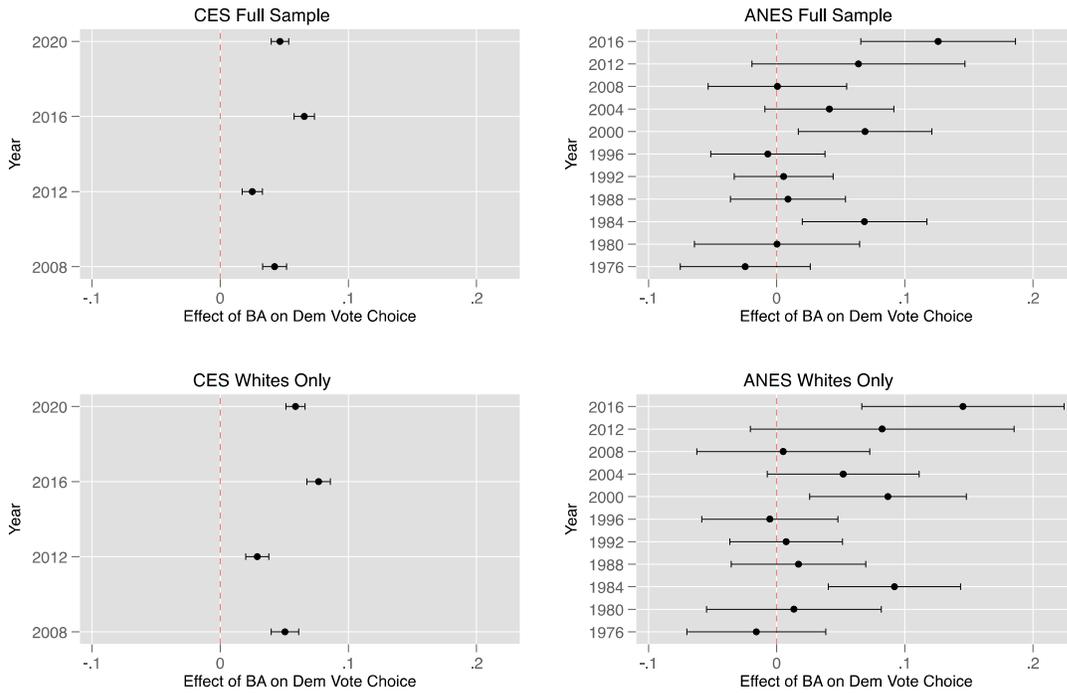
This mediation effect stems from the fact that education levels shape partisanship, and both partisanship and educational attainment shape vote choice. This mediation implies that we only see the partial effect of education when controlling for partisanship because education's effects travel indirectly through partisanship. In the supplemental appendix, I present a formal mediation analysis that demonstrates this point empirically. Figure 2 implies the total and indirect effect of education on vote choice increases over time. In the 2016 ANES, the indirect impact of holding a degree is just as large as the direct effect. This indirect effect means the total effect of education on vote choice is twice as large as the coefficient depicted in the top right panel of Figure 2.

Moreover, in the 2020 CES data, the indirect effect of holding a BA is *twice* as large as the direct effect. From a substantive perspective, these shifts in party identification suggest a long-term and still unfolding realignment of the American party coalitions. Many scholars regard partisanship as the "unmoved mover" in the study of political behavior (Johnston 2006). Shifts in party ID rarely occur, and in the event they do change, these changes are enduring (Campbell et al. 1960; Green, Palmquist and Shickler 2002). Partisanship is increasingly tracking educational attainment, suggesting this is not a short-term perturbation brought on by Donald Trump's unique candidacy and presidency. The CES results suggest this realignment was afoot before Trump ran, which is another indicator of its transformative nature. Overall, these results provide robust support for H1.

3.2 County-Level Analysis

Educational attainment has become a stronger predictor of partisanship and vote choice on the individual level. Thus, it stands to reason that these changes at the individual level have reshaped voting patterns in the aggregate. This section evaluates the relationship between educational attainment on the county level and Democratic vote share in presidential elections between 2000 and 2020. I assess whether a county's level of educational attainment explains changes in its Democratic vote share from one election to the next. The electorate is realigning along educational lines. I find evidence of this realignment at both the individual and aggregate levels.

In Table 2, I present the results of an OLS regression analysis. The dependent variable is the change in the Democratic vote percentage between time t and t-4 (the previous presidential election). I utilize several demographic measures as independent variables. I include the Asian, Black, and Latino percentages of the county's population lagged four years, in addition to the lagged percentage with a Bachelor's or above. We have seen quite a lot of change in the average

American county's racial, ethnic, and educational makeup between 2000 and 2020. The (population-weighted) average county has moved from 24 percent of the population with a BA to 34 percent—a ten-point increase. This increase raises the possibility that not only is education becoming a more powerful predictor of behavior, but that the growth of the population with a degree is reshaping politics. College graduates hold a distinct set of positions, *and* there are many more of them than there were 20 years ago. This increase is, perhaps, an under-emphasized part of the changes we have seen in contemporary American politics. Likewise, the Asian percentage has increased from 3.8 to 6.2%, while the Latino percentage has grown from 12.6 to 18.3%. The African American percentage grew just slightly, moving from 12.7 to 13.4%.

In addition, I include median household income lagged four years. I also include the percentage change in all of these variables from t-4 to t to assess whether election-to-election changes in demographics drive changes in vote shares. Likewise, to control for the urban-rural divide, which has been growing in recent years (Gimpel et al. 2020), I use the county's score on the Census's 10-point urban-rural continuum scale as an independent variable. A score of one is the most urban while ten is the most rural. I do not include the change in this urban-rural continuum variable because there is little year-to-year change. Lastly, I include the Democratic vote percentage from the most recent election (i.e., the lagged DV) to control for any variation in counties' political preferences not reflected by demographics.

The results in table 2 demonstrate that, while a county's previous Democratic vote share a strong predictor of its current vote share (B=.87), the percent of a county's population with a Bachelor's degree was the single strongest predictor of pro-Democratic vote shifts from one election to the next. The coefficient (B=.21) on Bachelor's percentage demonstrates that we expect a roughly 1.05-percentage point increase in county-level Democratic vote share from one

election to the next for every five percent of the county's population with a Bachelor's degree. This shift is despite the fact I am controlling for the previous Democratic vote share—meaning highly educated counties are becoming more Democratic—even if they were heavily Democratic two decades ago. One point that deserves mention is how different the heavily populated urban hubs are from the 'average' county. Across the data, in the median county, 17.54% of the population holds a college degree. However, when I weight by county population (as I do in the regression model), the median jumps to 28.9%. This discrepancy shows just how different the large, highly educated urban counties are from most counties in the country. As numerous observers have noted, the Democratic Party is winning a smaller and smaller share of counties despite winning a consistent (if not growing) share of the vote in national elections. One common theme across recent elections is that the Democrats win the large, educated urban areas while the Republicans win everything else.

This pro-Democratic shift in America's more educated counties is counteracted to a degree by the relationship between median income and changes in Democratic vote shares, which cut in the opposite direction. Higher median income levels are associated with shifts towards the Republican Party from one election to the next (B=.03). However, the effect is not as large as what we observe with education, even when I account for the differences in metrics. Unsurprisingly, the lagged Black and Latino populations are positively associated with shifts towards the Democratic Party. Finally, the urban/rural continuum variable exerts a significant and powerful effect on vote shares (B=-.13). This coefficient suggests that counties with high scores on the urban-rural index (i.e., rural counties) have shifted towards the Republican Party, even when controlling for their prior vote share.

Overall, the lagged demographic variables explain more variation in election-to-election vote swings than the variables that capture changes between t-4 and t. This finding is likely because demographics do not change rapidly, and four years is a relatively short time when demographic shifts are concerned. Demographic groups behave differently over time, which explains most of the changes in vote shares. Still, changes in the size of the African American population are associated with pro-Democratic vote shifts. Here, the size of the effect size is relatively large (B=.5), though the median four-year change is minimal (.09). Conversely, increases in median income are associated with pro-Republican shifts in vote share, while decreases are related to pro-Democratic shifts (B=-.07).

**Table 2: Change in County-Level Democratic Vote Share Regressed on County Level %
with Bachelor's Degree and Demographics, 2000-2020**

| *VARIABLES*	
Dem% t-4	0.87*
	(0.01)
BA Δ	-0.02
	(0.08)
Median Income Δ	-0.07*
	(0.02)
% Asian Δ	-0.00
	(0.23)
% Black Δ	0.50*
	(0.07)
% Latino Δ	0.07
	(0.10)
% BA t-4	0.21*
	(0.01)
Median Income t-4	-0.03*
	(0.01)
% Asian t-4	0.03
	(0.02)
% Black t-4	0.13*
	(0.01)
% Latino t-4	0.06*
	(0.01)
Urban-Rural Continuum	-0.13*
	(0.02)
State Fixed Effects	Yes
Year Fixed Effects	Yes
Constant	-2.81*
	(0.35)
Observations	15,562
R-squared	0.96

*Standard Errors in Parentheses * p<.05*

It helps to look at a graph to get a complete sense of just how much the relationship between

county-level educational attainment and Democratic vote share has changed over the last 20

years. Figure 4 depicts the relationship between the two variables in each of the six most recent

elections. The size of the circles represents each county's population size. As the figure makes clear, the strength of the relationship has strengthened a great deal. The slope of the population-weighted bivariate regression line was .32 in 2000. The r^2 was .06. By 2020, the coefficient had increased to .88, while the r2 had risen to .38. The percentage of a county's population with a Bachelor's degree explains a great deal about how the county votes in 2020. The changes in aggregate reflect shifts in behavior at the individual level—counties have realigned along educational lines.

Figure 4: The Relationship between the % of a County's Population with a Bachelor's Degree and Democratic Presidential Vote Share, 2000-2020
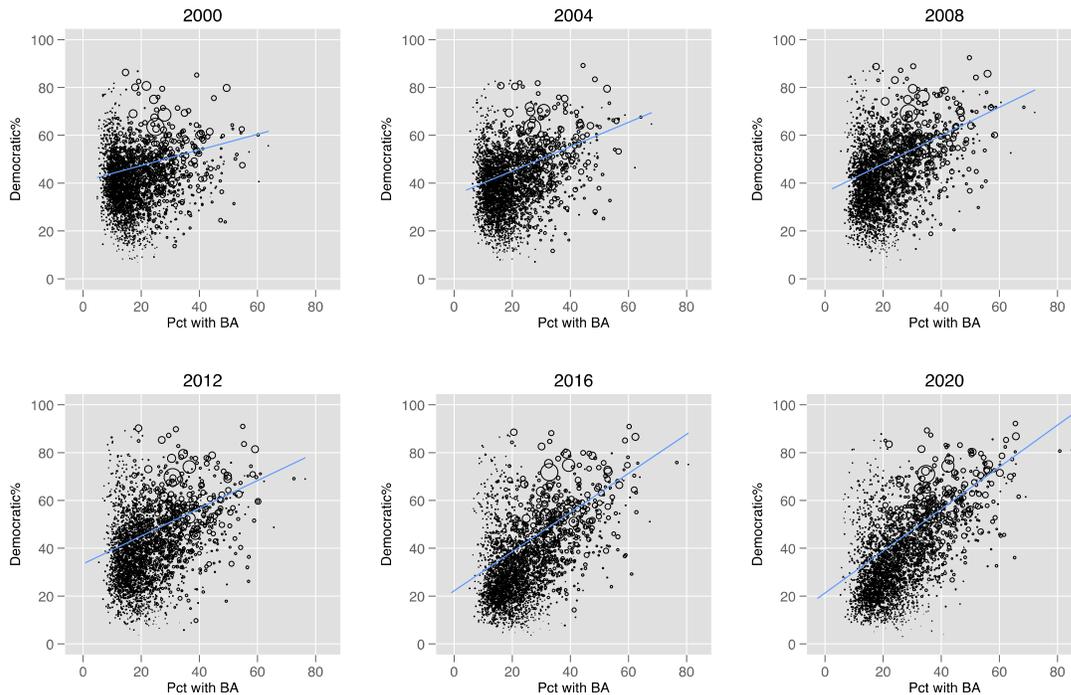

3.3 County Level Context and Individual Level Behavior

The previous two sections demonstrated that education is becoming a stronger predictor of individual-level partisanship and vote choice, and county-level vote trends reflect these changes in preferences. In this section, I assess whether the relationship between educational attainment and partisanship is context-dependent. Does living around many other college graduates amplify

the effect of holding a degree on attitudes and behavior? There is considerable evidence that

education reinforces a set of liberal norms (e.g., free expression, tolerance of diversity, support

for gay rights, etc.). It is possible that living in an area comprised of many college graduates

works to emphasize these norms. Another way of thinking about this is that the environment may

condition the effect of education on attitudes.

I put this possibility to the test by incorporating county-level data into my individual-

level models. Figure 5 displays the results (corresponding regression table in appendix A6).

Here, I replicate the CES models from figures 2 and 3. Still, I include an additional interaction

term where I interact educational attainment (Bachelor's degree 1/0) with the percentage of the

county's population with a Bachelor's degree or above.[5] Again, I present the corresponding

regression table in the supplemental appendix. This interaction term assesses whether the effect

of educational attainment on the individual level is conditional upon the overall level of

educational attainment where they live. This relationship is the crux of H3.

**Figure 5: The Marginal Effect of Individual-Level Educational Attainment on Whites'
Party Identification across varying levels of County-Level Educational Attainment**

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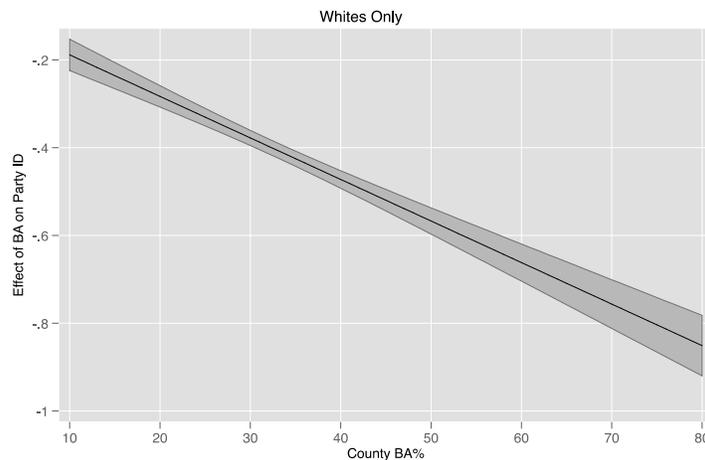
[5] I can only replicate the CES models here because the ANES does not contain information on what
county respondents live in, therefore, it is not possible to link the county with the individual level data.

As the figure clarifies, educational attainment at the county level strongly conditions the effect of education on partisanship at the individual level. Holding a Bachelor's degree is associated with stronger Democratic partisanship in counties where a more significant proportion of the population has a Bachelor's degree. For example, the effect of holding a degree jumps from .2 in counties where 10 percent of the population has a degree to just over .8 in counties where 80 percent of the population has a BA (the maximum observed value in the dataset). The effect is even more extreme if I examine 2016-2020 in isolation. There are a wide variety of mechanisms that could contribute to this relationship. High densities of college-educated people likely reinforce a similar set of values on race relations, diversity, immigration, and the broader set of 'culture war' attitudes salient in contemporary politics. Overall, the results of this analysis provide support for H3.

This interaction between individual-level degree-holding and county-level educational attainment helps explain many patterns we have seen over the past decades. The proportion of the population with a college degree has increased markedly. People with degrees, especially people with postsecondary degrees, increasingly live in large metropolitan areas. The fact that college graduates are more likely to live around other college graduates, combined with the Republican Party's recent populist turn, might explain their political realignment.

4.1 Discussion

Three coincident trends are reshaping the American electorate: 1.) a growing percentage of the population has a college degree 2.) a higher rate of college graduates identify as Democratic partisans 3.) degree holders are increasingly concentrated in the large metropolitan areas. The movement of college graduates, especially white college graduates, towards the Democratic Party in recent years serves as a counterweight to another significant trend: the movement of

"working class" Whites (often defined as Whites without a college degree) into the Republican Party (Zingher 2019). The conventional wisdom is that working-class Whites are socially and racially conservative. This conservatism led towards the Republican Party as social and racial issues came to the political forefront. This Republican shift was even though many working-class Whites still had common ground with the Democrats regarding economic policy. My analysis shows that the Republican focus of social conservatism might have attracted working-class White voters, but it also helped to alienate socially moderate to liberate White college graduates. Trump's nomination and subsequent presidency worked to exacerbate Republican losses further. The movement of "working class" Whites into the Republican Party and the subsequent shift of college graduates into the Democratic coalition has split the electorate along educational lines.

The recent split between college-educated and non-college-educated Americans reflects a worldwide trend. Across the globe, educated citizens have moved to the left. A recent study by The Economist found this trend was near-universal in Western democracies.[6] As Thomas Piketty and others have noted, this divide along educational lines has opened the door for right-wing populism. Electorates have sorted based on personality traits like authoritarianism and xenophobia. Authoritarian personality traits were once uncorrelated with partisanship (Hetherington and Weiler 2009). People with authoritarian personality traits coalesced into a single party, which provides a convenient vehicle for authoritarian movements. As a result, we have seen a rise in right-wing populism in countries across the globe, with very few exceptions. The United States is perhaps particularly prone to right-wing populist movements given its unique electoral institutions that severely restrict the number of viable political parties.

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[6] https://www.economist.com/graphic-detail/2021/05/29/educated-voters-leftward-shift-is-surprisingly-old-and-international

Regardless, the diploma divide is a critical component of contemporary politics, both in the United States and abroad.

These results present some potentially troubling implications for higher education in the United States from a broader perspective. As a series of recent Pew surveys have noted, the American public's confidence in higher education has declined in recent years.[7] Republicans' decreasing confidence in colleges and universities is fueling this decline. The fact that partisanship and educational attainment correlate so strongly are politicizing perceptions of colleges and universities. As Hofstader (1963) and others have pointed out, politicians attacking academics, intellectuals, and universities as effete "egg heads" is nothing new. What is new, perhaps, is the way these criticisms of higher education break along partisan lines. The elite consensus that college and universities exert a positive effect on society is breaking down as Republican elites are increasingly willing to attack professors and institutions of higher education more generally. Republican partisans in the electorate are receiving these cues. Higher education, much of which is under the purview of state legislatures, will be at greater risk as a result.

Works Cited

Aldy, Joseph. 2017. Real World Headwinds for Trump Climate Change Policy, *Bulletin of the Atomic Scientists*, 73(6): 376-381.

ANES. 2018. Time Series Cumulative Data File, 1948-2016 (December 8th, 2018 update). Ann Arbor, Michigan, and Palo Alto, CA: The University of Michigan and Stanford University.

Anoll, Allison. 2018. What Makes a Good Neighbor? Race, Place, and Norms of Political Participation, *American Political Science Review*, 112(3): 494-508.

Baum, Sandy, Jennifer Ma & Kathleen Payea. 2013. *Education Pays 2013: The Benefits of Higher Education for Individuals and Society*. The College Board

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[7] https://www.pewresearch.org/social-trends/2019/08/19/the-growing-partisan-divide-in-views-of-higher-education-2/

Bekhuis, Hidde, Marcel Lubbers & Maykel Verkuyten. 2014. How Education Moderates the Relation between Globalization and Nationalist Attitudes, *International Journal of Public Opinion Research*, 26(4): 487-500.

Bloome, Deidre, Shauna Dyer & Xiang Zhou. 2018. Educational Inequality, Educational Expansion, and Intergenerational Income Persistence in the United States, *American Sociological Review*, 83(6): 1215-1253.

Bobo, Lawrence & Frederick Licari. 1989. Education and Political Tolerance: Testing the Effects of Cognitive Sophistication and Target Group Affect, *Public Opinion Quarterly*, 53(3): 285-308.

Burden, Barry. 2009. The Dynamic Effects of Education on Voter Turnout, *Electoral Studies*, 28: 540-549.

Campbell, Agnus, Philip E. Converse, Warren E. Miller, & Donald Stokes. 1960. *The American Voter (Unabridged Edition)*. Chicago, IL: University of Chicago Press.

Castle, Jeremy. 2019. New Fronts in the Culture Wars? Religion, Partisanship, and Polarization on Religious Liberty and Transgender Rights in the United States, *American Politics Research*, 47(3): 650-679.

Cavaille, Charlotte & John Marshall. 2019. Education and Anti-Immigration Attitudes: Evidence from Compulsory Schooling Reforms across Western Europe, *American Political Science Review*, 113(1): 254-263.

Eichengreen, Barry, Cevat Giray Aksoy & Orkun Saka. 2021. Revenge of the Experts: Will COVID-19 Renew or Diminish Public Trust in Science? *Journal of Public Economics*, 193: 104343.

Enos, Ryan D. 2016. What the Demolition of Public Housing Teaches Us about the Impact of Racial Threat on Political Behavior, *American Journal of Political Science*, 60(1): 123-142.

Flanigan, William & Nancy Zingale. 1998. *The Political Behavior of the American Electorate, 9th Edition*. Washington, DC: Congressional Quarterly Press.

Gimpel, James, Nathan Lovin, Bryant Moy & Andrew Reeves. 2020. The Urban-Rural Gulf in American Political Behavior, *Political Behavior*, 42: 1343-1368.

Green, Jon & Sean McElwee. 2019. The Differential Effects of Economic Conditions and Racial Attitudes in the Election of Donald Trump, *Perspectives of Politics*, 17(2): 358-379.

Green, Donald P, Bradley Palmquist & Eric Shickler, 2002. *Partisan Hearts and Minds: Political Parties and the Social Identities of Voters*. New Haven, CT: Yale University Press.

Hainmueller, Jens & Michael Hiscox. 2006. Learning to Love Globalization: Education and Individual Attitudes Toward International Trade, *International Organization*, 60(2): 469-498.

Hetherington, Marc & Jonathan Weiler. 2009. *Authoritarianism & Polarization in American Politics*. New York, NY: Oxford University Press.

Hillygus, Sunshine. 2005. The Missing Link: Exploring the Relationship between Higher Education and Political Engagement, *Political Behavior*, 27(1): 25-46

Hofstadter, Richard. 1963. *Anti-Intellectualism in American Life*. New York, NY: Vintage Books.

Hornsey, Matthew, Matthew Finlayson, Gabrielle Chatwood & Christopher Begeny. 2020. Donald Trump and Vaccination: The effect of Political Identity, Conspiracist Ideation and Presidential Tweets on Vaccine Hesitancy, *Journal of Experimental Social Psychology*, 88: 103947.

Horowitz, Donald L. 2000. *Ethnic Groups in Conflict*. Los Angeles, CA: University of California Press.

Kam, Cindy & Carl Palmer. 2008. Reconsidering the Effects of Education on Political Participation, *Journal of Politics*, 70(3): 612-631.

Layman, Geoffrey. 2001. *The Great Divide: Religious and Cultural Conflict in American Party Politics*. New York, NY: Columbia University Press.

Leighley, Jan & Jonathan Nagler. 2014. *Who Votes Now? Demographics, Issues, Inequality, and Turnout in the United States*. Princeton, NJ: Princeton University Press.

Lemieux, Thomas. 2006. Postsecondary Education and Increasing Wage Inequality, *American Economic Review*, 96(2): 195-199.

Lipset, Martin Seymour. 1959. Democracy and Working-Class Authoritarianism. *American Sociological Review*, 24(4): 482-501.

Luskin, Robert. 1990. Explaining Political Sophistication, *Political Behavior*, 12: 331-361.

Marshall, John. 2019. The Anti-Democrat Diploma: How High School Education Decreases Support for the Democratic Party, *American Journal of Political Science*, 63(10: 67-83.

Maxwell, Rahsaan. 2019. Cosmopolitan Immigration Attitudes in Large European Cities: Contextual or Compositional Effects, *American Political Science Review*, 113(2): 456-474.

McPhetres, Jonathon & Miron Zuckerman. 2018. Religiosity Predicts Negative Attitudes Towards Science and Lower Levels of Science Literacy, *PLoS ONE* 13(11: e207125.

Mendelberg, Tali, Katherine McCabe & Adam Thal. 2017. College Socialization and the Economic Views of Affluent Americans, *American Journal of Political Science*, 61(3): 606-623.

Mocan, Naci & Luiza Pogorelova. 2017. Compulsory Schooling Laws and Formation of Beliefs: Education, Religion and Superstition, *Journal of Economic Behavior & Organization,* 142: 5-9-539.

Motta, Matthew. 2018. The Dynamics and Political Implications of Anti-Intellectualism in the United States, *American Politics Research*, 46(3): 465-498.

Mutz, Diana. 2018. Status Threat, not Economic Hardship, Explains the 2016 Presidential Vote, *Proceedings of the National Academy of Sciences*, 115(19): E4330-E4339.

Norris, Pippa. 2004. *Electoral Engineering: Voting Rules and Political Behavior*. New York, NY: Cambridge University Press.

Norris, Pippa & Ronald Inglehart. 2019. *Cultural Backlash*. New York, NY: Cambridge University Press.

Oliver, J. Eric & Wendy M. Rahn. 2016. Rise of the Trumpenvolk: Populism in the 2016 Election, *ANNALS, AAPSS*, 667: 189-206.

Parker, Christopher and Matt Barreto. 2014. *Change they Can't Believe in: The Tea Party and Reactionary Politics in America*. Princeton, NJ: Princeton.

Reny, Tyler, Loren Collingwood & Ali Valenzuela. 2019. Vote Switching in the 2016 Election: How Racial and Immigration Attitudes, Not Economics, Explain Shifts in White Voting, *Public Opinion Quarterly*, 83(1): 91-113.

Rodden, Jonathan. 2019. *Why Cities Lose: The Deep Roots of the Urban-Rural Political Divide*. New York, NY: Basic Books.

Solobewska, Maria & Robert Ford. 2020. *Brexitland*. New York, NY: Cambridge University Press.

Stonecash, Jeffrey. 2000. *Class and Party in American Politics*. Boulder, CO: Westview Press.

Valentino, Nicholas, Fabian Guy Neuner & L. Matthew Vandenbroek. 2018. The Changing Norms of Racial Political Rhetoric and the End of Racial Priming, *Journal of Politics*, 80(3): 757-771.

Wolfinger, Raymond and Steven Rosenstone. 1980. *Who Votes?* New Haven, CT: Yale University Press.

Wronski, Julie, Alexa Bankert, Karyn Amira, April Johnson, & Lindsey Levitan. 2018. A Tale of Two Democrats: How Authoritarianism Divides the Democratic Party, *Journal of Politics*, 80(4): 1384-1388.

Zingher, Joshua N. and Michael E Flynn. 2018. From on High: The Effect of Elite Polarization on Mass Level Attitudes and Behaviors, 1972-2012, *British Journal of Political Science*, 48(1): 23-45.

Zingher, Joshua N. and Michael E Flynn. 2019. Does Polarization Affect Even the Inattentive? Assessing the Relationship Between Political Sophistication, Policy Orientations, and Elite Cues, *Electoral Studies*, 57: 131-142.

Zingher, Joshua N. 2019. An Analysis of the Changing Social Bases of America's Political Parties: Group Support in the 2012 and 2016 Presidential Elections, *Electoral Studies,* 60: 102042.

Zingher, Joshua N. 2020. On the Measurement of Social Class and its Role in Shaping White Vote Choice in the 2016 US Presidential Election, *Electoral Studies*, 64: 102119.