Elite Education and Legislative Behavior in the U.S. Congress♠

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Abstract

About a third of the U.S. Congress is comprised of legislators who attended elite colleges, universities, and law schools. We study how legislative behaviors within this group have differed from those of other legislators between 1973 and 2014. We find that, both among Republicans and Democrats, both in the House and the Senate, those who acquired degrees from elite educational institutions tend to be more liberal than others in their respective parties. They also tend to put forward more substantively significant legislative proposals at a greater rate. These elite-educated lawmakers are more successful with these proposals when Democrats control Congress, and when these lawmakers are embedded in larger networks of similarly educated legislators. Such proposals do not fare as well, however, given Republican control of Congress, or when legislators are situated in smaller networks, such as those found in the Senate. This research suggests that there is still something of a "power elite" within the congressional Democratic Party. In contrast, ineffective and out of step with their party, elite-educated Republicans are disappearing from Congress.

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> *We seek to train doers … achievers, men whose successful careers are much subservient to the public good. We are not interested here in producing languid observers of the world, mere spectators in the game of life, or fastidious critics of other men's labors.*
>
> –Charles William Eliot, President of Harvard University (1869-1909)[1]

> *I'd rather entrust the government of the United States to the first 400 people listed in the Boston telephone directory than to the faculty of Harvard University.*
>
> –William F. Buckley, Jr.

As voters head to the polls before any election, they draw on a variety of implicit and explicit cues to form their judgments about the relative desirability of particular candidates. For voters who are motivated primarily by partisan considerations, knowing a candidate's party affiliation might be sufficient information with which to evaluate candidates. In contrast, for those voters who are motivated by ideological concerns, (perhaps) independent of party labels, a candidate's public declarations about his or her policy stances might be particularly important. Descriptive characteristics such as a candidate's race, gender, religion, and/or ethnicity can also all be used by voters to inform their beliefs about the likely qualities of different candidates (and how those qualities comport with voters' preferences).

Voters might also seek indicators of a candidate's likely competence, or potential quality as a legislator, upon which to base their judgments. Candidates who have previously served as incumbent members of Congress (for example) have well-established track records that can be pointed to as indicators of their likely competence as future legislators.[2] For those who have not served previously in Congress, however, somewhat noisier information might possibly be

[1] Quoted in Smith (1986, 29).

[2] Volden and Wiseman (2018) demonstrate, for example, that U.S. Representatives who were highly effective lawmakers in the House are likely to become more highly effective lawmakers in the U.S. Senate.

gleaned from the candidate's previous occupation, and other aspects of her professional background. While identifying the specific details of a candidate's background, such as the jobs that she has held, the educational degrees acquired, or the particular schools that she has attended, is relatively straightforward, the likely relationships between candidate backgrounds and subsequent qualities as legislators are less clear. Are doctors, for example, particularly effective at advancing health policy? Do lawyers make better legislators? Are there differences across legislators that correspond to where they went to college?

Political scientists remain interested in how electoral and governing successes might be linked to candidate characteristics, ranging from their race (Canon 1999, Cobb and Jenkins 2001, Hall 1996, Haynie 2001, Tate 2003, Whitby and Krause 2001), to their gender (Anzia and Berry 2011; Fox and Lawless 2004; Volden, Wiseman, and Wittmer 2013), to their working-class backgrounds (Carnes 2013, Carnes and Lupu 2016). While social scientists (e.g., Domhoff 1967, Mills 1956) have long noted another important characteristic common to America's "power elite" – their prestigious educational backgrounds – we know very little about how such backgrounds may influence legislative behavior, whether in terms of voting patterns or lawmaking effectiveness, and whether this relationship has changed over time. In contrast, beyond the political sphere, such high-level educational attainment has been linked to various occupations (Brint et al. 2020, Wai 2013, Wai 2014, Wai and Perina 2018) and wealth levels (e.g., Wai and Lincoln, 2016) in a variety of situations.

Building on this work, we seek to identify whether legislators who have acquired degrees from elite institutions differ in observable ways from their peers who have not acquired similar degrees. Conventional wisdom suggests that a variety of differences may arise. Conservatives, like William F. Buckley, Jr., quoted above, fear that those from Harvard and other elite

institutions may have liberal, pro-government views instilled in them from left-leaning faculty. Moreover, as "doers" and "achievers," those who attend institutions like President Eliot's Harvard, might be more active and effective as lawmakers; perhaps they are more likely to put forward grand reform proposals.

Drawing on four decades of data for all legislators who served in the House of Representatives and the Senate from 1973-2014, we find that elite education is quite common – between a third and a half of all lawmakers received degrees from the most prestigious and selective institutions. Consistent with Buckley's fears, such backgrounds are strongly correlated with more liberal ideological positions, both among Democrats and Republicans. Partisan differences extend to the legislative proposals that such lawmakers put forward and to their subsequent lawmaking successes. In both the House and the Senate, the proposals of elite-educated lawmakers fare better under Democratic control than under Republican control, perhaps due to differences across parties in the receptivity of their leaders to major liberal-leaning proposals. In the House, elite-educated Democrats tend to be highly effective lawmakers when in the majority party. In contrast, in the Senate, elite-educated Republicans significantly under-perform relative to their majority-party colleagues. Being both more effective and more closely aligned with their liberal bases, the number of elite-educated Democrats in Congress has remained high over the past half century. In contrast, being both less effective and ideologically out of step with their party's base, the number of elite-educated Republicans has declined precipitously over recent decades.

While our analysis does not allow us to speak definitively to the causal impact of the acquisition of degrees from highly selective educational institutions, our results provide strong evidence that legislators who have attended elite institutions are notably different than those who

have not, both in regards to ideology and legislative effectiveness. These differences appear to be linked to the types of proposals they put forth, and to the value of the elite-educated networks in which they find themselves. To the extent that voters are concerned about the relative lawmaking effectiveness and voting patterns of their elected officials, our results suggest that voters might be able to use legislators' (and candidates') educational backgrounds as one of the informative cues for their likely legislative effectiveness and voting behavior following their election to Congress.

How Might Elite-Educated Lawmakers Differ in Congress?

There are many reasons to expect that the political behaviors of legislators with elite-education backgrounds will differ from those of their colleagues. First, consider how ideological leanings have been linked to education. Opinion data among members of the mass public show somewhat complex and evolving relationships among education, partisanship, and ideological leanings (e.g., Bartels 2006, 2008). Several studies have suggested that voters who have completed higher levels of education, such as college degrees and beyond, are more politically engaged and knowledgeable than voters who have not acquired such high levels of education (e.g., Dee 2004; Milligan, Moretti, and Oreopoulos 2004).[3] Likewise, higher levels of education have been associated with greater social liberalness and tolerance among voters (e.g., Feldman and Johnston 2014; Kaufmann 2002; Nie, Junn, and Stehlik-Barry 1996). In contrast, Henry and Napier (2017) find greater favoritism for ideological in-group members among the college educated, an effect which is pronounced among liberal voters and which has been growing across recent decades.

[3] Kam and Palmer (2008), however, provide a nuanced exploration of the causal impact of advanced education on political participation.

Jacoby (1988) establishes that educational experiences provide the structure that help students develop their liberal-conservative thinking patterns. Henry and Napier (2017) find that such ideological structure in college is associated with more liberal views than conservative views, even controlling for other demographics. Some of this bias may be attributed to liberal leanings of professors at top colleges and universities (Gross 2013); and such ideological patterns link increasingly to partisanship. According to the Pew Research Center (2018), in 1994 college graduates leaned toward the Republican Party (54% were Republicans compared to 39% Democrats); but these percentages exactly reversed themselves by 2017. For those with post-graduate experience, 47% were Democrats in 1994 (compared to 45% Republicans), growing to 63% Democrats in 2017 (and only 31% were Republicans). These patterns are also reflected in partisan and ideological assessments of colleges and universities. Whereas 72% of Democrats hold a positive view of colleges and universities, only 36% of Republicans do – this gap expands to 79% among liberal Democrats down to 29% among conservative Republicans (Pew Research Center 2017).

Within Congress, the overwhelming majority of legislators have acquired (at least) a college degree. But there is substantial variance in the scope of their educational experiences, with many engaging in post-graduate work, such as law school. Moreover, there is notable variation in whether legislators acquired their degrees at elite institutions, such as the Ivy League or other prestigious and highly selective institutions, where their educational experience may have been quite different from that found elsewhere. Consistent with recent patterns among voters and the public at large, Tetlock (1983) finds that more educated U.S. Senators in the mid-20th century were more liberal than less-educated Senators, while also linking their ideology to

the complexity of their political arguments.[4] If we believe that the educational environment at elite institutions is qualitatively different—including likely more academically rigorous—than other institutions, then having attended an elite institution may be analogous to obtaining additional educational experience. Hence, applying these patterns, linking greater educational attainment with greater liberalism, to elite-educated members of Congress, we should see support for the following hypothesis:

> ***Elite Education and Liberalism Hypothesis***: Legislators who have acquired degrees from elite educational institutions will be more liberal than those legislators who have not acquired degrees from elite institutions.

Beyond their ideological leanings, there are reasons to expect that elite-educated members of Congress might perform differently in their lawmaking activities. Beginning with Hacker (1961), who identified the proportion of U.S. Senators who attended Ivy League universities and compared them to an analogous sample of private-sector company presidents, scholars (e.g., Wai 2013, 2014), have demonstrated how Representatives and Senators are drawn, disproportionately, from elite educational institutions (in comparison to the general populace). Such comparisons to leaders in other professions suggest possible differences in their performance within their chosen careers. For example, even within Fortune 500 CEOs, those with an elite education had higher incomes and worked in companies with higher gross revenues (Wai and Rindermann 2015); and elite education is highly concentrated among various groups of influential people in U.S. society, including business and law (Brint et al. 2020, Wai 2013), journalism (Wai and Perina 2018), and even among the incredibly wealthy (Wai and Lincoln 2016).

[4] Gift and Lastra-Anadón (2018) find that elite-educated politicians are viewed in a more favorable light by liberal voters than by conservative voters.

Within the context of political careers, Besley and Reynal-Querol (2011) argue that a candidate's educational attainment is a reasonable proxy for a candidate's "valence" characteristics, such as "honesty and competence," which might be valued by voters. Such an assumption provides a theoretical rationale for their finding that democracies tend to select more-educated leaders, in comparison to other political systems; as voters are likely taking cues from a candidate's level of education in casting their votes. Likewise, the postulated relationship between educational attainment and candidates' subsequent success finds some degree of empirical support in Besley, Montalvo, and Reynal-Querol (2011), who demonstrate that countries that have more-educated leaders also have higher rates of economic growth.

Building on our earlier conjecture, to the extent that admission to, attendance, and graduation from an elite educational institution might represent a more rigorous and value-added learning environment than a non-elite institution, the acquisition of a degree from an elite institution might serve as a meaningful proxy for a candidate's valence characteristics, such as competence or likely effectiveness. Alternatively, it might be the case that legislators who have attended elite institutions are able to leverage advantages from the networks that they cultivated while attending these schools (or post-graduation, through alumni networks), which would facilitate greater levels of lawmaking effectiveness (Battaglini, Leone Sciabolazza, and Patacchini 2020).[5] To the extent that such mechanisms hold, we should find support for the following hypothesis:

> ***Elite Education and Legislative Effectiveness Hypothesis***: Legislators who have acquired degrees from elite educational institutions will be more effective

[5] Given the wide body of evidence that points to how elite educational institutions produce individuals across numerous sectors of influence in U.S. society, it is plausible that attending these schools during one's formative years contributes to bonds and social capital with those who could contribute to one's professional success at later points in life—including in lawmaking activities.

lawmakers than those legislators who have not acquired degrees from elite institutions.

Although elite education could be associated with an overall more expansive and effective lawmaking portfolio, as this hypothesis suggests, there are also reasons to believe that the relationship between elite education and lawmaking effectiveness may be more complex. In many fields, elite educational backgrounds are only linked to high performance under particular conditions. For example, Dale and Kreuger (2002, 2014) have illustrated that elite education only influences one's long run earnings through a variety of selection effects. Additionally, within descriptive work on elite education and various high-end occupations (Brint et al. 2020, Wai 2013, Wai and Rindermann 2015), there is significant variance across sectors, suggesting that elite education may be more valuable in some areas relative to others (Rivera 2016).

With respect to lawmaking in Congress, the benefits from elite education may be conditional on a variety of institutional factors; and in the contemporary Congress, political parties offer the most noteworthy institutional structure through which elite educational backgrounds might influence lawmaking effectiveness. There are many reasons to believe that elite educational backgrounds may be differentially linked to effective lawmaking for Democrats and Republicans. First, over recent decades, the two parties have become increasingly polarized ideologically (e.g., McCarty, Poole, and Rosenthal 2016). Today, based on commonly used metrics (e.g., Poole and Rosenthal 1997) every Republican is ideologically more conservative than every Democrat in Congress. To the extent that Democrats are more receptive to liberal initiatives, and to the extent that elite-educated lawmakers put forward more liberal proposals, we might expect Democratic control of Congress to be associated with enhanced lawmaking effectiveness among such lawmakers.

Second, coupled with their more expansive view of the purpose and activities of government, Democrats tend to put forward (and be more supportive of) substantial policy changes, compared to the smaller changes that are advanced by Republicans (e.g., Volden and Wiseman 2014, 66-68). For example, of the 219 "landmark laws" (e.g., Mayhew 2005) produced by Congress between 1973 and 2012, 137 were proposed by Democrats, compared to only 82 by Republicans.[6] If the elite-educated "doers" and "achievers" put forth more substantial reform proposals, they would likely find a more receptive audience among Democrats. Third, networks of like-minded individuals tend to be very valuable in large institutions, including Congress (e.g., Fowler 2006). With the current larger communities of elite-educated lawmakers among Democrats, as highlighted below, Democratic control of Congress will feature more within-network partners to elite-educated lawmakers on average than what would obtain in Republican-controlled Congresses, perhaps giving them a lawmaking advantage. In combination, these sorts of considerations offer the basis for the following conditional hypothesis.

> ***Partisan Effects of Elite Education Hypothesis***: The effects of elite education on effective lawmaking will be more positive under Democratic control of Congress than under Republican control.

None of our hypotheses should be necessarily interpreted as proposing a causal relationship, such that the exposure to elite educational institutions yields effective liberal lawmakers. Rather, the effects could be based on much more complex processes and patterns. For example, the highly selective nature of elite colleges and universities may mean that we are exploring (and below detecting) a selection effect. Those who apply for, and who are admitted

[6] Based on calculations by authors from lists available from http://campuspress.yale.edu/davidmayhew/datasets-divided-we-govern/ and bill sponsorship data from www.congress.gov.

into these institutions may differ significantly in their "scholastic aptitude" (from the SAT's former meaning) in ways that impact likely success in numerous professions—from those who run large companies to those who legislate well. Alternatively, the skills that are attained in these educational environments may produce leaders who view the world through particular lenses, and who can effectively produce innovative proposals and build certain types of coalitions. Still another possibility arises from the networks of high achieving individuals to which those in their midst gain access in formative years, shaping both their ideological dispositions and their ability to advance policy ideas. To the extent that one of these possibilities is more plausible than another based on the data analysis below, we will be well-positioned to comment on likely causes, even beyond the general patterns suggested by our hypotheses.

Research Design

To explore our hypotheses, we require three key pieces of information – legislators' ideological preferences, their relative effectiveness as lawmakers upon assuming office, and their educational backgrounds – as well as data on many related aspects of policymaking in Congress. To measure a legislator's ideological preferences we employ Representatives' and Senators' DW-NOMINATE scores (i.e., Poole and Rosenthal 1997), as is standard in the legislative politics literature. While there may be debates as to whether DW-NOMINATE scores (or any roll-call based metric) captures a legislator's overall ideology, or her preferences over social or economic considerations, these scores are widely considered to be the most straightforward proxy of legislators' ideological preferences.

To measure a legislator's relative effectiveness as a lawmaker, we employ Volden and Wiseman's (2014) Legislative Effectiveness Scores, which draw on publicly-available data from congress.gov, the Library of Congress website, as the foundation of a summary metric that

captures a legislator's "proven ability to advance [her] agenda items through the legislative process and into law" (Volden and Wiseman 2014, 18). More specifically, Volden and Wiseman identified the sponsor of every public bill (H.R.) that was introduced into the U.S. House since the 93rd Congress (1973-74). For each Representative, they focused on five lawmaking stages: how many bills she sponsored in each two-year Congress, and how many of those bills received any action in committee, action beyond committee on the floor of the House, passed the House, and/or became a public law.

Each bill was categorized as being either a commemorative measure (C), a substantive bill (S), or a substantive and significant bill (SS).[7] Drawing on these fifteen different bill-level indicators (three levels of significance across five lawmaking stages), a *Legislative Effectiveness Score* (LES) was calculated for each Representative, capturing her relative success (in comparison to other Representatives) at advancing her sponsored bills through the legislative process in a given Congress.[8] Volden and Wiseman (2018) use a similar approach to calculate Legislative Effectiveness Scores for each U.S. Senator. While fairly comprehensive and increasingly used by scholars, it is important to note that the LES only captures positive lawmaking activities, leaving aside obstruction as well as non-lawmaking activities such as constituency service or oversight.

Finally, to measure whether a legislator acquired a degree from an *elite* institution, we begin with the coding protocol used by Wai (2013) in his study of the elite educational backgrounds of a number of American groups of high achievement and leadership. After

[7] As described in detail in Volden and Wiseman (2014, 19-22), bills were categorized as substantive and significant if they had been the focus of an end-of-the-year write-up in the *Congressional Quarterly Almanac*, and they were categorized as commemorative if they satisfied one of several criteria, such as providing for a renaming, commemoration, and the like.

[8] Legislative Effectiveness Scores are normalized to take an average value of "1" in each Congress to facilitate easy inter-legislator comparisons in a given Congress.

collecting data on all universities, graduate schools, and professional schools that U.S. Representatives and Senators attended, Wai designated an educational institution as being *elite* if its matriculated students scored among the top 1% in the relevant standardized test required for admission. More specifically, an undergraduate institution was designated *elite* if the median combined SAT Critical Reading and Math score of the undergraduate student body was 1400 or higher, as identified in the 2013 *U.S. News and World Report Rankings*.[9] A business school was designated as being *elite* if it was among the top 12 business schools, as ranked by average GMAT test scores among its student body; and a similar filter was applied to identify the twelve *elite* law schools (considering LSAT scores). Finally, Wai identified a graduate program (e.g., MA, Ph.D.) as being elite if it was housed at one of the 21 elite research universities (as determined by their undergraduate SAT scores).

The Wai approach has many attractive features for the purposes of our analysis. Most notably, the designation of elite status based on average or median test scores is particularly appealing, given that we seek to identify the relative competitiveness of an academic environment. That said, the Wai sample has its shortcomings, as well. As explicated above, Wai identifies a (non-professional school) graduate program as being elite if it is housed at an elite university. Such a coding protocol has the possibility of missing extremely competitive programs that are housed at non-elite universities. Likewise, Wai's coding protocol might unintentionally give elite credit to relatively non-competitive graduate programs housed at elite universities. (However, the LSAT and GMAT protocols mean that this is not a problem for law schools and business schools, which are commonly attended by lawmakers.)

[9] For those schools that only reported ACT composites, those scores were translated to SAT composites by employing a concordance table.

The most notable potential concern with Wai's coding protocol is that it is based on schools' test scores as reported in the 2013 *U.S. News and World Report* college rankings issue; and similar rankings are not identified for previous years (or decades). Hence, if the schools that had median SAT (math + verbal) scores above 1400 in 2013 were (notably) different from a similar sample that would be obtained from a consideration of schools in the 1970s, for example, then one might question the appropriateness of using the same sample of elite schools across the entire time period of analysis. This concern is particularly relevant given that most of the legislators in the sample attended their universities and graduate/professional schools several decades before the 2013 rankings were calculated by Wai.[10]

Rather than rely solely on Wai's coding protocol, then, we draw on a wider range of data about schools to generate our metric of elite educational institutions. More specifically, we identified every college and university that was ranked within the "top 20" of *U.S. News and World Report* rankings between 1987-2009; and we coded an undergraduate institution as being "elite" if it was ranked within the "top 20" for at least 75% of the rankings over this time period.[11] To identify whether a law school or business school was an elite institution, we coded a law school as "elite" if it was ranked within the top 20 law schools according to *U.S. News* at least 75% of the time between 1987-2003; and a business school was coded as "elite" if it was ranked within the top 20 business schools according to *U.S. News* at least 75% of the time between 1991-2009.[12] Combining these data, we code a Representative or Senator as having attended an elite educational institution if she attended an elite undergraduate or graduate

[10] Wai is sensitive to this concern, though he notes that "there has been relatively little shift in rank order over time among the very top schools" (2013, footnote 3; also see Cole, 2009, who argues that it is early first mover and cumulative advantage that has allowed certain elite institutions to maintain their lead in rankings and influence).
[11] The lone exception is 2006, as we have thus far been unable to acquire data from *U.S. News and World Report* on its college rankings in that year.
[12] *U.S. News and World Report* did not rank business schools in the 1980s.

institution, or an elite law school or business school, as defined above. While *U.S. News* rankings might be an imperfect proxy for academic selectivity, Wai (2019) points to how rankings among the top schools are highly correlated with admissions test scores. Hence, by drawing on a large time series of these rankings, and selecting those schools that have been consistently among the top schools, we are plausibly identifying the collection of the most academically selective (according to admissions test scores) institutions attended by Representatives and Senators in recent Congresses. The complete list of elite educational institutions can be found in Appendix Table A1.

Consistent with the *Elite Education and Legislative Effectiveness Hypothesis*, some of the most noteworthy congressional lawmakers attended top colleges, universities, and law schools by these criteria. To name but a few, Henry Waxman (D-CA, UCLA Law), Barney Frank (D-MA, Harvard), Jim Sensenbrenner (R-WI, Stanford), and Lamar Smith (R-TX, Yale) were all highly productive in the House, especially in committee chair roles. That said, in our main analyses below we focus on the broad overall patterns, rather than such highlights.

Findings

We begin our analysis with a simple examination of the percentage of legislators in the House and Senate who have acquired degrees from elite institutions. In considering the data presented in Figure 1, several features are particularly striking. First, a notably larger percentage of Senators have acquired degrees from elite institutions than have Representatives. Across the entire sample, approximately 43% of the Senate has earned a degree from an elite institution, compared to approximately 27% of the House. Second, with some Congress-to-Congress fluctuations, the percentage of elite-educated Democrats has generally held steady over the past

Figure 1a: Percent Elite-Educated by Party in U.S. House

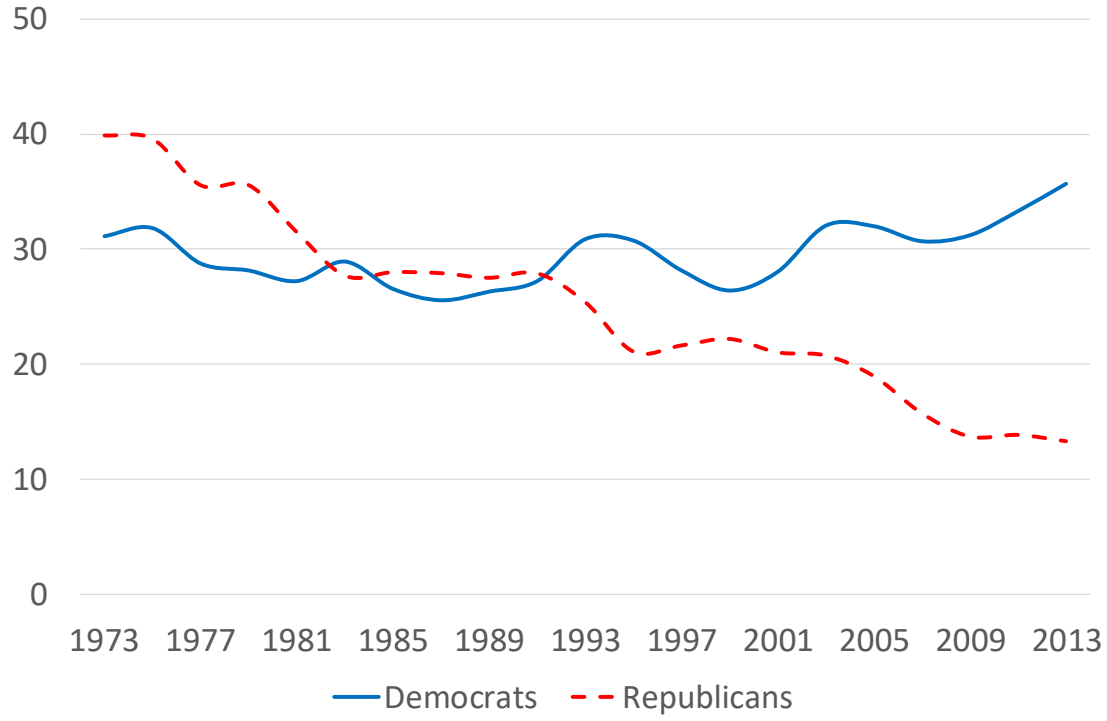
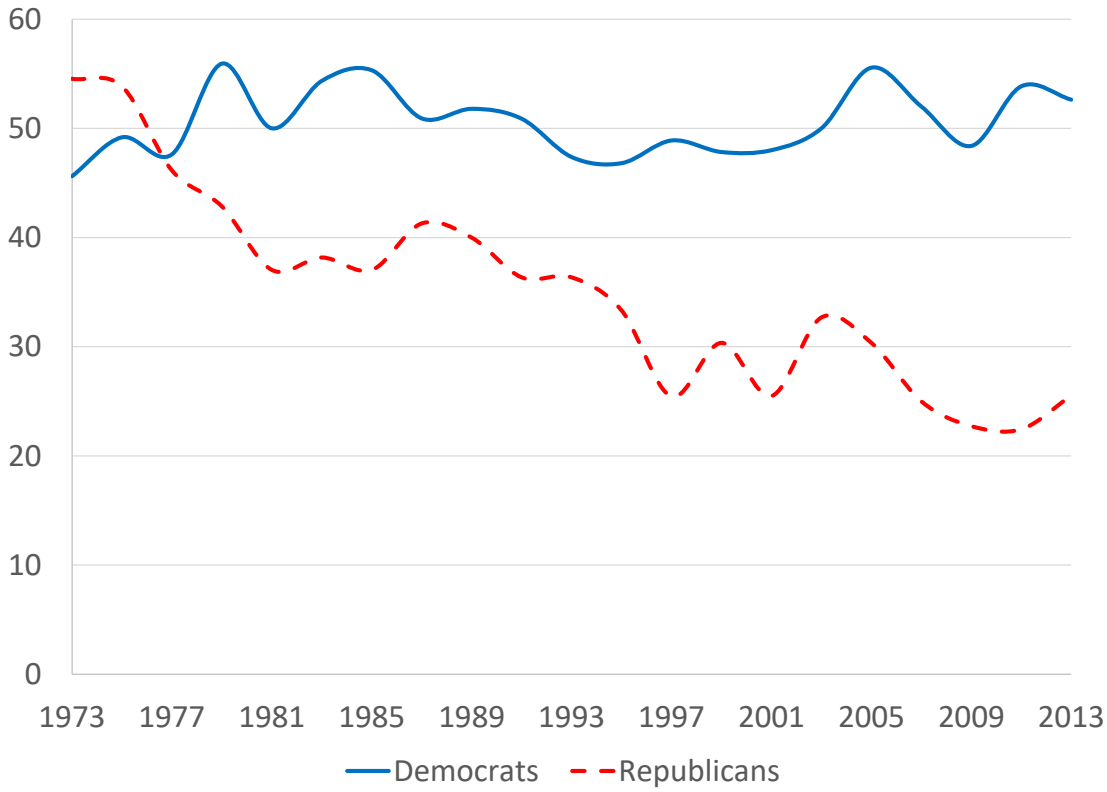


Figure 1b: Percent Elite-Educated by Party in U.S. Senate



40 years. In contrast, the percentage of elite-educated Republicans has been steadily declining since 1973. In the House, elite-educated Republicans dropped from 40% of the party in 1973 to just 13% in 2013, about a third of its former value. In the Senate that drop was from more than half of all Republicans having elite-educated backgrounds in 1973 to less than a quarter in 2013.

Although not serving as a direct test, the changes evident in Figure 1 are broadly consistent with our hypotheses. If, indeed, the *Elite Education and Liberalism Hypothesis* is correct, elite-educated Republicans would have become more out of step with their rightward-moving party over time. Such a misalignment with their party's base coupled with the hollowing out of the ideological center in Congress would be consistent with the declining numbers of elite-educated Republicans (Canes-Wrone, Brady, and Cogan 2002; Thomsen 2017). Moreover, if our *Partisan Effects of Elite Education Hypothesis* is correct and Democrats are more likely to reward (and be rewarded by) the type of lawmaking that is advanced by elite-educated legislators, elite-educated Democrats should outperform elite-educated Republicans in terms of effective lawmaking. If, in turn, such effective lawmaking is rewarded by voters, or if ineffective lawmakers voluntarily retire from Congress at a greater rate (e.g., Volden and Wiseman 2014, 35-36), such partisan differences in lawmaking effectiveness might translate into differences in the numbers of elite-educated Democrats and Republicans in Congress.

We next turn to more direct tests of our hypotheses. First, to explore the *Elite Education and Liberalism Hypothesis*, we compare the DW-NOMINATE scores of those with and without elite educational backgrounds, both overall and by party; both in the House and in the Senate. We display the mean ideology of each group in Table 1. In all cases, elite-educated legislators are more liberal on average, with lower DW-NOMINATE Scores, than are other legislators ($p <$

0.05 in difference-in-means tests).[13] As seen in Models 1.1 and 1.4, elite-educated Representatives and Senators are on the liberal side of the ideological spectrum, on average (negative scores), while the *Others* are on the conservative side, with positive average scores.

Table 1: Elite Educated Lawmakers are More Liberal

	House			Senate		
	Model 1.1: Representatives	Model 1.2: Democrats	Model 1.3: Republicans	Model 1.4: Senators	Model 1.5: Democrats	Model 1.6: Republicans
Elite Educated	*-0.079***	*-0.366***	*0.347***	*-0.126***	*-0.343**	*0.218***
Others	0.037	-0.331	0.457	0.091	-0.304	0.412
N	9,213	5,069	4,140	2,123	1,102	1,021

Notes: Results show average DW-NOMINATE score, with lower values being more liberal. Statistical significance levels shown on the *Elite Educated* subset are based on difference-in-means tests compared to the *Others* category.
*$p < 0.05$, **$p < 0.01$ (one-tailed)

These differences are also evident within each party, although with more substantial gaps among Republicans than among Democrats. Models 1.2 and 1.5 show a small but statistically significant liberal-leaning pattern among elite-educated Democrats in the House (0.035 difference) and the Senate (0.039 difference). Models 1.3 and 1.6 show that these differences are more pronounced among Republicans, with elite-educated members being 0.11 points more liberal in the House and 0.19 points more liberal in the Senate. These differences are above a quarter of a standard deviation for this metric in the House, and more than a half a standard deviation in the Senate. Similar findings emerge from OLS regression analyses with DW-

[13] The results of the tests in Tables 1 and 2 are robust to the alternative specification of elite education based solely on attendance at Ivy League colleges and universities. That said, the detected relationship is weaker under such a coding choice (smaller coefficients and larger standard errors) likely due to the decreased numbers of elite-educated lawmakers under such a coding protocol, and to the miscoding of those who attended elite institutions beyond the Ivy League. The results of the models in Tables 3 and 4 are likewise weaker when focusing solely on the Ivy League.

NOMINATE as the dependent variable and *Elite Educated* as the key independent variable, either alone or controlling for a host of individual- and district-level variables.[14] All variable sources, descriptions, and summary statistics are shown in Appendix Table A2. In total, these analyses offer strong evidence that elite-educated lawmakers are indeed more ideologically liberal than are those who did not attend such prestigious educational institutions.

To explore the *Elite Education and Legislative Effectiveness Hypothesis,* we begin by examining whether there is any clear relationship between a lawmaker's Legislative Effectiveness Score and her educational background. More specifically, Table 2 presents the results from an Ordinary Least Squares regression, drawing on data from the 93rd-113th Congresses (1973-2014), where a legislator's LES in each Congress is regressed onto a wide range of independent variables that were demonstrated by Volden and Wiseman (2014, 2018) to be correlated with lawmaking effectiveness in both the House and Senate, including majority party status, gender, committee chairs, and other factors. Of particular interest for the current analysis is the variable *Elite Educated*, which is an indicator variable for whether the Representative acquired a degree from an elite institution, as defined above. As we can see, within the House (Model 2.1) the coefficient on *Elite Educated* is positive and statistically significant by conventional standards, suggesting greater lawmaking effectiveness among elite-educated Representatives. More specifically, given that Legislative Effectiveness Scores are normalized to have an average value of "1" in each Congress, the magnitude of the coefficient on *Elite Educated,* 0.119, suggests that Representatives who have acquired degrees from elite

[14] In all such models, we cluster the standard errors by legislator. When including control variables, we account for the lawmaker's party status, committee and subcommittee chair positions, seniority, gender, race and ethnicity, vote share, and presidential candidate vote share in the district.

Table 2: Elite Educated Lawmakers Are More Effective, Only in the House

	Model 2.1 House	Model 2.2 Senate
Elite Educated	*0.119**	*-0.016*
	(0.054)	*(0.073)*
Majority Party	0.476**	0.313**
	(0.047)	(0.077)
Seniority	0.056**	0.113**
	(0.016)	(0.017)
Seniority Squared	0.0004	-0.005**
	(0.001)	(0.001)
State Legislative Experience	-0.100	-0.188*
	(0.073)	(0.108)
State Legislative Experience	0.518*	0.869*
× Legislative Prof.	(0.231)	(0.485)
Majority Party Leadership	0.498**	-0.006
	(0.168)	(0.166)
Minority Party Leadership	-0.142**	-0.046
	(0.054)	(0.069)
Speaker	-0.674**	-----
	(0.256)	
Committee Chair	3.126**	1.090**
	(0.241)	(0.121)
Subcommittee Chair	0.764**	0.255**
	(0.075)	(0.076)
Power Committee	-0.200**	-0.142*
	(0.054)	(0.065)
Distance from Median	0.066	-0.071
	(0.096)	(0.138)
Female	0.089*	0.072
	(0.051)	(0.134)
African-American	-0.343**	-0.136
	(0.079)	(0.085)
Latino	0.055	0.092
	(0.109)	(0.194)
Size of Congressional	-0.003	-----
Delegation	(0.002)	
Vote Share	0.016	0.034
	(0.010)	(0.021)
Vote Share Squared	-0.0001*	-0.0003*
	(0.0001)	(0.0002)
Constant	-0.456	-0.822
	(0.355)	(0.696)
N	8,966	2,091
Adjusted-R^2	0.43	0.41

Notes: Ordinary Least Squares analyses, robust standard errors in parentheses, observations clustered by member.
* $p < 0.05$ (one-tailed), ** $p < 0.01$ (one-tailed).

institutions are approximately 12% more effective as lawmakers than Representatives who have not attended such institutions, equivalent to just over two more terms of *Seniority*.

In contrast, in the Senate, there is a negative, but not statistically significant coefficient on *Elite Educated*. Therefore, these analyses offer only mixed support for the *Elite Education and Legislative Effectiveness Hypothesis*. Perhaps this mixed result is due to elite education being linked to effective lawmaking only under certain conditions, as proposed in the *Partisan Effects on Elite Education Hypothesis*.

We explore this possibility in Table 3, wherein we replicate the models from Table 2, but now only on particular subsets of the data. Specifically, in Models 3.1 and 3.2 we look at the subsets in which Democrats held majority control, in the House and in the Senate, respectively. In Models 3.3 and 3.4 we look at instances of Republican-controlled House and Senate.[15]

Table 3: Differences in Effectiveness by Party Control

	Democratic Controlled		Republican Controlled	
	Model 3.1: House	Model 3.2: Senate	Model 3.3: House	Model 3.4: Senate
Elite Educated	*0.176*** *(0.071)*	*0.035 (0.096)*	*0.087 (0.081)*	*-0.118 (0.078)*
Controls?	Y	Y	Y	Y
N	5,529	1,193	3,437	799
Adj. R^2	0.44	0.40	0.42	0.46

Notes: Ordinary Least Squares analyses on subsets of Congresses, robust standard errors in parentheses, observations clustered by member. All control variables reported in Table 2 are also included in the model specifications here.
*$p < 0.05$, **$p < 0.01$ (one-tailed).

[15] We set aside the 107th Senate (2001-02) from all models in Table 3, as each party held majority control for part of that Congress due to Sen. Jim Jeffords' (VT) party switch.

In three of the four models shown in Table 3, the coefficient on Elite Educated takes a positive value, but it is only statistically significant under Democratic majority control in the House (Model 3.1). In Republican-controlled Senates, elite-educated lawmakers are actually less effective as lawmakers than are their counterparts, although this coefficient does not attain statistical significance at conventional levels (here $p = 0.07$). Comparing Democratic control to Republican control within each chamber lends some support to the *Partisan Effects of Elite Education Hypothesis*. Specifically, in the House, being *Elite Educated* is associated with an 18% increase in lawmaking effectiveness under Democratic control (Model 3.1) but only a 9% increase (failing to attain statistical significance) under Republican control. In the Senate, the coefficient on *Elite Educated* is 0.153 units larger under Democratic control than under Republican control (although neither is statistically significant on their own).

The patterns emerging in Table 3 are even more pronounced when we limit the sample to majority-party lawmakers, as shown in Table 4. In Model 4.1, we see a significant boost in lawmaking effectiveness among elite-educated Democrats when the Democratic Party controls the House. The 0.266 coefficient on *Elite Educated* represents almost a 20% increase in LES within this subset (with the average majority-party LES in the House being 1.44). On the other end of the spectrum, we see elite-educated Republicans in the Senate performing particularly poorly when in the majority party, as represented by the -0.222 coefficient in Model 4.4. In between these two extremes we find Senate Democrats and House Republicans. In both the House and the Senate, the coefficient on *Elite Educated* is between 0.14 and 0.19 units greater among Democrats than among Republicans, consistent with the *Partisan Effects of Elite Education Hypothesis*.

Table 4: Differences in Effectiveness of Majority-Party Lawmakers, by Party Control

	Democratic Controlled		Republican Controlled	
	Model 4.1: House Democrats	Model 4.2: Senate Democrats	Model 4.3: House Republicans	Model 4.4: Senate Republicans
Elite Educated	*0.266*** *(0.112)*	*-0.022* *(0.065)*	*0.123* *(0.173)*	*-0.222** *(0.123)*
Controls?	Y	Y	Y	Y
N	3,309	529	1,820	433
Adj. R^2	0.41	0.12	0.37	0.38

Notes: Ordinary Least Squares analyses on subsets of Congresses, robust standard errors in parentheses, observations clustered by member. All control variables reported in Table 2 are also included in the model specifications here.
**p < 0.05, **p < 0.01* (one-tailed).

In total, the results shown in Tables 1-4 show that elite-educated members of Congress differ from their counterparts both in terms of their ideology and their lawmaking effectiveness. Elite-educated legislators are more liberal on average, with the most sizable effect among Republicans. And elite-educated lawmakers in the House are more effective, especially for Democrats under Democratic control. That said, relative to our hypotheses, two surprising findings emerged. In particular, elite-educated Senators were not found to be more effective than their counterparts, contrary to the *Elite Education and Legislative Effectiveness Hypothesis*. And, indeed, for the subset of Republicans in Republican controlled Senate, elite education was associated with *lower* lawmaking effectiveness.

To explore these findings more completely, we return briefly to the reasons we articulated above for why we expected partisan differences, in constructing the *Partisan Effects of Elite Education Hypothesis*. First, we suggested that the liberal leanings of elite-educated lawmakers would yield legislative proposals that appealed more naturally to Democrats than to Republicans. As such, the finding that elite-educated members of Congress outperform their

colleagues under Democratic control (especially in the House) but under-perform during Republican control (especially in the Senate) is a natural extension of such ideological leanings. That said, the models in Tables 3 and 4 account for ideological positions through the *Distance from Median* variable, and thus the liberal nature of elite-educated lawmakers (and presumably of their proposals) cannot fully explain these patterns (otherwise no elite-educated effects would persist upon controlling for ideology).[16]

Second, we argued that elite-educated lawmakers might tend to put forward larger reform proposals in their legislation, the types of proposals that past research established as resonating more clearly with Democrats than with Republicans. As per our expectations, the elite-educated House members averaged 0.84 "substantive and significant" bills, compared to 0.69 for other House members (a significant difference with $p < 0.001$). In the Senate, these averages are 2.30 for elite-educated Senators and 2.05 for others (difference at $p = 0.05$). As shown in Appendix Table A3, which mimics the subset analyses from Table 4 but now with a focus on the number and types of laws produced, this focus on major policy changes pays off for Democrats under Democratic control. In Model A3.2, we see 0.11 more substantive and significant (SS) laws for those with elite-educated backgrounds, a 25% boost over those who did not attend such elite schools. Such a significant boost is also found for all elite-educated lawmakers (regardless of their party) when Democrats control the House. In contrast, no such effect is found when Republicans are in the majority party, either in the House or in the Senate. However, in Model A3.3, we see that elite-educated Republican Senators under Republican control produce fewer substantive laws than their counterparts, perhaps due to having turned their attention away from

[16] Similar findings to those in Tables 3 and 4 emerged upon controlling for the raw DW-NOMINATE liberal-to-conservative ideological scores of lawmakers, rather than transformed to capture the distance from the median legislator.

such prosaic lawmaking to focus on more high-profile changes. As Model A3.4 shows, however, such proposals do not result in notably more SS laws under Republican control.

Third, the larger groups of elite-educated Democratic lawmakers than elite-educated Republican lawmakers (especially in recent decades) may offer network-based benefits for Democrats that are not matched within the Republican ranks. Moreover, such network benefits may be more valuable in the large House of Representatives than in the Senate, where fewer lawmakers and longer terms offer many more opportunities to build relationships on other grounds.[17] To explore the lawmaking benefits from being embedded within an elite-educated partisan network, we constructed a *Network Size* variable to capture how many elite-educated lawmakers were in each lawmaker's party in their home chamber in each Congress. We then included the *Network Size* variable, as well as its interaction with *Elite Educated*, in the models from Table 2, with results shown in Appendix Table A4. There, we find that larger networks of elite-educated legislators in one's own party tend to have a negative effect on a lawmaker's LES if she is *not* elite-educated herself, but a positive effect if she *is* elite-educated. This means that the lawmaking effectiveness of elite-educated legislators is enhanced (relative to those without such degrees) when such networks are larger.

[17] A wide range of scholars have suggested that groups of individuals who have shared characteristics (e.g., similar educational backgrounds) are likely to form social and professional connections, such that these subgroups will exhibit a degree of homophily (i.e., McPherson et al. 2001); and these groups can, in turn, contribute to the provision of collective goods. That said, beginning with Granovetter (1973) scholars of networks have suggested that the strength of network ties in any group is likely related to the length of time that members of the network have interacted with each other. Hence, one would suspect that professional settings that consist of a relatively small number of individuals who have opportunities to interact with each other over a relatively long period of time (e.g., the Senate) would likely provide opportunities for networks to form that were organized around something other than shared descriptive characteristics, in comparison to professional settings that consisted of a relatively large number of individuals who interacted with each other over a relatively short period of time (e.g., the House). Networks that were organized around something other than shared characteristics (e.g., similar educational backgrounds) could likewise help to facilitate the provision of shared collective goods.

Although these supplemental models are more suggestive than definitive, their predicted marginal effects do nicely match the overall effect sizes from Table 2, as well as the partisan effects sizes from Table 4. Specifically, in the House, the average same-party elite-educated network contains 61 members. The predicted marginal effect of elite education on the LES in this size of a network based on Model A4.1 is 0.118, in line with that found in Table 2. Furthermore, elite-educated Democrats in the House range in numbers from 56 in the 106th Congress (1999-2000) to 93 in the 94th Congress (1975-76), with an average size of 73. The marginal effect of elite education in a network of size 73 is 0.180 and in a network of size 93 is 0.285, values that are right in line with those found for House Democrats in Model 4.1.

In the Senate, elite-educated Republicans range in numbers from 10 in the 111th Congress (2009-10) to 24 in the 93rd Congress (1973-74), with an average size of 17. Due to these small networks, there is not much benefit from being in the elite-educated group. Indeed, based on the results of Model A4.2, the marginal effect from being an elite-educated Senator in a network of size 10 is -0.114, growing to -0.057 for a network of size 17. On average, elite-educated Democratic Senators numbered 27, yielding a (slightly) positive marginal effect on LES for their members of 0.024. In other words, although there appear to be network benefits in both the House and the Senate, the network sizes are too small in the Senate, especially among Republicans, to offer the type of significant lawmaking benefit found in the House. These differences across the chambers are consistent with other contrasts that have been established between the House and the Senate (i.e., Sinclair 2017). The Senate has long been viewed as less hierarchical than the House; Senators have been demonstrated to exhibit a substantial degree of autonomy and individual influence over the lawmaking process, in comparison to their House counterparts.

Finally, we also explored whether holding a law degree was associated with greater lawmaking effectiveness. If attending law school is helpful for lawmaking, such degree attainment may help explain the partisan patterns above that support the *Partisan Effects of Elite Education Hypothesis*. Attending law school means one has a greater opportunity to be in our *Elite Educated* group, offering a second chance at an elite education beyond the undergraduate degree. Because Democrats in Congress are more likely to hold J.D.'s than are Republicans, law school attendance could produce partisan effects. Specifically, over our time period, 49% of Democrats in the House held law degrees, compared to 38% of Republicans. In the Senate, Democrats again held the edge in this regard, 66% to 56%. To explore the effect of law school attendance on lawmaking effectiveness, we included an indicator for whether a legislator received a J.D. (or other law degree) in the models of Table 2 above.[18] In neither the House nor the Senate was there any evidence of members of Congress performing any better (or worse) at lawmaking upon having attended law school.[19] Therefore, unlike the effects of ideology, proposing major policy changes, or being embedded in larger elite-educated partisan networks, holding a J.D. does not help explain the partisan patterns of elite education on lawmaking effectiveness uncovered here.

Implications and Conclusions

Candidates often point to various attributes, such as their personal characteristics, prior careers, and work experiences, in attempts to influence voters' perceptions about their likely

[18] Additionally, the main substantive findings reported throughout this manuscript are robust to inclusion of such a J.D. indicator as an additional control variable in all regression models.

[19] Although much less common among members of Congress, the Master of Public Policy/Master of Public Administration degree is also more frequently held by Democrats than Republicans. Similar to the J.D., we find no evidence that holders of this degree are any more or less effective as lawmakers than those without an MPP/MPA, all else equal.

performance in office. While many of these traits are easy to observe, the mapping between personal traits and subsequent legislative performance is often opaque. In this paper we have focused on one common but understudied background characteristic – whether a legislator acquired a degree from an elite educational institution – and explored whether the acquisition of such degrees corresponds with observable differences across legislators.

Drawing on more than four decades of data from the U.S. House and Senate, we have demonstrated that legislators who acquired degrees from elite institutions behave differently in Congress than those who have not. Consistent with conservative fears about left-leaning educational institutions, these lawmakers are more liberal in their voting patterns, a finding especially prominent among Republicans. Consistent with views about their active roles in putting forth major reforms, elite-educated lawmakers sponsor more bills that are substantive and significant, proposals that are more likely to be well-received by Democratic leaders than by Republican leaders. Consistent with the idea that they represent a ruling power elite, these lawmakers thrive when embedded in larger networks of elite-educated copartisans.

On the whole, these differences translate into liberal-leaning and highly effective Democrats embedded in large elite-educated networks in the House. Elite-educated Republicans in the House are likewise more liberal, but are no more or less effective, seemingly due to their smaller networks and to less support from their leaders for their major (and more liberal) reform proposals. In the Senate, lacking large networks, elite-educated Democrats are still more liberal leaning than others, but are no more or less effective at lawmaking. Elite-educated Senate Republicans are more liberal that other Republicans but are actually less effective, likely due to their proposals being less attractive to their leaders coupled with insufficient elite-educated networks to offset this effect.

Elite-educated congressional Democrats are thus well-positioned to present a positive image to their voters, being closely aligned with their constituents' liberal ideology and often more effective as lawmakers. Perhaps as a result, their numbers have remained steady or grown in Congress across recent decades. In contrast, being more liberal than their base, and often less effective as lawmakers, the ranks of elite-educated Republicans have declined by more than half in both the House and Senate over the past forty years.

This decrease in elite-educated Republicans, combined with the positive correlation between elite education and ideological liberalism, links neatly to the arguments of Hacker and Pierson (2005), and Mann and Ornstein (2006, 2012), who claim that the increase in ideological polarization in Congress is due largely to Republicans becoming more ideologically conservative while Democrats have remained relatively consistent ideologically over time. Indeed, regressing the DW-NOMINATE score of the median Republican in the House and the Senate onto the proportion of Republicans in each chamber that are elite-educated demonstrates that there is a positive, and statistically significant, relationship between the proportion of Republicans who are elite-educated and the liberal leanings of the median Republican.[20] Simply stated, as fewer elite-educated Republicans have been elected to office, there has been an increase in more conservative Republicans in office, which (in the aggregate) has corresponded to a rightward shift in the orientation of the Republican Party in Congress.

Moreover, the decline in elite-educated Republicans, coupled with Republican majorities in the House, may partially explain the scarcity of landmark legislation in recent years. As our analyses demonstrate, elite-educated lawmakers propose more substantive and significant bills. When Democrats hold the majority in the House, these proposals find enormous success. Under

[20] These results are substantively (and statistically) robust in both the House and Senate to the inclusion of various control variables, such as the size of the Republican Party, and whether Republicans controlled the chamber.

Republican control, such wide-ranging proposals were viewed more skeptically. And with fewer elite-educated Republicans advancing such proposals due to their declining numbers, there has been less pressure toward landmark reforms. These results may help us understand recent gridlock on high-profile issues, and the prospects for their return again under Democratic control. Future periods of Democratic control of the House and Senate, coupled with continued sizable elite-educated populations in their ranks, may offer glimpses of the ruling power elite so commonly referred to in the post-World War II period.

These results therefore offer not only a compelling and coherent view of the legislative differences that individual elite-educated lawmakers bring to Congress, but also a new lens through which to understand collective changes like the conservative movement of congressional Republicans and the decline of landmark legislation. That said, two main caveats should be noted (and reemphasized). First, it goes without saying that our analysis does not allow us to speak, definitively, to the causal impact of elite education on legislators' voting patterns and lawmaking effectiveness. The fact that these empirical findings are quite robust, however, suggests that our results are not the artifact of spurious correlations. Whether these differences are directly attributable to the educational environments in which future legislators are raised, so to speak, or are indicative of the types of individuals who seek a certain type of educational experience, deserves further exploration that may tease out treatment from selection effects (to use causal language).

Second, some readers might be concerned with the limits of our various coding protocols – in identifying whether an educational institution is elite and in characterizing lawmaking effectiveness – or the scope of our analyses on the whole. As discussed above, we explored the extent to which the results are robust to alternative specifications (such as solely looking at Ivy

League educations) or to components of our metrics (such as the number of substantive and significant laws produced). While these robustness checks were largely consistent with our overall findings, such analyses cannot speak to the effects of other relevant backgrounds and experiences (such as earlier careers, or service in the military or state legislatures) or to additional types of legislative behavior (such as obstruction or oversight). Nevertheless, the strong patterns detected here suggest that future explorations along these lines will likely be quite fruitful and are worthy of investigation.

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Appendix Table A1: List of Elite Educational Institutions

University or College Name	
Amherst College$^{\upsilon}$	Bowdon College$^{\upsilon}$
Brown University$^{\upsilon}$	California Institute of Technology$^{\upsilon}$
Carleton College$^{\upsilon}$	Carnegie-Mellon University$^{\beta}$
Claremont McKenna College$^{\upsilon}$	Colgate University$^{\upsilon}$
Columbia University$^{\upsilon\lambda\beta}$	Cornell University$^{\upsilon\lambda\beta}$
Dartmouth College$^{\upsilon\beta}$	Davidson University$^{\upsilon}$
Duke University$^{\upsilon\lambda\beta}$	Georgetown University$^{\lambda}$
Grinnell College$^{\upsilon}$	Harvard University$^{\upsilon\lambda\beta}$
Haverford College$^{\upsilon}$	Johns Hopkins University$^{\upsilon}$
Massachusetts Institute of Technology$^{\upsilon\beta}$	Middlebury College$^{\upsilon}$
New York University$^{\lambda\beta}$	Northwestern University$^{\upsilon\lambda\beta}$
Pomona College$^{\upsilon}$	Princeton University$^{\upsilon}$
Rice University$^{\upsilon}$	Smith College$^{\upsilon}$
Stanford University$^{\upsilon\lambda\beta}$	Swarthmore College$^{\upsilon}$
University of California-Berkeley$^{\lambda\beta}$	University of California-Los Angeles$^{\lambda}$
University of Chicago$^{\upsilon\lambda\beta}$	University of Michigan-Ann Arbor$^{\lambda\beta}$
University of North Carolina-Chapel Hill$^{\beta}$	University of Notre Dame$^{\upsilon}$
University Pennsylvania$^{\upsilon\lambda\beta}$	University of Southern California$^{\lambda}$
University of Texas-Austin$^{\lambda\beta}$	University of Virginia$^{\lambda\beta}$
Vassar College$^{\upsilon}$	Vanderbilt University$^{\lambda}$
Washington & Lee University$^{\upsilon}$	Washington University in St. Louis$^{\upsilon}$
Wellesley College$^{\upsilon}$	Wesleyan University$^{\upsilon}$
Williams College$^{\upsilon}$	Yale University$^{\upsilon\lambda\beta}$

$^{\upsilon}$Undergraduate/Graduate School
$^{\lambda}$Law School
$^{\beta}$Business School

Table A2: Variable Descriptions, Sources, and Summary Statistics

Variable	*Description*	*House Mean (Std. Dev.)*	*Senate Mean (Std. Dev.)*
Elite Educated[a]	1 = member attended elite educational institution	0.274 (0.446)	0.429 (0.495)
Ideology[b]	Legislator's first dimension DW-NOMINATE Score	0.006 (0.435)	-0.002 (0.380)
LES[c]	Member's Legislative Effectiveness Score	1.00 (1.58)	1.00 (1.02)
Majority Party[c]	1 = member is in majority party	0.567 (0.496)	0.552 (0.497)
Seniority[c]	Number of terms served by member in current chamber in Congress	5.26 (4.08)	6.16 (4.65)
State Legislative Experience[c]	1 = member served in state legislature	0.490 (0.500)	0.404 (0.491)
State Legislative Experience × Legislative Prof.[c]	Level of state legislature's professionalism for members who served there (= 0 otherwise).	0.144 (0.180)	0.081 (0.114)
Majority Party Leadership[c]	1 = member served in majority-party leadership	0.017 (0.131)	0.053 (0.223)
Minority Party Leadership[c]	1 = member served in minority-party leadership	0.019 (0.138)	0.045 (0.207)
Speaker[c]	1 = member was Speaker of the House	0.002 (0.043)	
Committee Chair[c]	1 = member served as a committee chair	0.050 (0.217)	0.161 (0.367)
Subcommittee Chair[c]	1 = member served as a subcommittee chair	0.244 (0.430)	0.456 (0.498)
Power Committee[c]	1 = member served on chamber's power committee	0.248 (0.432)	0.720 (0.449)
Distance from Median[c]	|Member's DW-NOMINATE score – Median's DW-NOMINATE score|	0.374 (0.249)	0.331 (0.219)
Female[c]	1 = legislator is female	0.101 (0.301)	0.074 (0.262)
African-American[c]	1 = legislator is African American	0.069 (0.253)	0.006 (0.075)
Latino[c]	1 = legislator is Latino/a	0.040 (0.195)	0.006 (0.075)
Size of Congressional Delegation[c]	Number of districts in state's congressional delegation	18.4 (14.2)	
Vote Share[c]	Percentage of vote received in previous election	68.1 (13.7)	59.8 (9.44)
Network Size[a]	Number of same-party elite-educated legislators in chamber	61.5 (16.0)	22.0 (6.05)

[a]Constructed by authors, as described in text.
[b]Data from www.voteview.com.
[c]Data from Center for Effective Lawmaking (www.thelawmakers.org).

Table A3: Partisan Differences in Production of Different Types of Laws

	Democrats in Democratic Controlled House		Republicans in Republican Controlled Senate	
	Model A3.1: Substantive Laws	Model A3.2: SS Laws	Model A3.3: Substantive Laws	Model A3.4: SS Laws
Elite Educated	*0.044* *(0.043)*	*0.111** *(0.063)*	*-0.571*** *(0.217)*	*0.047* *(0.124)*
Controls?	Y	Y	Y	Y
N	3,309	3,309	433	433
Adj. R^2	0.14	0.29	0.17	0.15

Notes: Ordinary Least Squares analyses on subsets of Congresses, robust standard errors in parentheses, observations clustered by member. All control variables reported in Table 2 are also included in the model specifications here. Results show a significantly higher number of substantive and significant (SS) laws produced by elite-educated Democrats under Democratic control in the House, and a significantly lower number of substantive laws produced by elite-educated Republicans under Republican control in the Senate. Such findings are consistent with the claim that the enhanced focus on substantive and significant lawmaking among elite-educated legislators benefits Democrats but not Republicans.
*$p < 0.05$, **$p < 0.01$ (one-tailed).

Table A4: Effect of Elite-Education Network Sizes in House and Senate

	Elite-Education Networks in House of Representatives	Elite-Education Networks in U.S. Senate
	Model A4.1: House LES	Model A4.2: Senate LES
Elite Educated	*-0.201*	*-0.196*
	(0.215)	*(0.206)*
Network Size	*-0.0048***	*-0.0062*
	(0.0016)	*(0.0076)*
Elite Educated × Network Size	*0.0052*	*0.0081*
	(0.0034)	*(0.0102)*
Controls?	Y	Y
N	8,966	2,091
Adj. R^2	0.43	0.41

Notes: Ordinary Least Squares analyses, robust standard errors in parentheses, observations clustered by member. All control variables reported in Table 2 are also included in the model specifications here. *Network Size* captures the number of elite-educated legislators in the lawmaker's party within their chamber in the current Congress. Negative coefficients on *Network Size* show that larger networks of elite-educated legislators undermine the effectiveness of those who are not elite-educated. The positive interaction term (larger than the *Network Size* coefficient) shows this effect is reversed among elite-educated lawmakers.
*$p < 0.05$, **$p < 0.01$ (one-tailed).