Changing Minds: How Academic Fields Shape Political Attitudes

Preliminary Version (Comments Welcome)

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Abstract

This study examines how academic fields shape political attitudes, using data on 310,000 students who entered 470 American colleges between 1990 and 2015. The main analysis employs a conditional-on-observables approach, leveraging unusually rich pre-college controls for political attitudes and major preferences. Results indicate that choosing a business or economics major instead of humanities or social sciences reduces liberal self-placement by 0.22 standard deviations (approximately 10 percentage points). To further support the causal interpretation, a complementary analysis exploits college-level expansions in specific fields to construct a quasi-experimental design. This analysis reveals that increases in the availability of business and economics programs reduce liberal self-placement, partly by influencing major choices. Furthermore, findings indicate that majors affect policy attitudes on issues such as taxation and abortion, suggesting impacts beyond ideological self-placement. An investigation of potential mechanisms finds no evidence of peer effects, implying that academic content or faculty interactions may be the primary channels. Finally, accounting for self-selection into majors reveals that fields of study contribute to political polarization and the observed gender gap in political attitudes among college graduates.

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"Socrates does nothing that is just; he is a curious person, who searches into things under the earth and in the sky, and he makes the worse appear the better cause; and he teaches the aforesaid doctrines to others."
The Apology of Socrates

1 Introduction

Education has long been at the heart of human societies and is a subject of extensive social science research. While economic research shows that schooling enhances career prospects (e.g., Mincer, 1974; Angrist and Krueger, 1991; Card, 1999), its broader societal effects remain less understood. Historically, education was seen not just as a tool for economic mobility but as a means to cultivate critical thinking, moral autonomy, and engaged citizenship (cf. Plato, 1992; Kant, 2002; Dewey, 1916; Negt, 2000). Yet, education has always been a disputed territory—Socrates was famously accused of corrupting Athenian youth, and today, universities face charges of ideological bias. A key aspect of this modern debate involves the influence of specific academic fields; for instance, critics argue that certain disciplines foster an unwarranted liberal shift, prompting calls for restrictions on these fields. Despite their prominence in public discourse, empirical evidence on the ideological impact of academic fields and the underlying mechanisms remains limited. This study seeks to fill that gap, investigating whether and how academic fields influence students' political attitudes.

Providing direct empirical evidence on these questions is challenging. Data on students' political attitudes are not easily available. Even where such data exist, differences across majors may reflect self-selection of students with particular pre-college views. Identifying mechanisms is equally complex since distinct fields expose students to different curricula, faculty, classmates, and future career paths (e.g., Bleemer and Mehta, 2022). Each of these factors can shape political attitudes. To address these issues, the present analysis uses a large-scale survey dataset of 310,000 students who entered 470 four-year U.S. colleges between 1990 and 2015. A unique feature of the dataset is that it includes each student's responses at two critical points: during the first week of college and at graduation. Political ideology is measured by asking students to select one of five distinct options: highly conservative, conservative, moderate, liberal, or highly liberal. The dataset also includes detailed policy attitudes on issues such as abortion, race, taxation, and healthcare, enabling analyses beyond self-identified ideology. Finally, data on peer and faculty characteristics facilitate an investigation into the mechanisms underlying these effects.

The main analysis examines the effects of college majors on students' political attitudes using a conditional-on-observables approach. Specifically, it compares graduation attitudes across majors while controlling for baseline ideology, attitudes, and intended majors. Under the conditional independence assumption—that major choice is uncorrelated with unobserved factors affecting graduation attitudes, given these controls—the estimates are plausibly causal. An unusually rich set of pre-college variables mitigates concerns about omitted variable bias, and introducing additional controls for pre-college behaviors, life goals, and demographics does not change the results. A negative-control exposure test further supports the causal interpretation by using initial major preferences as a proxy for unobserved pre-college confounders, providing suggestive evidence that the conditional independence assumption is plausible in our setting.

Results indicate that college majors play a crucial role in shaping graduates' political ideology. Although students become about 0.1 standard deviation (or six percentage points) more liberal on average during college, this average conceals substantial heterogeneity. Our analysis suggests that this heterogeneity reflects the causal effects of different majors. In particular, students in humanities and social sciences (excluding economics) shift 0.22–0.26 standard deviations (or 8–12 percentage points) further liberal relative to those in economics and business, while students in STEM, health, and education fields shift about 0.08–0.12 standard deviations more liberal than their peers in economics or business.

These magnitudes indicate that major choice is among the most influential experiences shaping political ideology. By comparison, Brown et al. (2023) find that childhood environment shapes young people's voting behavior. The present estimates suggest that majoring in social sciences or humanities, rather than business or economics, is as consequential as moving to a county about 20 percentage points more liberal during the formative ages of 13 to 19. Moreover, major choice contributes to heightened polarization, as students tend to select fields that reinforce their preexisting views, and it helps explain the gender gap in political attitudes, given women's higher propensity to choose liberal-leaning majors.

The causal interpretation of the results is further validated using a complementary quasi-experimental approach that exploits variations in the availability of different fields of study within colleges over time. The analysis focuses on sharp increases in the relative availability of business and economics at specific colleges, with these shocks shown to be independent of students' baseline political ideology. Anecdotal evidence suggests that these changes are driven by external factors such as donations. Following an increase in the availability of business and economics majors, the likelihood of pursuing social sciences or humanities majors decreases by six percentage points, and students' graduation political ideology shifts by 0.06

standard deviations toward conservatism. While these results are not directly comparable to our main estimates—as such shocks may affect students' college experiences beyond major choices (e.g., through changes in courses taken), they confirm our main causal finding: fields of study significantly influence students' political ideology.

An additional analysis investigates whether college majors shape students' views beyond liberal-conservative self-identification. Results show that majors affect policy attitudes on issues ranging from abortion to taxation. These effects partially mirror changes in self-placement political ideology. For instance, students majoring in business or economics tend to adopt more conservative views on taxation and national healthcare yet remain relatively liberal on abortion compared to students in other majors.[1] An opinion-based index is constructed to assess the alignment between broader policy opinions and self-placement political ideology. This index predicts a student's graduation political ideology using only graduation policy responses. Analyses employing the index reveal that college majors that cause students to shift toward a more liberal ideology also lead to corresponding liberal shifts in their policy positions.

Finally, the analysis investigates the mechanisms behind these effects. To assess the impact of peer political ideology, we exploit variations in students' baseline self-placement ideology within the same major and college over time. Although there is a strong correlation between students' political ideology and those of their peers upon graduation, our analysis suggests this relationship stems from selection rather than peer influence. Specifically, an exogenous peer effect specification (Manski, 1993) estimating the effect of peers' initial ideology on their classmates' graduation ideology reveals a precisely estimated null effect.[2] These results allow us to reject the possibility that peer political ideology accounts for more than 5% of the overall effect of majors on graduation ideology.

Thus, other factors, such as academic content and faculty interactions, may be more critical in shaping students' political ideology. Consistent with this interpretation, the liberal shift for social sciences and humanities students is particularly pronounced among higher-ability individuals. Future versions of this paper will investigate these pathways further, incorporating additional evidence on faculty attitudes and teaching practices.

[1]Note that the term "liberal" can carry multiple meanings across different contexts. To ensure empirical clarity, we restrict its use to two measurable outcomes: self-identification as liberal and the specific policy attitudes that predict such self-identification.

[2]Other studies have found some evidence of peer effects in specific contexts. For example, Strother et al. (2021); Coriale et al. (2023) report impacts from roommates' political attitudes, while Mendelberg et al. (2017) shows that affluent students at colleges with more affluent peers tend to develop conservative economic attitudes through socialization.

Overall, this study's findings reveal that college's influence on political attitudes varies markedly by field of study. Economics or business majors shift students toward more conservative stances, while humanities and social sciences push them further left. These results imply that if all students were to pursue economics or business, the typical liberal shift among graduates would vanish, narrowing—or even eliminating—the ideological gap with non-graduates. Moreover, shifts in major composition, such as the recent decline in humanities enrollments, may have far-reaching effects on the political landscape. Although the normative desirability of such shifts is beyond the scope of this paper, the results underscore that policies promoting or restricting specific academic fields can meaningfully reshape the broader political environment.

This research contributes to the literature on how higher education shapes students' political attitudes by providing novel evidence on the role of academic fields in this process. Recent studies have documented that students in the US, UK, and Romania tend to become more liberal during their studies, particularly on cultural issues (Brońić and Miles, 2021; Fryer, 2022; Scott, 2022; Apfeld et al., 2023), and that the specific college students attend influences their political outcomes (Firoozi, 2023). However, less is known about the role of fields of study. Much of the prior research in economics has focused on economics majors, showing that their political attitudes differ from those of students in other majors and evolve differently during their studies (e.g., Frank et al., 1993; Rubinstein, 2006; Bauman and Rose, 2011; Hammock et al., 2016; Fischer et al., 2017; Paredes et al., 2023). A recent study from political science highlights correlations between fields of study and voting behavior in Europe, driven by both selection into fields and their effects (Hooghe et al., 2024).[3]

This paper makes three key contributions. First, it presents novel evidence that academic fields causally influence students' political attitudes. Second, it examines the mechanisms behind these effects, revealing minimal peer influence and suggesting that academic content and faculty interactions may be more important. Third, it connects major choices to broader political outcomes, including heightened polarization, the gender gap in political attitudes, and the divide between college graduates and non-graduates. Future research could bolster causal identification using randomized variations in fields of study (e.g., via admission thresholds), extend the findings to long-term effects on voting and civic engagement, and further clarify the channels through which majors shape political views by incorporating more data on classroom content and faculty attitudes.

[3]Somewhat relatedly, Bell et al. (2022) provides evidence that students in specific majors—mainly humanities, arts, and social sciences—are more likely to vote.

More broadly, this paper also contributes to the research on how educational content influences students' views. Previous studies have shown that politically driven curriculum changes impact attitudes, as seen in Nazi Germany, China, and Taiwan (Voigtländer and Voth, 2015; Cantoni et al., 2017; Chen et al., 2023). In contrast, this study focuses on a setting perceived as neutral, where students freely choose their majors. This highlights that educational content can influence political perspectives, even in environments without explicit political agendas.

Finally, this study's findings also complement the literature on the labor market implications of college majors (e.g., Hastings et al., 2013; Kirkeboen et al., 2016; Heinesen et al., 2022; Bleemer and Mehta, 2022; Goldstein, 2024). This paper contributes by highlighting that college majors play a critical role not just in determining career trajectories but also in shaping students' political attitudes.

The rest of this paper is organized as follows: the following section, 2 describes the data and definitions; Section 3 presents the main estimation results regarding the impacts of college majors on students' political views; Section 4 shows additional evidence and discuss potential mechanisms, and Section 5 concludes.

2 The Data: HERI Student Surveys

This study relies on survey data from the Cooperative Institutional Research Program (CIRP), conducted by the Higher Education Research Institute (HERI) of UCLA. The survey data has gathered information on incoming college students across the US since the 1960s. The incoming freshman survey covers various topics, including backgrounds, plans, attitudes, behaviors, etc. Since 1990, a subset of these students has also participated in an exit survey upon graduation. The sample of colleges in the survey is not random, as participation requires colleges to pay a fee. Despite this, a substantial number of colleges across the US–more than a thousand annually–choose to pay and participate. Some of these colleges have also participated at least once in the exit survey. The compliance rate has been relatively high because the surveys are typically part of other paperwork required by the college.

Sample. The baseline survey sample covers cohorts who started their undergraduate studies from 1990 to 2015, comprising approximately 10 million students from 1,500 colleges who completed the freshman survey (also known as TFS).[4] This study focuses on the subset of 477 4-year colleges that also participated in the senior survey (also known as CSS), involving approximately 2,500,000 students in relevant years. Among them, 380,000 students completed both surveys.

[4]Details on the data and access are available here: https://heri.ucla.edu/cirp-freshman-survey.

Finally, the primary analysis focuses on the subset of about 310,000 students with non-missing information on political ideology and chosen majors.

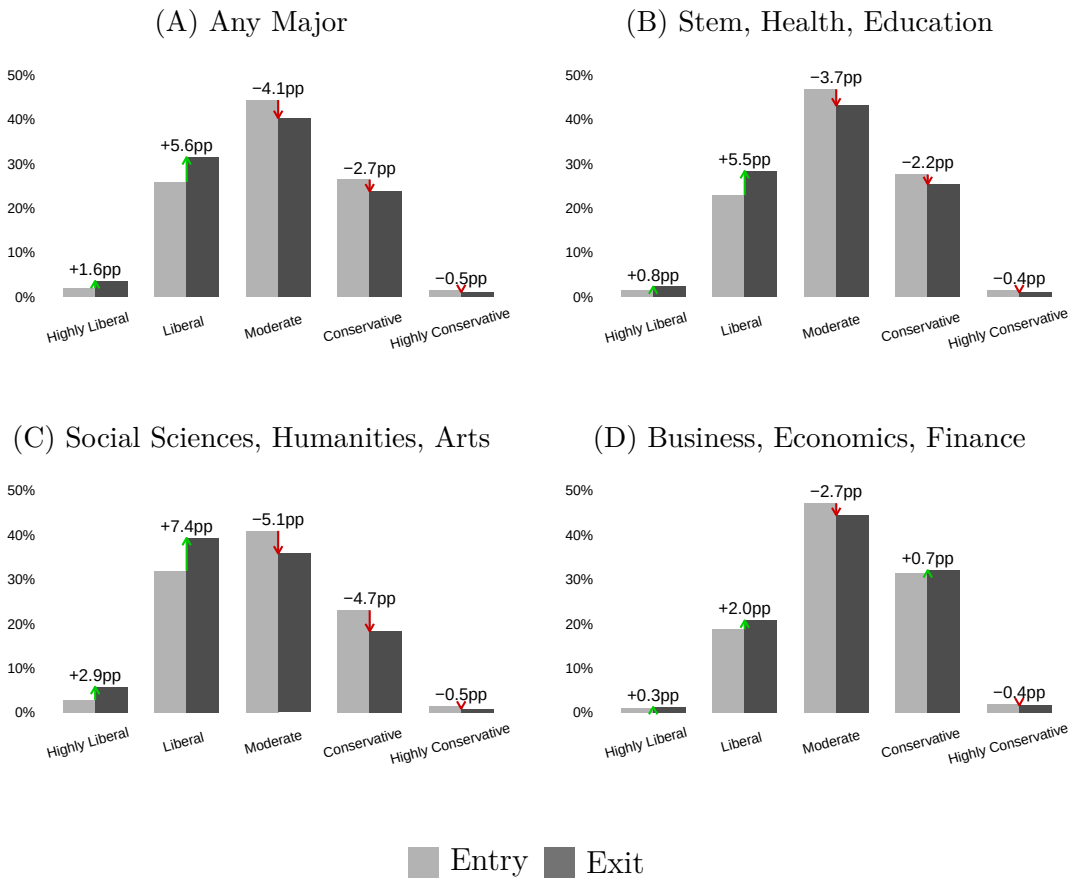
Political ideology. The primary outcome of interest is students' responses to the question: "How would you characterize your political views?" with a response scale from 5 (highly liberal) to 1 (highly conservative). The trends in this outcome among incoming and graduating students appear in Appendix Figure A1. This figure highlights several interesting trends. First, our data reveal that over the study period, incoming college students have gradually identified as slightly more liberal. Second, there is a noticeable shift towards more liberal political ideology from when students enter college to graduate. This gap is stable and appears every year during our sample period. Third, this gap varies substantially between students in different majors.

Figure 1 illustrates the evolution of students' political ideologies over the course of college. For clarity, we rescaled the variable so that lower values correspond to more liberal orientations. This rescaling is used in all subsequent analyses. Panel A, showing the distribution for the entire student population, reveals a general shift away from conservative and moderate views toward more liberal and very liberal positions. On average, students become seven percentage points more liberal and three percentage points less conservative during college. However, this pattern varies by major. For instance, business and economics majors become about three percentage points less moderate—shifting primarily to the right, with a smaller leftward movement—while humanities and social sciences majors become 10 percentage points more liberal and five percentage points less conservative. Meanwhile, students in health, education, and STEM experience modest liberal shifts, similar to the overall average. These initial findings suggest a potential causal impact of college majors on political attitudes—a hypothesis examined in depth in Section 3.

Similar trends appear in Figure A2, which provides detailed information on the transitions between different political attitudes. Panel A shows transitions for all the students and illustrates that students who start as moderates are more likely to become liberal (26%) than conservative (15%). However, Panels B–D repeat this analysis by major groups and show that this pattern varies substantially between fields, with 33% becoming liberal in the humanities and social sciences, compared to 18% in business and economics.

Figure 2 compares students' baseline and graduation ideology across majors. For most majors in business, economics, health, education, and STEM, graduation ideology remain similar to baseline or become only slightly more liberal. In contrast, humanities and social sciences majors exhibit a significant liberal shift

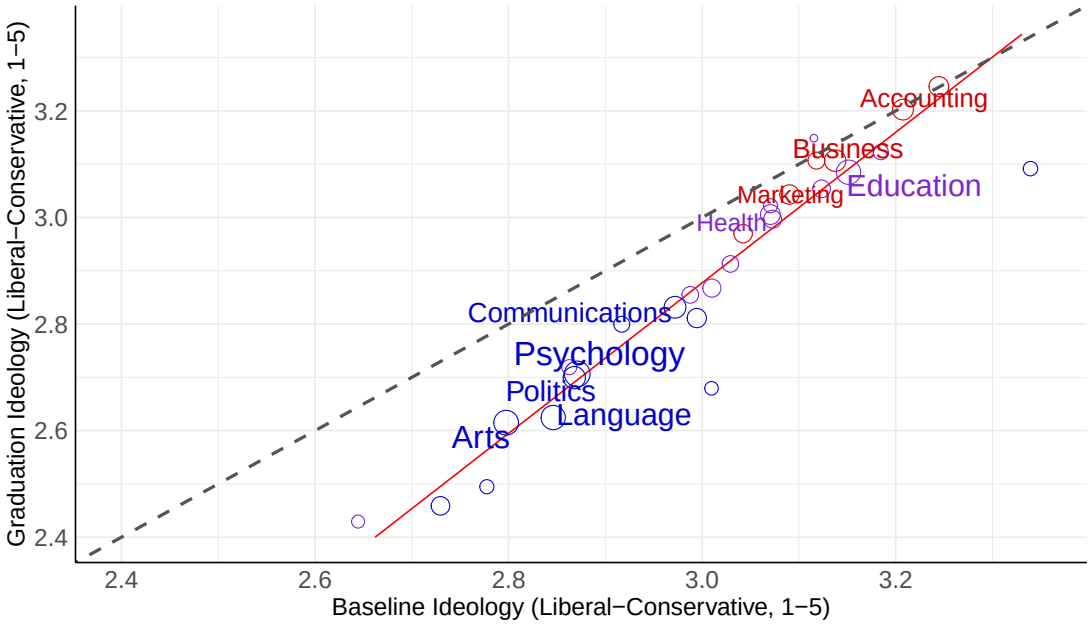
Figure 1: Political Ideology Distributions Before and After College



Note: This figure plots the distribution of students' baseline (light grey) and graduation (dark grey) political ideology. The sample includes all students with non-missing values for this outcome in the baseline and graduation surveys, totaling 299,630 students. Panel A's sample includes all students, while panels B–D's samples are restricted to students in specific groups of majors.

during college—and these fields tend to attract more liberal students from the outset. If these changes reflect a causal effect of college majors, then major selection likely contributes to growing political polarization, as students choose fields that reinforce their preexisting ideology. Still, there are exceptions: some majors attract less liberal students yet induce a more liberal shift. A notable example is theology, which, despite attracting relatively conservative students, often leads to a marked shift toward more liberal views.

Figure 2: Students Baseline and Graduation Ideology By Major



Note: This figure plots the average baseline (x-axis) and graduation (y-axis) political ideology of students by major, on a scale of 1–5 from highly liberal to highly conservative. The sample includes only students with non-missing values in the major and political ideology (299,630 students). Colors indicate the classification group for each major: blue for social sciences, humanities, and arts; purple for STEM, health, and education; red for business, economics, and finance. The black dashed line indicates where students' graduation ideology equal their baseline ideology (45-degree line), while the red solid line represents the regression line fitted to the observed data.

Policy attitudes. The survey data include questions on specific policy areas, with responses ranging from 1 (disagree) to 4 (agree). Ten of these questions remain consistent across most years, appearing in both entry and exit surveys throughout the sample period. Table 1 lists these questions, their response distributions, and their correlation with political ideology. The table highlights significant shifts in responses to some questions (e.g., on abortion) while showing minimal change in others (e.g., on taxation). The main analysis, discussed later, examines how these shifts vary across different fields of study.

Interestingly, the table also shows that the correlation between responses to all statements and students' political ideology increases during college. This suggests

that while students' views and political ideology both evolve throughout their time in college, they do so in a way that strengthens the connection between them, leading to a more cohesive alignment between their policy attitudes and political identity.

Table 1: Students' Opinions on Policy Issues

Statement	Survey	Observations	Disagree Strongly	Disagree Somewhat	Agree Somewhat	Agree Strongly	$Cor(., P)$
Abortion should be legal	Baseline	351537	31.31%	15.9%	25.77%	27.03%	0.43
	Graduation	310663	22.72%	15.01%	27.57%	34.7%	0.47
A national health care plan is needed to cover everybody's medical costs	Baseline	214658	10.88%	21.03%	43.38%	24.7%	0.38
	Graduation	196365	10.98%	20.21%	42.22%	26.59%	0.44
It is important to have laws prohibiting homosexual relationships	Baseline	299852	45.65%	28.22%	14.65%	11.48%	-0.39
	Graduation	243050	56.99%	23.4%	11.77%	7.85%	-0.41
Wealthy people should pay a larger share of taxes than they do now	Baseline	306896	13.71%	27.25%	39.51%	19.54%	0.3
	Graduation	244767	12.69%	26.73%	38.93%	21.65%	0.39
Marijuana should be legalized	Baseline	340195	42.9%	27.39%	21.79%	7.93%	0.27
	Graduation	279297	30.34%	26.36%	28.69%	14.6%	0.35
The death penalty should be abolished	Baseline	317725	29.89%	36.98%	19.28%	13.85%	0.2
	Graduation	260801	24.48%	36.75%	21.73%	17.04%	0.29
The federal government should do more to control the sale of handguns	Baseline	315706	5.35%	11.75%	37.91%	44.99%	0.24
	Graduation	197702	5.63%	11.97%	36.5%	45.9%	0.28
There is too much concern in the courts for the rights of criminals	Baseline	315250	6.54%	29.64%	47.05%	16.77%	-0.22
	Graduation	184967	8.01%	35.31%	42.65%	14.03%	-0.27
Racial discrimination is no longer a major problem in America	Baseline	358650	37.4%	45.51%	14.86%	2.23%	-0.18
	Graduation	324837	46.61%	39.75%	11.42%	2.21%	-0.25
The activities of married women are best confined to the home and family	Baseline	237805	59.99%	21.55%	12.83%	5.63%	-0.19
	Graduation	203593	66.77%	18.63%	10.46%	4.14%	-0.2

Note: This table displays ten questions related to policy issues, as featured in both the baseline and graduation surveys throughout most of our analysis period. The table shows the distribution of responses to these questions and the correlation between responses to each question and answers to political ideology (P): "How would you characterize your political views?" with a response scale from 1 (very conservative) to 5 (very liberal) in both surveys (entry and exit).

Majors. The data includes information on students' initially preferred majors at the start of college and their chosen majors. The list of majors in the survey slightly changes over time, so we aggregate them into broader groups at two levels, as detailed in Appendix Table A1. Appendix Figure A4 illustrates the transitions between preferred and actual majors, indicating that approximately half of the students in our sample ultimately pursued the majors they initially preferred, while the other half switched to a different major. Interestingly, the figure also shows movement between nearly all pairs of majors, even if the numbers are small for certain specific pairs.

Attrition. The sample for this study is derived from two distinct sampling processes. The baseline survey was conducted with a representative sample of

American first-year students, while the graduation survey sampled graduating students. The primary analysis sample consists of students who participated in both surveys. Among college cohorts included in both surveys, approximately 20% of baseline survey participants are also observed in the graduation survey. If participation in the graduation survey varies systematically by major choice (differential attrition), this study's findings could be biased.

Directly examining differential attrition between actual majors is impossible, as we lack information on the actual majors taken by students who did not participate in the graduation survey. However, it is possible to test for heterogeneous attrition by preferred major. Columns (1)–(3) of Table A2 reveal slight differences in the likelihood of participating in the graduation survey across students with different preferred majors. These differences, however, become negligible and statistically insignificant once controlling for students' high school GPA. This suggests that differential attrition is unlikely in our context and that our results are unlikely to suffer from significant attrition bias. Moreover, columns (4)–(6) demonstrate that preferred majors do not influence graduation survey participation for individuals with any baseline political ideology, mitigating concerns about attrition bias.

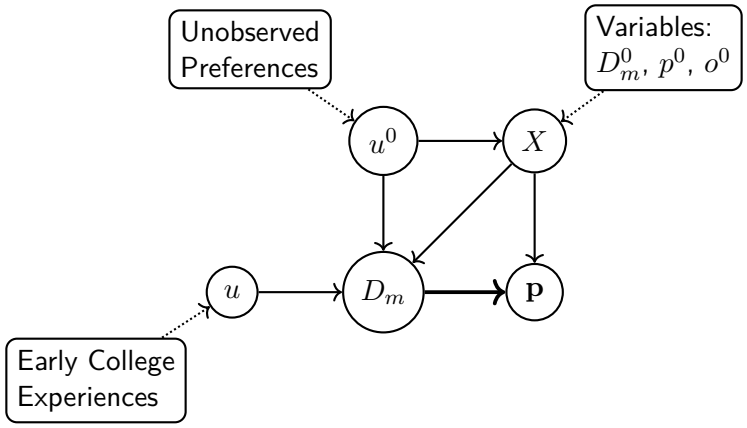
3 Academic Fields Impacts on Political Ideology

This section investigates the causal effect of academic fields on students' political attitudes. It begins with a selection-on-observables approach that leverages unique features of our dataset—pre-treatment measures of political ideology and students' stated major preferences collected just before college entry—to analyze the impact of college major choices. In addition, the dataset includes a comprehensive set of control variables, which helps address concerns about omitted variable bias and supports the plausibility of a causal interpretation. To further validate the causal interpretation, we implement a quasi-experimental design that exploits temporal variation in the availability of specific academic fields within colleges.

3.1 Baseline Estimates

As a first step, the following equation estimates the effect of each major on students' political ideology:

Figure 3: DAG Illustrating Our Baseline Identification Approach and Caveats



Note: This figure illustrates our baseline identification approach (equation 1) and its potential caveats using a directed acyclic graph. D_m denotes actual major choices, p represents graduation political ideology, and X includes the main control variables: preferred majors (D_m^0), baseline political ideology (p^0), and policy attitudes (o^0). u^0 captures unobserved preferences influencing major choices that are not controlled for, while u represents early college experiences occurring after the baseline survey that may also affect major choices. The graph demonstrates our identification assumption: neither u nor u^0 directly affects graduation political ideology. Figure A10 demonstrates the negative control exposure test for the validity of this assumption.

$$\underbrace{p_i}_{\substack{\text{Graduation political} \\ \text{ideology}}} = \underbrace{\sum_m \delta_m D_{im}}_{\substack{\text{Major} \\ \text{effects}}} + \underbrace{X_i'\alpha}_{\substack{\text{Baseline political ideology,} \\ \text{policy attitudes, preferred major}}} + \varepsilon_i. \tag{1}$$

where p_i represents the political ideology of student i at graduation. D_{im} is a dummy variable equal to 1 if student i majored in field m, and 0 otherwise. The coefficients of interest, δ_m, estimate the effect of major m on political ideology relative to the omitted reference category.

In the main specification, the vector X_i includes fixed effects for students' baseline political ideology, policy attitudes, and preferred majors at enrollment. Other specifications also include additional controls that, while not strictly necessary for identification, address concerns about omitted variable bias. These controls, detailed in Table A3, include pre-college goals, behaviors, preferences, and demographic characteristics, as well as college- and year-level fixed effects and interactions between some of these variables.

The identification assumption underlying this specification is that, conditional on the controls, actual major choices are not correlated with unobserved factors affecting graduation ideology ($\varepsilon_i \perp\!\!\!\perp D_{im} \mid X_i$). Figure 3 illustrates the identification framework using a directed acyclic graph (DAG). The figure highlights two distinct sets of variables that could theoretically bias the results: (1) unobserved

preferences that existed before the baseline survey but were not captured in it, and (2) later experiences during college that influence both final major choices and political ideology. Subsequent sections discuss evidence that these potential sources of bias are unlikely to affect our results significantly.

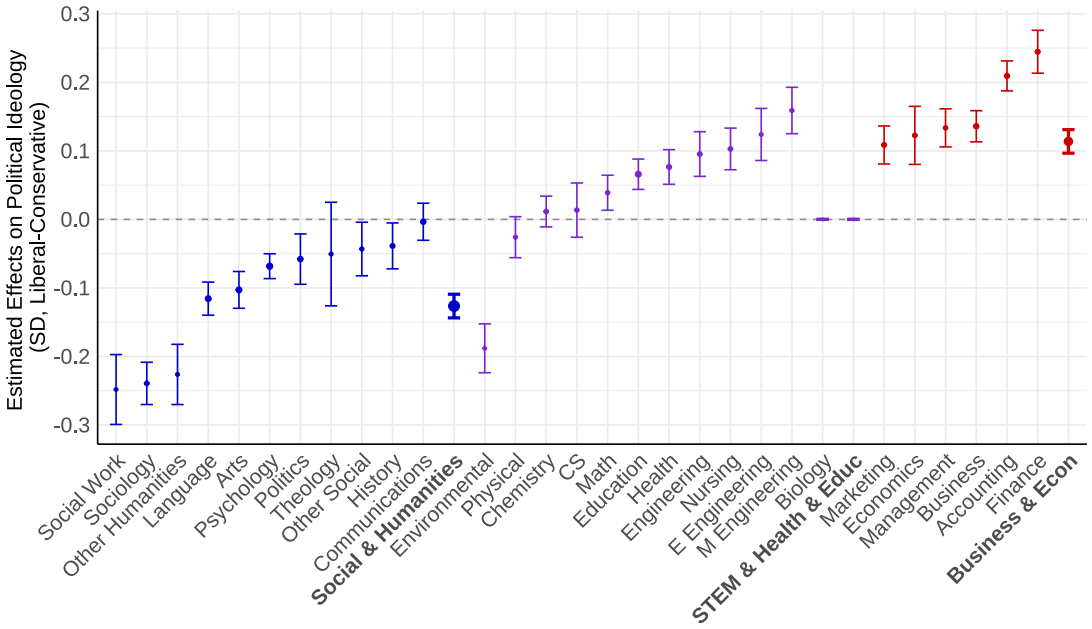
Figure 4 presents the main results. The bold lines represent coefficients from a model that groups majors into three broad categories, while the thinner lines show coefficients from a more detailed model with 28 specific major categories. The omitted group comprises STEM, health, and education students for the broad model and biology for the detailed model. The findings reveal substantial effects: majors in humanities, arts, and social sciences significantly shift students' ideology towards more liberal self-placements, with a notable impact of approximately 0.11–0.15 standard deviations compared to the omitted majors. Conversely, economics and business majors shift students approximately 0.09–0.13 standard deviations towards more conservative ideology relative to the more professionally oriented STEM, health, and education fields.

The figure also shows heterogeneity within major groups. Among humanities and social sciences, fields such as other humanities, sociology, anthropology, and social work exhibit the most substantial liberalizing effects. For example, choosing sociology over biology increases a student's liberal ideology by an average of 0.21–0.27 standard deviations. In contrast, finance and accounting are associated with a slight conservative shift in business-related fields compared to other majors in their category. Notably, environmental sciences stand out within STEM as an outlier, significantly shifting students toward liberalism.

Figure A5 shows the estimation results with an outcome of an indicator for identifying as liberal. Students in humanities, arts, and social sciences are 5–7 percentage points more likely to identify as liberal, while those in business and economics are 3–6 percentage points less likely, relative to the omitted group. Similarly, humanities and social sciences students are 2–4 percentage points less likely to identify as conservative, whereas business and economics majors are 2–4 percentage points more likely to do so (Appendix Figure A6). Further, business and economics students are 0–2 percentage points more likely to classify themselves as moderate, while those in other social sciences and humanities are 3–4 percentage points less likely (Appendix Figure A7). Finally, students in humanities and social sciences are 1–2 percentage points more likely to become highly liberal, whereas business and economics students show only a very small (less than 1 percentage point) increase in high conservative self-placement (Appendix Figures A8 and A9).

Furthermore, the estimates are insensitive to including different sets of control variables. Figure 5 displays the estimated coefficients from the broader model, considering different subsets of control variables listed in Table A3. Initially, the

Figure 4: Effects of College Majors on Political Ideology



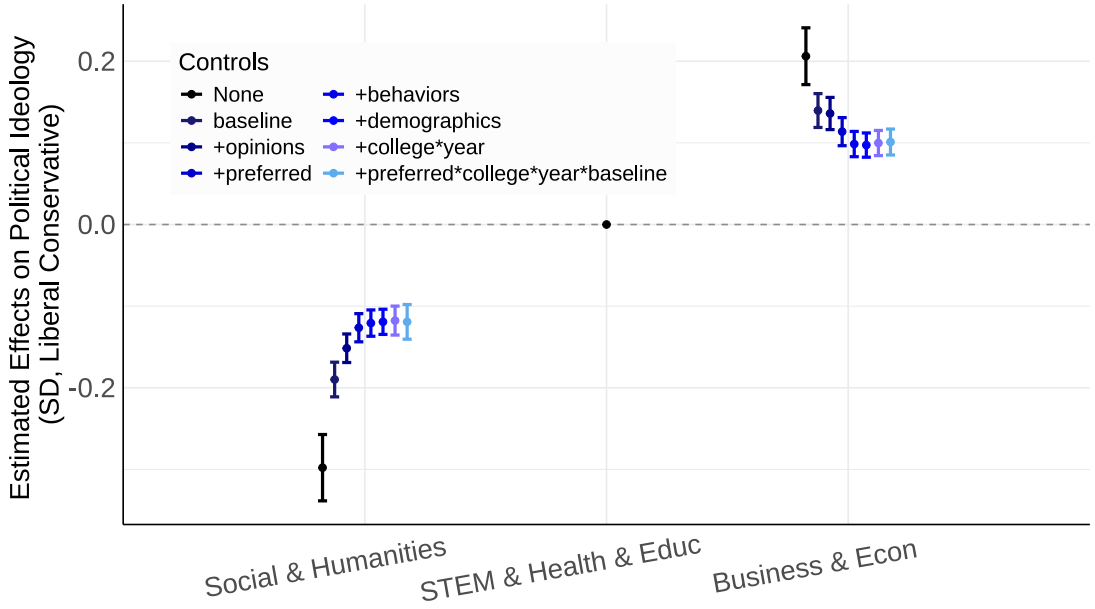
Note: This figure plots the estimates for δ_m from equation 1 along with their 95% confidence intervals. The bold lines represent coefficients from a model that groups majors into three broad categories, with STEM, health, and education as the omitted reference group. The thinner lines show coefficients from a more detailed model with 28 specific major categories, where biology is the omitted reference group. The outcome variable is students' self-reported answers to the question: "How would you characterize your political views?". Estimates are presented in standard deviation units. Both models control flexibly for students' baseline political ideology, policy attitudes, and major preferences. The sample is restricted to students with non-missing values for both major and outcome, totaling 313,466 students.

coefficients reflect a model incorporating only the major dummies, which is prone to selection bias. The model is then sequentially expanded to include controls for students' initial political ideology, their opinions on different policy areas, and their preferred majors. These first three sets of controls appear crucial for satisfying our identification assumption, as their inclusion significantly impacts the estimated coefficients.

However, the estimates remain stable as additional control variables are incorporated into the analysis. The inclusion of behavioral controls—such as participation in student elections, frequency of political discussions, and stated goals regarding environmental activism and racial equity—does not meaningfully alter the results. This stability is particularly noteworthy since these behavioral variables could be considered potential sources of unobserved confounding. Adding comprehensive demographic controls and highly granular fixed effects similarly leaves the coefficient estimates unchanged, providing additional evidence that omitted variable bias is unlikely to drive the results.

Consistent with this interpretation, a negative control exposure (NCE) test is conducted to detect potential omitted variable bias. NCE tests evaluate whether

Figure 5: Effects of College Majors on Political Ideology, Robustness to Including Additional Sets of Control Variables



Note: This figure plots the estimates for δ_m from equation 1 and their 95% confidence intervals. The estimated coefficients represent the effects of studying in each major group relative to STEM, health, and education (the omitted group of majors). The outcome variable is students' responses to the following question: "How would you characterize your political views?". Estimates are shown in standard deviations. The sample includes only students with non-missing majors and political ideology in the graduation survey (313,466 students). Table A3 provides the full list of control variables. Baseline refers to baseline political ideology and preferred refers to preferred majors. Our model incorporates all variables flexibly (with fixed effects for each value available in the survey).

an observed variable—used as a proxy for unobserved threats—is independent of the outcome after conditioning on the treatment. Under a valid design, this proxy should add no information about the outcome beyond its correlation with the treatment; any detected association implies a violation of the treatment's independence.[5] In our setting, students' preferred majors serve as the negative control, as they likely capture pre-existing factors influencing major choices. Panel A of Figure A12 shows that, after controlling for all other factors and actual major choices, preferred majors have near-zero coefficients in predicting graduation political ideology. In contrast, when actual majors are excluded from the model (Panel B), preferred majors correlate with graduation political ideology, confirming their validity as a negative control exposure. This further supports the validity of our conditional-on-observables approach for generating plausibly causal estimates in this setting.

[5]See Danieli et al. (2023) for a discussion of negative control instrument tests, which are equivalent to NCE tests in IV settings.

Furthermore, the results in Panel B provide an additional robustness check. While Panel A indicates that unobserved pre-college preferences are unlikely to bias our estimates, events during college—such as interactions with conservative peers—could still affect both final major choices and political ideology. For example, such interactions might lead some students to adopt more conservative views and choose majors like business. To address this, students' declared major preferences at college entry can be used as instruments for their eventual major selections. This strategy exploits variation driven by initial preferences, thereby mitigating bias from later college experiences. The results in Panel B can be viewed as the reduced form of this instrumental variable approach. The following system of equations implements the full IV strategy:

$$D_{im} = \sum_m \pi_m D^0_{im} + Q_i'\beta + u_i, \tag{2}$$

$$p_i = \sum_m \tau_m D_{im} + Q_i'\gamma + v_i, \tag{3}$$

Where D^0_{im} are the preferred major dummies, serving as instrumental variables for actual major choices D_{im}, and Q_i is defined as X_i excluding the preferred major dummies. Figure A4 shows that about 50% of students ultimately pursue their preferred major, indicating a strong first stage for the IV approach. The independence assumption for this analysis—requiring that preferred majors are uncorrelated with factors affecting graduation ideology, conditional on our controls ($v_i \perp\!\!\!\perp D^0_{im} \mid Q_i$)—is stronger than that of our main analysis. This assumption can be tested using a negative control instrument test with proxies for other determinants of major preferences, such as life goals, which we plan to assess in future versions. Meanwhile, this exercise helps mitigate concerns that later college experiences may drive our estimates.

The IV monotonicity assumption is likely to hold because a preference for a specific major increases the likelihood of pursuing it. This exercise also relies on an exclusion restriction: major preferences should affect graduation ideology only through their impact on major choice. A potential violation could occur if students who preferred a major but ultimately did not choose it still took related courses that influenced their political ideology. Although such violations might make these results less comparable to our main approach, they would operate through the same channel and are unlikely to be large in our setting.

Figure A11 shows that the results from this IV approach are very similar to those obtained from our main OLS estimation. Furthermore, the IV estimates are slightly larger than the baseline OLS estimates. If the OLS estimates were

biased due to omitted variables, we would expect them to be upward biased. Thus, the fact that the IV estimates are larger suggests that the baseline OLS estimates may not be biased due to unobserved factors. It is plausible that the larger estimates using the IV strategy result from attenuation bias in the OLS estimates, which may arise due to measurement error. However, the differences between the estimates from the two strategies are not statistically significant and may reflect noise.

3.2 Quasi-Experimental Analysis of College-Level Changes in Fields-of-Study Availability

While the main results rely on a conditional-on-observables approach, we further validate the causal interpretation using a quasi-experimental design that exploits college-level shocks to field supply. In theory, such shocks could serve as instruments to estimate the impact of college majors—provided they affect students' political ideology only through changes in their chosen majors. However, this exclusion restriction is unlikely to hold here, as these shocks may also influence students' course selections beyond their majors. Nonetheless, because these expansions reflect supply-side shifts rather than demand, they are expected to be orthogonal to students' potential outcomes, allowing us to estimate a policy-relevant causal parameter: the effect of expanding access to specific fields within a college. For statistical power reasons, our analysis focuses on sharp expansions in business and economics programs. While some colleges also expand STEM fields, the implications for political ideology are ambiguous, and humanities and social sciences are less likely to expand during the study period.

Administrative data from the Integrated Post-secondary Education Data System (IPEDS) is employed to identify such shocks. This dataset provides information on the total number of graduates from each program (at the Classification of Instructional Programs, or CIP, level) by college and year. We classify the CIP codes into three groups of majors, corresponding to the groups used in our primary analysis. This allows us to calculate, for each college i by year y, the share of students in business and economics majors, denoted by B_{icy} (calculated as leave-one-out shares, excluding the individual). For the main analysis, shocks are defined as years with a relative increase of 30% or more in the share of students studying business or economics, with no significant change (an increase or decrease of 15% or more) in the previous year.

This approach allows us to identify large shocks in field availability in 123 of the colleges in our sample. Anecdotal evidence suggests that these shocks are driven by external factors. For instance, web reports indicate that the two largest colleges

experiencing such shocks since 2010 received significant financial donations aimed at expanding access to business and economics programs, with the timing closely aligning with the identified shocks. This further supports the assumption that these shocks reflect college supply decisions rather than students' demand.

The following event study equation estimates the dynamic impact of these college-level shocks:

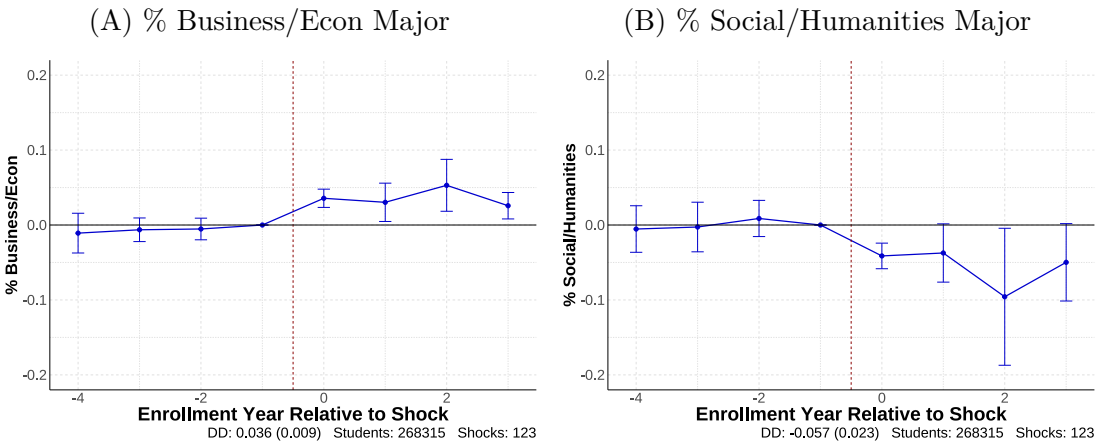
$$y_{icy} = \sum_{k \neq -1} \rho_k \mathbb{1}[\text{years since shock} = k] + \eta_c + \zeta_y + \epsilon_{icy}, \tag{4}$$

The term $\mathbb{1}[\text{years since shock} = k]$ is an indicator variable equal to 1 if the students first enrolled in college k years before ($k < 0$) or after ($k > 0$) the identified shock year. The coefficients of interest, ρ_k, represent the effect of the shock relative to the omitted category ($k = -1$, the year immediately preceding the shock). The terms λ_c and η_y denote college and year fixed effects, respectively. The analysis focuses on a window of eight years around the shock. Additionally, estimating an alternative specification that includes a single indicator for post-shock years allows us to capture the average effect on students during the four years following the shock. The timing of events varies across colleges in our sample, resulting in a staggered difference-in-differences design. Recent literature (surveyed recently by Roth et al., 2023) has argued that Two-Way Fixed Effects (TWFE) regressions may be biased in such settings. To overcome these issues, our main estimation employs the imputation estimator (Borusyak et al., 2024), and we verify that the results are robust to alternative estimation methods.

Figure 6 presents the estimated effects on binary indicators for students majoring in Business/Economics and Social Sciences/Humanities. Prior to the shock, both outcomes follow parallel trends. However, following the shock, the probability of a student majoring in Business/Economics increases by 4 percentage points, while the likelihood of majoring in Social Sciences/Humanities declines by 6 percentage points. These results indicate that the shocks are statistically significant and produce a meaningful shift in academic field exposure.

To further validate these findings, we conduct falsification tests to ensure that students' characteristics remain stable before and after the shocks. Panels (a)–(c) of Figure A14 show that the shocks do not significantly affect students' stated preferred majors, and Panel (d) confirms that baseline political ideology is unchanged. This evidence supports the view that the shocks are driven by supply-side factors rather than shifts in student demand. It is important to note that these falsification tests are highly powered, as they include the full sample of students from the baseline survey.

Figure 6: Estimated Impacts of College-Level Shocks to Feild Availability on Major Choices



Note: These figures plot the estimates for ρ_k from equation 4, representing the effects of college-level shocks to the availability of business and economics on students' actual major choices, along with their standard errors clustered at the college level. Each figure also reports the equivalent difference-in-difference estimate for the average impact. Estimation is based on the imputation estimator (Borusyak et al., 2024). *** p<0.01, ** p<0.05, * p<0.1

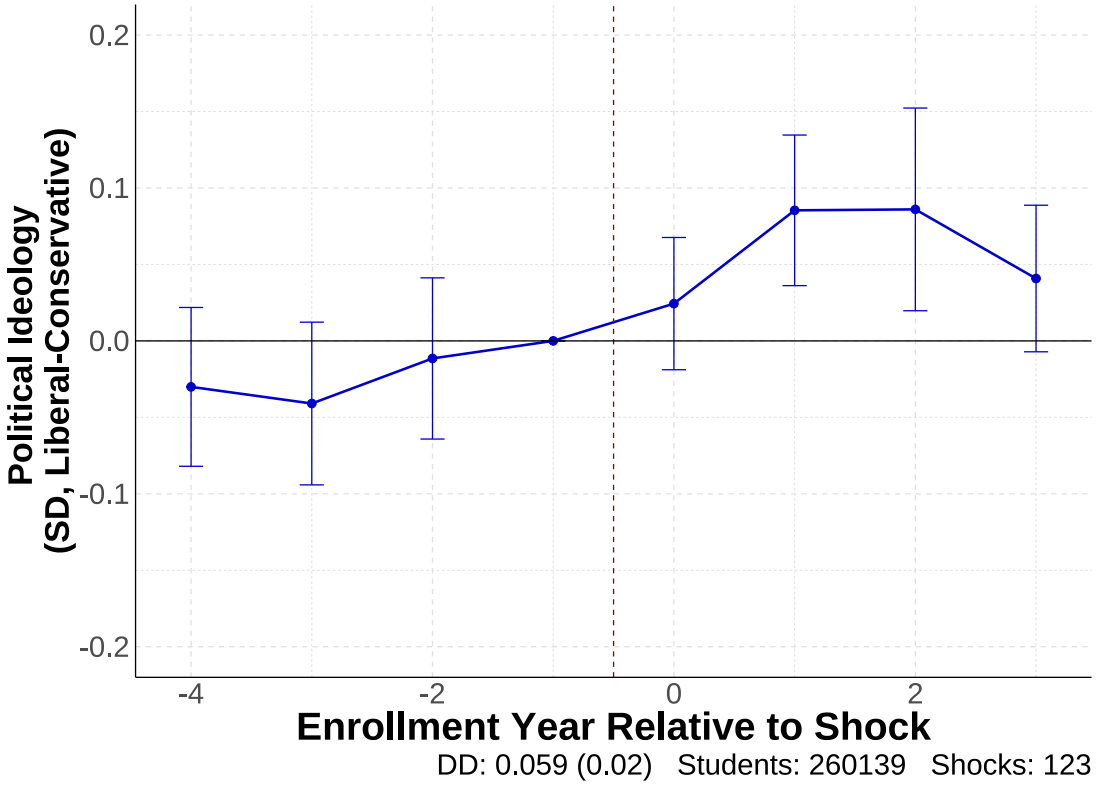
Lastly, Figure 7 reveals that, subsequent to the shock, students' graduation political ideology shifts 0.06 standard deviations toward conservatism. This observation further corroborates our main causal channel: the academic field in which a student enrolls has a significant influence on their political ideology.

These results are not directly comparable to those from the conditional-on-observables approach, as they estimate the average effect of college-level expansions rather than isolating the direct impact of majoring. Nonetheless, the estimates are both statistically and economically significant, suggesting that expanding opportunities in specific fields of study meaningfully influences students' political ideology. The results are also robust for changing the definition of event as shown in Table A4 and to alternative estimators. We also validate that the results are robust to controlling for preferred majors and baseline political ideology and for using other estimators.

3.3 Magnitude of the effects

While our analysis focuses on ideological self-identification, these effects likely extend to voting behavior. Although our surveys do not capture actual votes, data from CCES and ANES reveal a strong correlation between self-placement on the liberal-conservative scale and voting patterns: most liberals vote Democratic, most conservatives vote Republican, and moderates tend to lean Democratic. Our estimates show that studying business or economics as a major makes students 10 percentage points less likely to identify as liberal—shifting six percentage points

Figure 7: Estimated Impacts of College-Level Shocks to Field Availability on Students' Ideology



Note: This figure plots the estimates for ρ_k from equation 4, representing the effects of college-level shocks to the availability of business and economics on students' political ideology, along with their standard errors clustered at the college level. The figure also reports the equivalent difference-in-difference estimate for the average impact. Estimation is based on the imputation estimator (Borusyak et al., 2024). *** p<0.01, ** p<0.05, * p<0.1

toward conservatism and four percentage points toward moderation. Based on the voting shares in Appendix Figure A3, this corresponds to roughly $0.8\times6 + 0.25\times4 \approx 6$ percentage points lower likelihood of voting Democratic. These magnitudes imply that major choice is among the most influential experiences shaping political attitudes. For context, Brown et al. (2023) find that every additional year spent in a county with a one percentage point higher Democratic vote share during the formative ages of 13–19 increases the likelihood of voting Democratic by about 0.05 percentage points. Thus, our estimates suggest that majoring in social sciences or humanities, rather than business or economics, is as consequential as moving to a county with approximately 20 percentage points higher Democratic support during all of these six formative years.

These findings have broader political implications. Currently, students become 0.1 standard deviations more liberal during college, but if all students studied economics or business, they would instead become 0.03 standard deviations more conservative, thereby narrowing the gap between college graduates and less educated individuals. Moreover, differential major selection partly explains the

gender gap in political attitudes: it accounts for 0.04 standard deviations of the 0.23 standard deviation gap at graduation (about 17%). Finally, because students with pre-existing political ideology tend to choose majors that reinforce their views, college majors contribute to increased polarization within the student body.

4 Investigating the Mechanisms Driving the Effects

The results in the previous section show that college majors significantly affect students' political attitudes. This section explores why this happens. First, it studies students' opinions on different policy issues.Second, it examines the role of peer effects.Third, it discusses additional potential mechanisms.

4.1 Policy Attitudes

This analysis explores how college majors influence students' worldviews beyond simple liberal-conservative self-placement. It begins by estimating equation 1 using various policy attitudes—measured in standard deviations—as outcome variables. Table 2 reports the results, which indicate that college majors affect policy attitudes in an issue-specific manner. For example, students majoring in business or economics tend to adopt more right-leaning views on taxation (a 0.16 standard deviation effect relative to the omitted category), whereas their views on abortion rights remain relatively liberal (a 0.02 standard deviation effect compared to the omitted category).

Furthermore, the analysis quantifies how well the overall change in political ideology aligns with shifts in policy attitudes. To do so, we first predict each student's political ideology using their responses to all policy questions in Table 1; these predicted values capture how closely a student's policy attitudes conform to a liberal outlook beyond their self-placement on the liberal-conservative spectrum. We then estimate equation 1 with these predicted values as the outcome. Figure A13 shows that majors driving students toward more liberal self-identification also shift their attitudes on various policy areas in a manner consistent with a liberal worldview. The effect size of moving from economics or business to other social sciences or humanities is 0.12 standard deviations—smaller than the effect on self-placement political ideology, yet still substantial. This suggests that the overall change in political ideology is partly explained by changes in policy attitudes. In future work, we plan to decompose the overall change into components attributable to shifts in different policy attitudes, priorities, and residual factors using an Oaxaca-Blinder decomposition.

Table 2: Effects of College Majors on Opinions

	Index	Abortion	Guns	Death	Criminal	Race	LGBTQ	Marijuana	Healthcare	Taxes
Business/	-0.02**	0.03**	-0.02	-0.04**	0.03*	0.08***	0.04***	0.05***	-0.16***	-0.16***
Economics	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
Social/	0.11***	0.09***	0.04***	0.14***	-0.14***	-0.12***	-0.10***	0.13***	0.08***	0.07***
Humanities	(0.00)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)	(0.01)
N	291849	270806	164322	222709	153864	284371	205612	240473	169710	210351

This table shows the estimates for δ_m from equation 1 and their 95% confidence intervals. The estimated coefficients represent the effects of studying each major relative to STEM, health and education (the omitted group of majors). The sample includes only students with non-missing values in the major and outcome. The outcomes represent responses (measured in standard deviations) to the following questions: Abortion should be legal; The federal government should do more to control the sale of handguns; The death penalty should be abolished; There is too much concern in the courts for the rights of criminals; Racial discrimination is no longer a major problem in America; It is important to have laws prohibiting; Marijuana should be legalized; The activities of married women are best confined to the home and family; Wealthy people should pay a larger share of taxes than they do now; A national health care plan is needed to cover everybody's medical costs *** p<0.01, ** p<0.05, * p<0.1

4.2 Could Peer Effects Drive the Impacts of College Majors?

Students selecting different majors are exposed to peers with varying political ideology. This sub-section examines whether students' political ideology are influenced by the political ideology of peers in the same college major cohort. To avoid reflection issues (Manski, 1993), the analysis focuses on how one's *graduation* ideology is affected by their peers' *baseline* ideology. Results show no evidence for such effects in our setting and allow us to rule out peer effects as a key mechanism driving the impacts of college majors on students' ideology.

Throughout the analysis, peers are defined as students who enrolled in the same college in the same year and intended to pursue the same major—that is, based on preferred majors rather than actual majors. This choice is driven by two considerations. First, since students typically finalize their majors in their second or third year, using preferred majors avoids potential endogeneity from early college friendships influencing final major choices. Second, the preferred major data from the freshman survey covers a much larger sample than the actual major data from graduation, reducing measurement error and increasing precision. Moreover, many students with the same preferred major eventually choose the same actual major, and even those who do not are likely to share similar early course experiences.

Causal identification relies on exploiting idiosyncratic variations in peers' baseline ideology within the same college major over time. To achieve this, we examine the relationship between a student's graduation ideology and the average baseline

ideology of their peers, controlling for fixed effects at the college-by-major, college-by-year, and major-by-year levels. We also include a counterfactual measure of peer ideology constructed from students in the same college and major from adjacent cohorts (two years ahead and two years behind). This control allows us to interpret the estimates as comparing the effects of actual peers versus similar potential peers. Under the assumption that, conditional on our fixed effects, peers are as good as randomly drawn from the pool of potential peers, controlling for their average ideology is sufficient for identification.[6] Formally, the following equation estimates peer effects:

$$p_{icmt} = \sigma P^{-i}_{cmt} + \beta \Phi^{-i}_{cmt} + \nu_{cm} + \theta_{ct} + \lambda_{mt} + \varepsilon_{icmt} \tag{5}$$

Where p_{icmt} is political graduation ideology of student i studying at college c, preferring major m, and starting their studies at year t; P^{-i}_{cmt} represents the average baseline political ideology of the student's peers (in standard deviations); Φ^{-i}_{cmt} captures the average ideology of students in the same college and preferred major across the five-year window ($t' \in \{t-2, t-1, t, t+1, t+2\}$; ν_{cm}, θ_{ct}, and λ_{mt} denote college-major, college-cohort, and major-cohort fixed effects, respectively. Identification of this specification relies on the assumption that potential graduation ideology are orthogonal to peers' average ideology, conditional on the controls. This assumption yields a testable implication: a student's baseline political ideology should be uncorrelated with their peers' average ideology after conditioning on our control set. We empirically validate this and discuss the results below.

Measuring peer baseline ideology based on a subsample. A key challenge in our setting is that only a subset of peers is observed. Although this subsample is representative, using the observed peers' average ideology may introduce attenuation bias by incorrectly assuming that the observed and unobserved peers share similar idiosyncratic ideology components. To address this, we construct an adjusted treatment measure that predicts the unobserved peers' ideology using fixed effects from Equation 5. Specifically:

$$P^{-i}_{cmt} = \alpha_{ct} P^{-i,O}_{cmt} + (1 - \alpha_{ct}) \widehat{P^{-i}_{cmt}} \tag{6}$$

[6]This approach follows Guryan et al. (2009) and can be viewed as implementing a recentering econometric strategy (Borusyak and Hull, 2023). However, because students can choose their college and major in our setting, we include additional fixed effects and interpret our identification strategy as model-based, with the fixed effects absorbing slight differences between groups within the pool of potential peers.

Where $P_{cmt}^{-i,O}$ is the average ideology of observed peers, α_{ct} is the share of students in college c and enrollment year t who are covered in the baseline survey,[7], and $\widehat{P_{cmt}^{-i}}$ is the predicted political ideology of students in college c and enrollment year t, with preferred major m, based only on the fixed-effects specified in equation 5. Φ_{cmt}^{-i} is also adjusted using the predicted value for the unobserved potential peers. Under the assumption that peers' ideology are uncorrelated conditional on controls, this constructed measure equals the average ideology of all peers (observed and unobserved) plus a small measurement error due to idiosyncratic components in unobserved peers' ideology. Appendix C.1 formally derives the attenuation bias and presents our proposed solution. In the main analysis, the sample is restricted to college cohorts, where the baseline survey coverage exceeds 30 percent of enrolled students, to avoid noisy measures of peers' ideology.

Avoiding exclusion bias. Estimating peer effects in specifications that include fixed effects presents a unique challenge of exclusion bias (Guryan et al., 2009; Angrist, 2014; Caeyers and Fafchamps, 2024). The exclusion bias arises because individuals are mechanically excluded from their own peer group, creating a negative correlation between individual outcomes and peer averages in specifications that include fixed effects. For individuals in the same college-year-major cell, when an individual is above (below) the pool average, their exclusion from their peer group necessarily lowers (raises) the peer average, inducing a negative correlation. A split-sample method addresses this bias by dividing the data into separate groups for measuring outcomes and defining peer ideology (Stevenson, 2017). Our analysis builds on this approach by implementing a four-way split. It randomly divides the graduation sample into quarters, using each quarter in turn as the outcome group while constructing peer measures from the remaining three quarters combined with baseline survey observations not included in the graduation sample. The reported coefficients average the estimates from these four iterations.[8]

Falsification tests. Columns 1-2 of Table 3 presents balance test, which regresses students' baseline political ideology on their peers' average ideology using specification 5. The specification accounts for partial coverage and exclusion bias, as previously described. Column 1 uses the full baseline sample, while column 2 restricts the outcome to students who complete the graduation survey (though the peer ideology treatment remains defined using the full freshman sample). The

[7]We calculate the coverage as the number of surveyed students in college c in year t divided by the number of total first-year BA enrollment based on the IPEDS administrative data.
[8]We do so by estimating equation 5 with quarter dummies interacting with all variables and fixed effects except the treatment.

results support the identification assumption, showing small, negative, and statistically insignificant coefficients in the large freshman sample and small positive but insignificant coefficients in the graduation sample. The large sample size allows the rejection of positive coefficients larger than 0.007 and 0.053 in the baseline and graduation samples, respectively. These precise null results provide compelling evidence that the identification strategy successfully isolate quasi-random variation in peers' ideology, uncorrelated with students' own ideology.

The first two columns of Appendix Table A1 replicate the analysis without adjusting for partial coverage, yielding qualitatively similar but smaller coefficients due to attenuation bias. Columns 1-2 of Appendix Table A2 present an alternative approach to exclusion bias, constructing peer measures solely from students not included in the graduation survey. These results align closely with the main balance test reported above. Columns 1-2 of Appendix Table A3 demonstrate robustness to varying minimum coverage thresholds (0-70%), with only the 60% threshold showing marginal significance in the graduation sample. Appendix Table A4 examines balance tests by major groups, with all majors showing insignificant coefficients.

Estimated peer effects. Columns 3-4 of Table 3 present the main estimates for the impacts of peer political ideology, based on equation 5. Column 4 includes controls for students' baseline political ideology. The estimated effects are small and statistically insignificant (0.001 and -0.007, respectively). The large sample size enables ruling out peer effects as small as 0.021 in the preferred specification (column 4). Appendix Tables A1-A3 demonstrate robustness across various specifications, consistently showing small negative coefficients with precise standard errors. Appendix Table A4 examines heterogeneity across major groups, finding no significant effects in any of them.

These results stand in stark contrast to the strong positive correlation observed between peers' and students' ideology. A naive regression of peers' baseline ideology on students' graduation ideology yields an estimated coefficient of 0.46 standard deviations (SE = 0.003), indicating a highly statistically significant relationship. However, our findings suggest that this correlation is driven only by the self-selection of students with similar ideology into the same fields, rather than by genuine peer effects.

A back-of-the-envelope calculation assesses whether peer effects explain a large fraction of the estimated college major effects. The baseline difference in political views between business/economics and social/humanities majors is 0.351 standard deviations. With an upper bound peer effect estimate of 0.021 standard deviations, the maximum peer effect from switching between these majors equals 0.007

standard deviations (0.021 × 0.351). Since only 36 percent of the pairs of students with the same preferred major ultimately choose the same major, a more conservative estimate yields 0.019 standard deviations (0.007/0.366). This accounts for merely 9 percent of the estimated effect of choosing business/economics over social/humanities (0.22 standard deviations), suggesting that peer effects could only explain a tiny fraction of major-specific changes in political ideology.

Table 3: Peer Effects at the College-Major-Cohort Level

Outcome:	Own Baseline Ideology		Own Graduation Ideology	
	(1)	(2)	(3)	(4)
Peers Ideology (Adj.)	-0.002	0.017	0.001	**-0.007**
	(0.005)	(0.019)	(0.016)	**(0.014)**
Baseline Ideology Controls				✓
Fixed Effects	✓	✓	✓	✓
Sample	Baseline	Graduation	Graduation	Graduation
Observations	3,995,045	238,022	238,022	238,022
R^2	0.1409	0.3194	0.3360	0.5178
Within R^2	0.0000	0.0001	0.0000	0.0000

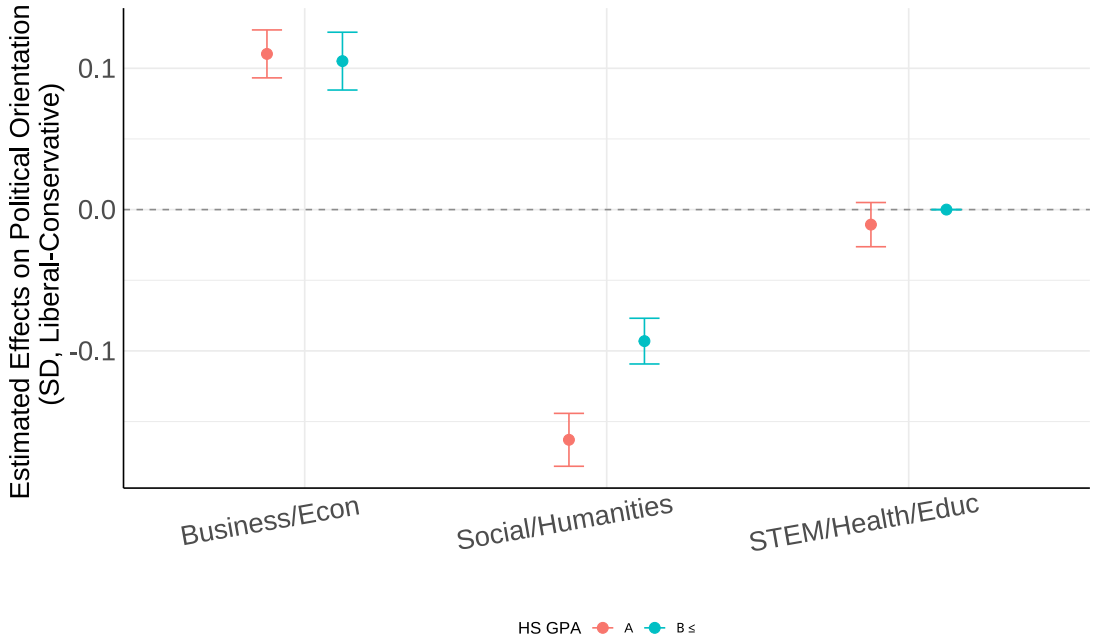
Note: This table presents estimates of peer effects on students' political ideology based on equation 5. The outcome variable measures political views using responses to the question "How would you characterize your political views?" from both the baseline survey (columns 1-2, serving as balance tests) and the graduation survey (columns 3-4). The treatment variable captures peers' responses to the same question in the baseline survey, where peers are defined as students from the same college-cohort-preferred major group. The estimates account for exclusion bias using a four-way split-sample approach. The treatment is adjusted for partial coverage, and specifications include controls for the average political views of potential peers from adjacent cohorts (two years ahead and behind). Column 4 adds controls for students' baseline political ideology. All estimates are in standard deviation units. The sample is restricted to students with non-missing values for both major and political views and with information available for at least 30% of their peers. Fixed effects include college-major, college-cohort, and major-cohort combinations.

4.3 Discussing Potential Mechanisms

The results show that college majors significantly affect students' political ideology and policy attitudes. Peer effects could not drive these effects. Therefore, other channels, such as exposure to faculty and academic material, are potentially more important in driving these effects.

Although new data on faculty political ideology and teaching perspectives have been collected for future analysis, those results are not yet available. Nonetheless, interesting heterogeneity emerges: Figure 8 shows that the liberalizing effects of social sciences and humanities are more pronounced among higher-ability students, suggesting that learning mechanisms may be an important channel. In future versions of this paper, we will use additional data sources to further examine these channels. We will also assess the role of earnings expectations as a potential channel.

Figure 8: Heterogeneity of the Effects of College Majors on Students' Ideology, by Students' Abilities



Note: This figure presents the estimates for δ_m from the estimation of an adjusted version of equation 1, where major indicators are interacted with students' high school GPA (an indicator for GPA of A-, A, or A+), along with their 95% confidence intervals. The estimated coefficients capture the effects of studying each major relative to STEM, health, and education for students with lower high school GPAs (the omitted group). The outcome variable is students' responses to the question: "How would you characterize your political views?" The estimates are reported in standard deviations. The sample comprises 311,617 students with non-missing high school GPA, college major, and political ideology data from the graduation survey.

5 Conclusion

This study provides new evidence on the role of academic fields in shaping college graduates' political attitudes. Leveraging a large-scale dataset and combining conditional-on-observables with quasi-experimental approaches, we find that academic choices significantly impact students' political ideology and policy attitudes at graduation. Humanities and social sciences tend to make students much more liberal, while fields such as business and economics have a smaller—or even

negligible—liberalizing effect. These findings suggest that major selection is a pivotal life experience in developing political ideology. Further analysis indicates that, when major selection patterns are considered, academic fields contribute to growing polarization and help explain the gender gap in political attitudes.

By emphasizing the differential influence of college majors on political values, this research contributes to ongoing debates about how higher education shapes youth worldviews. The results imply that if all students pursued economics or business, the typical liberal shift among graduates would vanish, narrowing—or even eliminating—the ideological gap with non-graduates. Moreover, changes in major composition, such as the recent decline in humanities enrollments, may have far-reaching effects on the political landscape.

In summary, this research highlights the importance of educational experiences in shaping students' political attitudes, complementing existing work that mainly focuses on labor market outcomes. While the development of new perspectives on societal issues is a central aspect of higher education, the normative implications of these findings remain open to interpretation.

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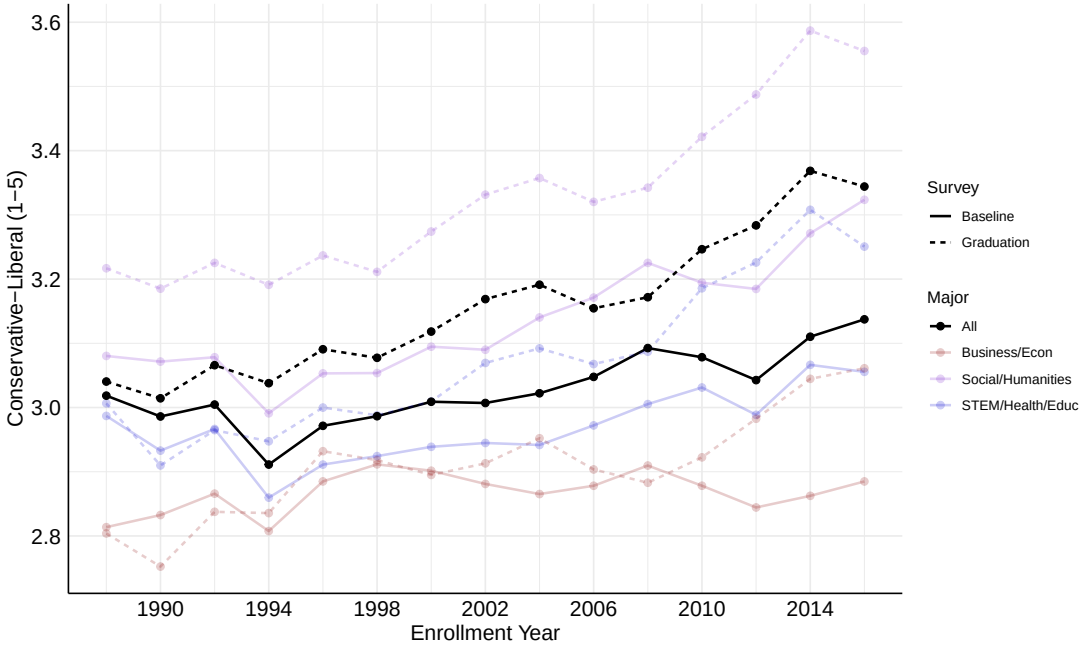
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Appendix A Appendix Figures

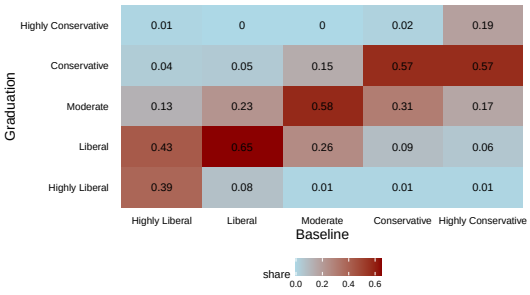
Figure A1: Students' Political Ideology, 1990–2015



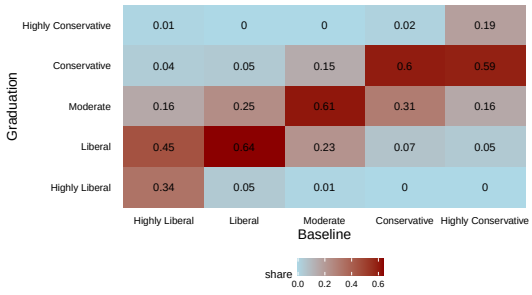
Note: This figure plots students' baseline (solid lines) and graduation (dashed lines) political ideology. The sample includes all students with non-missing values for this outcome in the entry and exit surveys, who started their studies in 1990 or later (299,630 students). Note that the colleges included in the survey have not been consistent over the years, and thus, changes over the years may be partly attributed to changes in the sample of colleges.

Figure A2: Transitions in Political Ideology During College

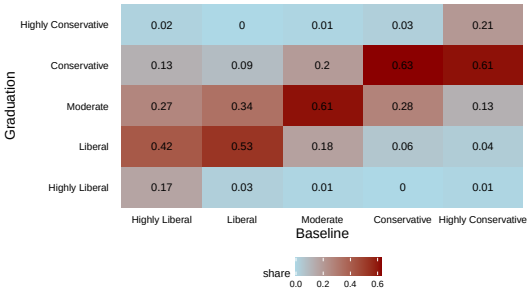
(A) All



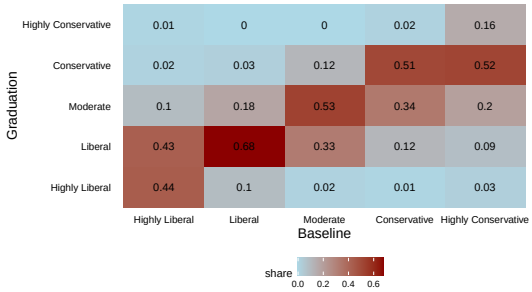
(B) STEM & Health & Education



(C) Business & Economics

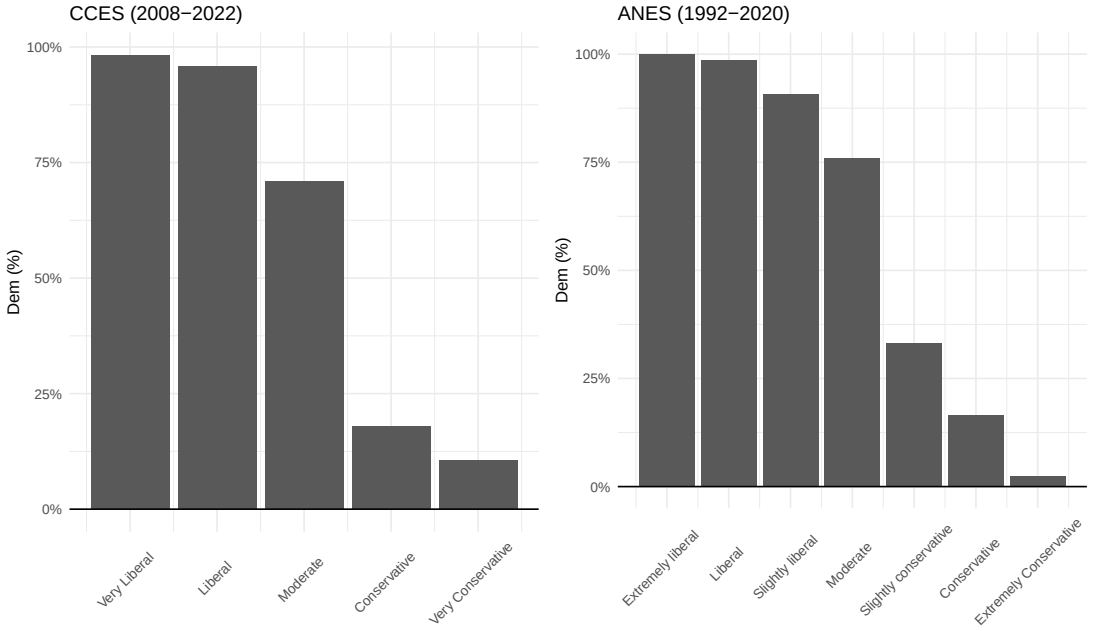


(D) Social Sciences & Humanities & Arts



Note: This figure plots the changes in students' baseline and graduation political ideology. The sample includes all students with non-missing values for this outcome in the entry and exit surveys, totaling 299,630 students. Panel A's sample includes all students, while the samples in panels B, C, and D are restricted to those in specific groups of majors.

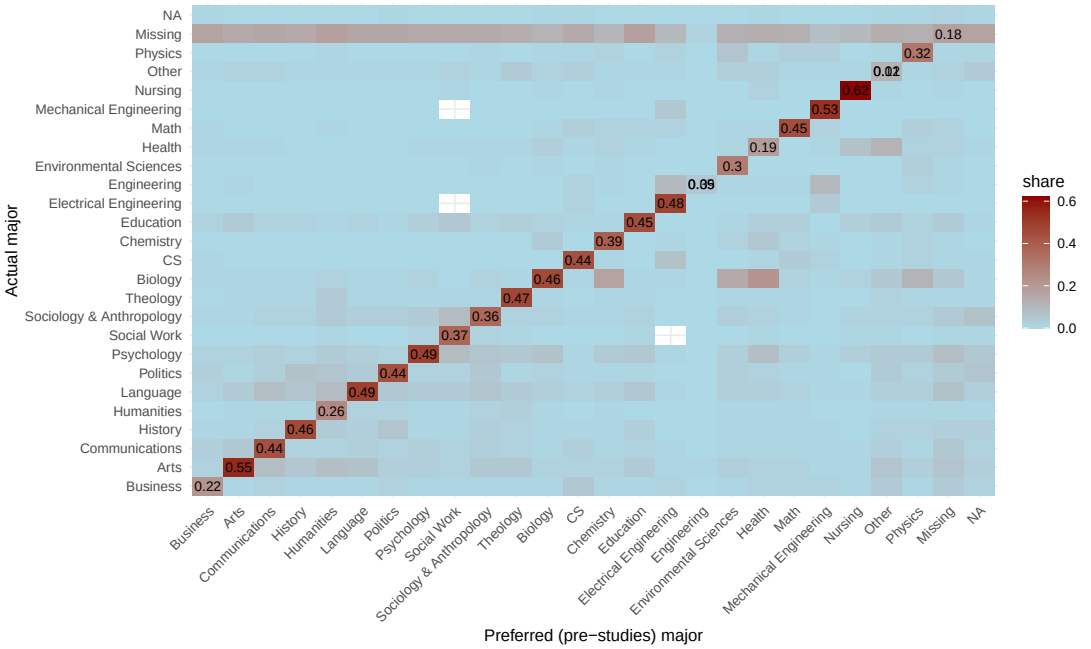
Figure A3: Students' Attitudes and Voting in National Surveys



Note: This figure plots students' attitudes on a liberal-conservative scale and their voting in presidential elections. The sample includes all students in the CCES and ANES surveys with non-missing values for the scale ('How would you characterize your political views?') and voting in presidential elections variables. We focus on student responses in the ANES (American National Election Studies) and CCES (Cooperative Election Study), which both feature an ideology scale and a presidential voting question. The larger CCES (n=11,570) aligns more closely with our surveys in query structure[a] but only dates back to 2006, limiting historical overlap. The ANES, older and with fewer students (n=345), employs a different ideology question ('We hear a lot of talk these days about liberals and conservatives. Here is a 7-point scale on which the political views that people might hold are arranged from extremely liberal to extremely conservative. Where would you place yourself on this scale, or haven't you thought much about this.') and scale. The correlation between ideology and voting behavior is very high in both surveys and higher in the CCES (0.65) than in the ANES (0.59). The figure presents the distribution of voting to the democrat candidate in national elections in both surveys based on the ideology scale.

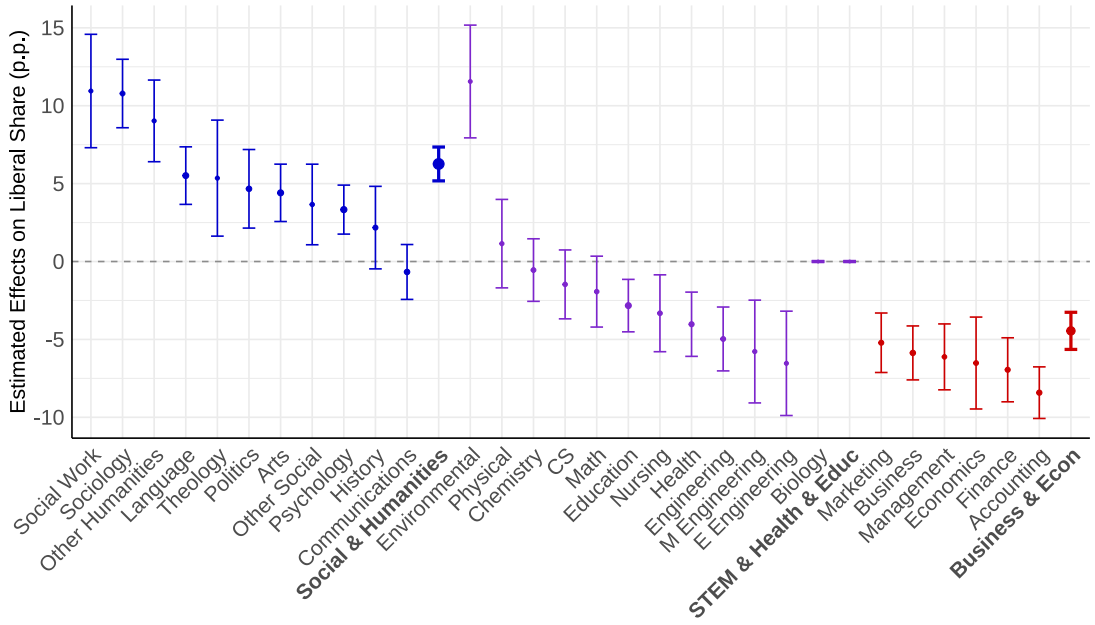
[a]'In general, how would you describe your own political viewpoint'

Figure A4: Major Choice Changes During College



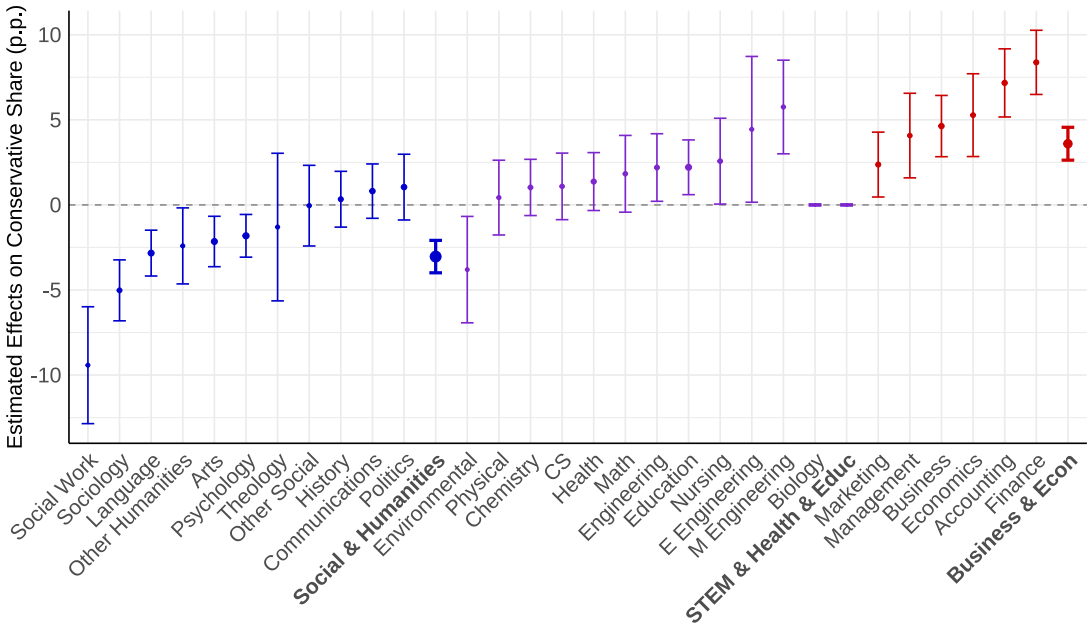
Note: This figure plots students' preferred and actual majors. The sample includes all students in our sample with non-missing values for this variable both in the entry and exit surveys (324,090 students).

Figure A5: Effects of College Majors on Liberal Share



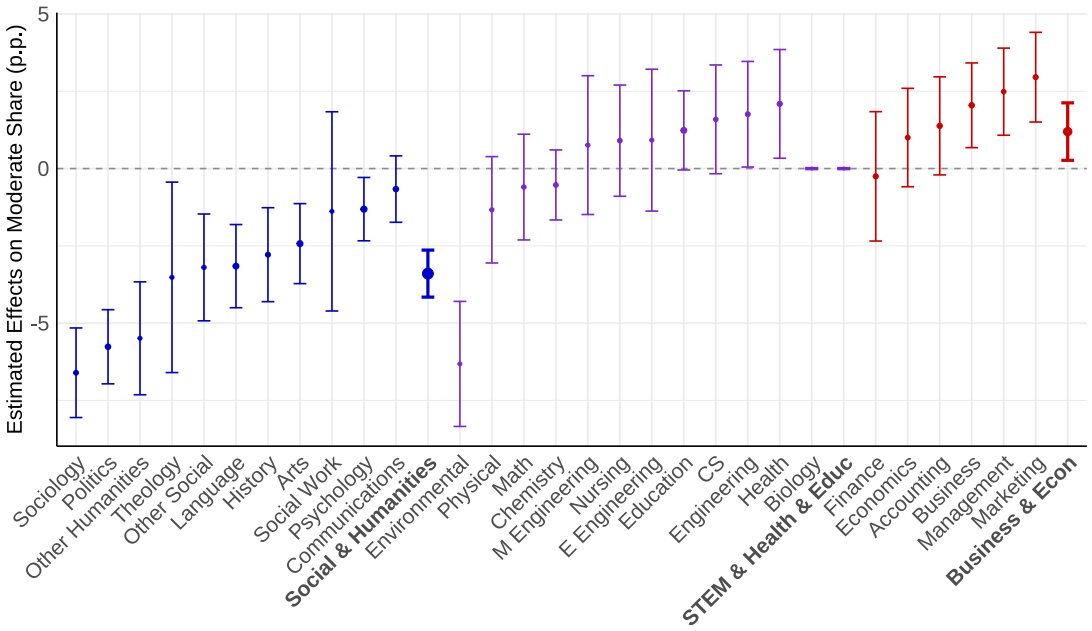
Note: This figure plots the estimates for δ_m from equation 1 along with their 95% confidence intervals. The bold lines represent coefficients from a model that groups majors into three broad categories, with STEM, health, and education as the omitted reference group. The thinner lines show coefficients from a more detailed model with 28 specific major categories, where biology is the omitted reference group. The outcome variable is a dummy for students' identification as either liberal or highly liberal. Estimates are shown in percentage points. Both models control flexibly for students' baseline political ideology, policy attitudes, and major preferences. The sample includes only students with non-missing values in the major and outcome (313,466 students). Standard errors are clustered at the college level.

Figure A6: Effects of College Majors on Conservative Share



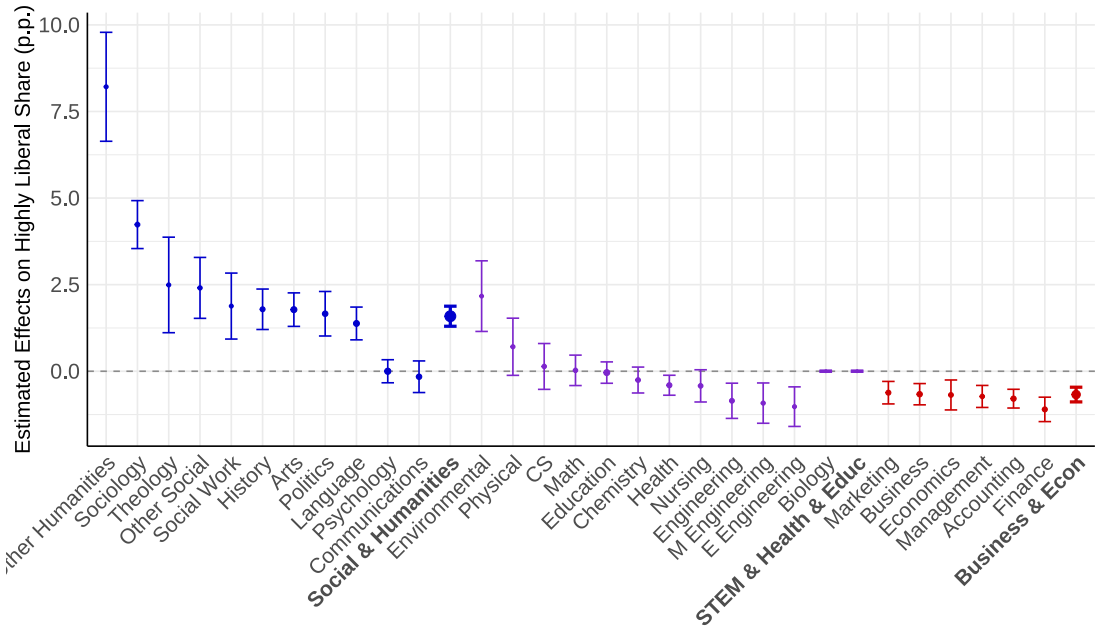
Note: This figure plots the estimates for δ_m from equation 1 along with their 95% confidence intervals. The bold lines represent coefficients from a model that groups majors into three broad categories, with STEM, health, and education as the omitted reference group. The thinner lines show coefficients from a more detailed model with 28 specific major categories, where biology is the omitted reference group. The outcome variable is a dummy for students' identification as either conservative or highly conservative. Estimates are shown in percentage points. Both models control flexibly for students' baseline political ideology, policy attitudes, and major preferences. The sample includes only students with non-missing values in the major and outcome (313,466 students).

Figure A7: Effects of College Majors on Moderate Share



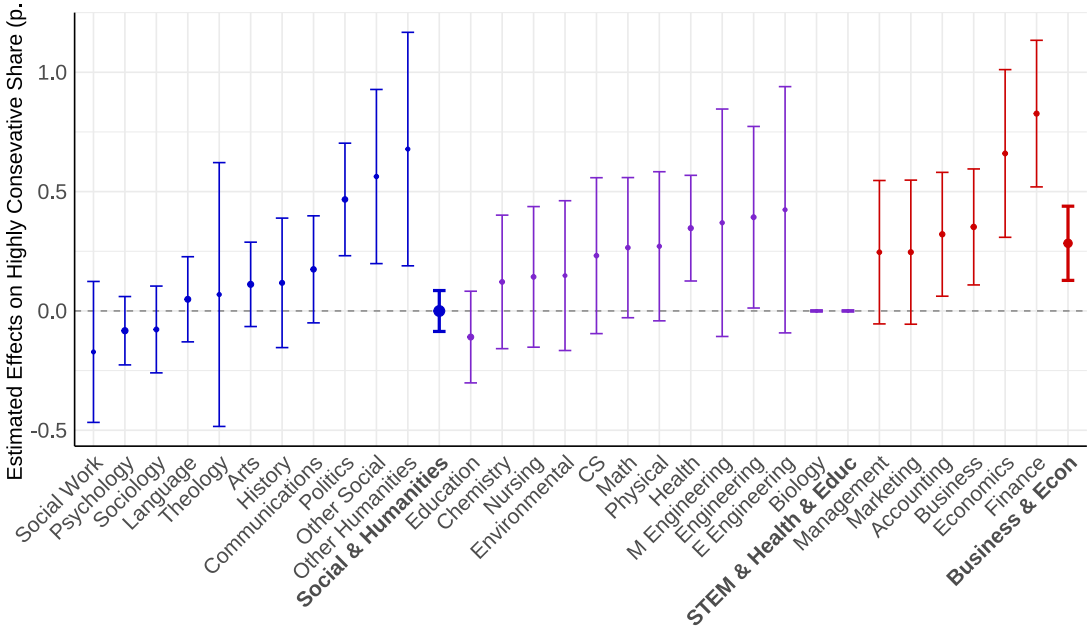
Note: This figure plots the estimates for δ_m from equation 1 along with their 95% confidence intervals. The bold lines represent coefficients from a model that groups majors into three broad categories, with STEM, health, and education as the omitted reference group. The thinner lines show coefficients from a more detailed model with 28 specific major categories, where biology is the omitted reference group. The outcome variable is a dummy for students' identification as moderate. Estimates are shown in percentage points. Both models control flexibly for students' baseline political ideology, policy attitudes, and major preferences. The sample includes only students with non-missing values in the major and outcome (313,466 students). Standard errors are clustered at the college level.

Figure A8: Effects of College Majors on Highly Liberal Share



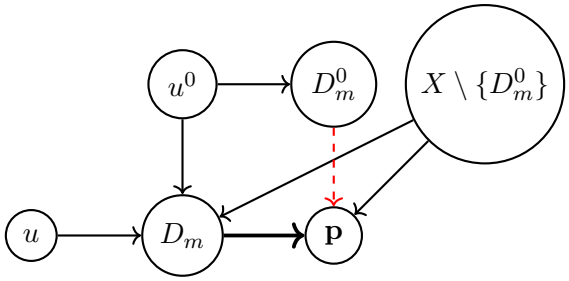
Note: This figure plots the estimates for δ_m from equation 1 along with their 95% confidence intervals. The bold lines represent coefficients from a model that groups majors into three broad categories, with STEM, health, and education as the omitted reference group. The thinner lines show coefficients from a more detailed model with 28 specific major categories, where biology is the omitted reference group. The outcome variable is a dummy for students' identification as highly liberal. Estimates are shown in percentage points. Both models control flexibly for students' baseline political ideology, policy attitudes, and major preferences. The sample includes only students with non-missing values in the major and outcome (313,466 students). Standard errors are clustered at the college level.

Figure A9: Effects of College Majors on Highly Conservative Share



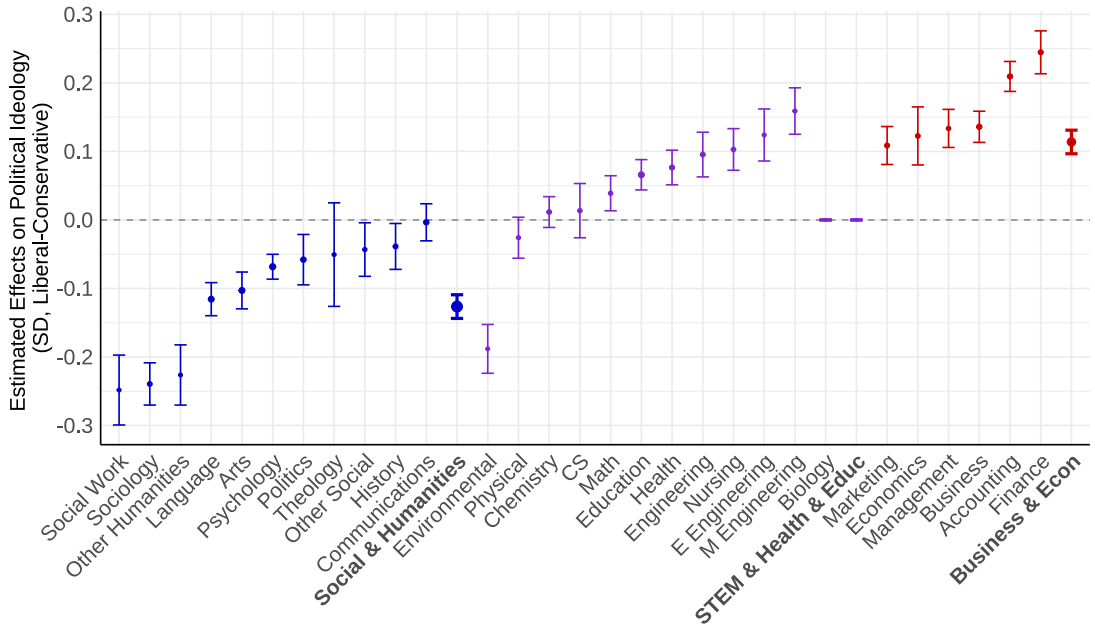
Note: This figure plots the estimates for δ_m from equation 1 along with their 95% confidence intervals. The bold lines represent coefficients from a model that groups majors into three broad categories, with STEM, health, and education as the omitted reference group. The thinner lines show coefficients from a more detailed model with 28 specific major categories, where biology is the omitted reference group. The outcome variable is a dummy for students' identification as highly conservative. Estimates are shown in percentage points. Both models control flexibly for students' baseline political ideology, policy attitudes, and major preferences. The sample includes only students with non-missing values in the major and outcome (313,466 students). Standard errors are clustered at the college level.

Figure A10: DAG Illustrating Negative Control Exposure Test Using Preferred Majors



Note: This figure illustrates the negative control exposure test for the validity of our baseline identification approach (estimated using equation 1) using a directed acyclic graph. D_m denotes actual major choices, p represents graduation political ideology, and X includes the main control variables: preferred majors (D_m^0), baseline political ideology (p^0), and policy attitudes (o^0). The graph demonstrates our test supporting the assumption that unobserved preferences (u^0) do not directly influence graduation ideology, using preferred majors (D_m^0) as a proxy (negative control). u represents early college experiences after the baseline survey that may also affect major choices, which we assume have no direct impact on students' graduation ideology.

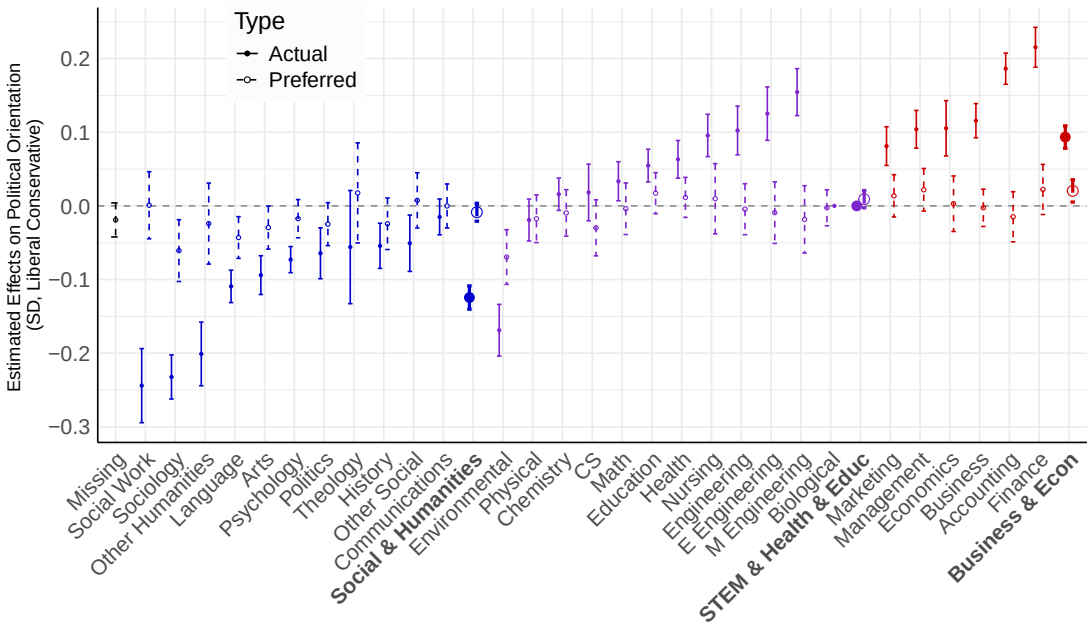
Figure A11: Effects of College Majors on Political Ideology, Preferred Majors as IVs



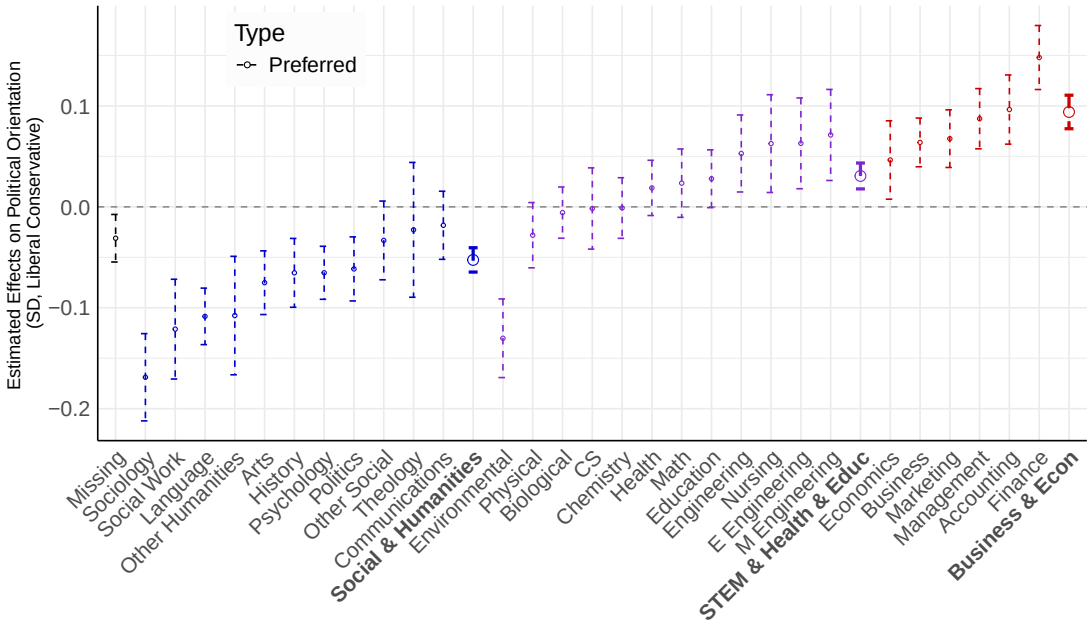
Note: This figure plots the estimates for τ_m from equation 2 along with their 95% confidence intervals. The bold lines represent coefficients from a model that groups majors into three broad categories, with STEM, health, and education as the omitted reference group. The thinner lines show coefficients from a more detailed model with 28 specific major categories, where biology is the omitted reference group. The outcome variable is students' answers to the following question: "How would you characterize your political views?". Estimates are shown in standard deviations. Both models are flexible in controlling students' baseline political ideology and policy attitudes. The sample includes only students with non-missing values in the major and outcome (313,466 students).

Figure A12: Negative Control Exposure Test, Using Preferred Majors

(A) Including Actual Majors

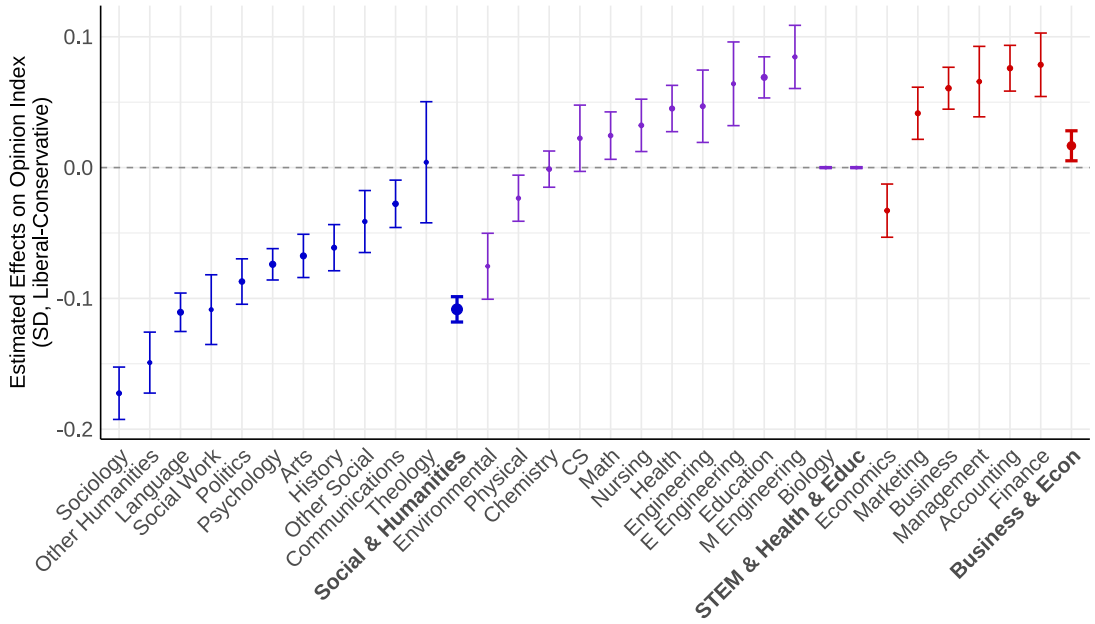


(B) Excluding Actual Majors



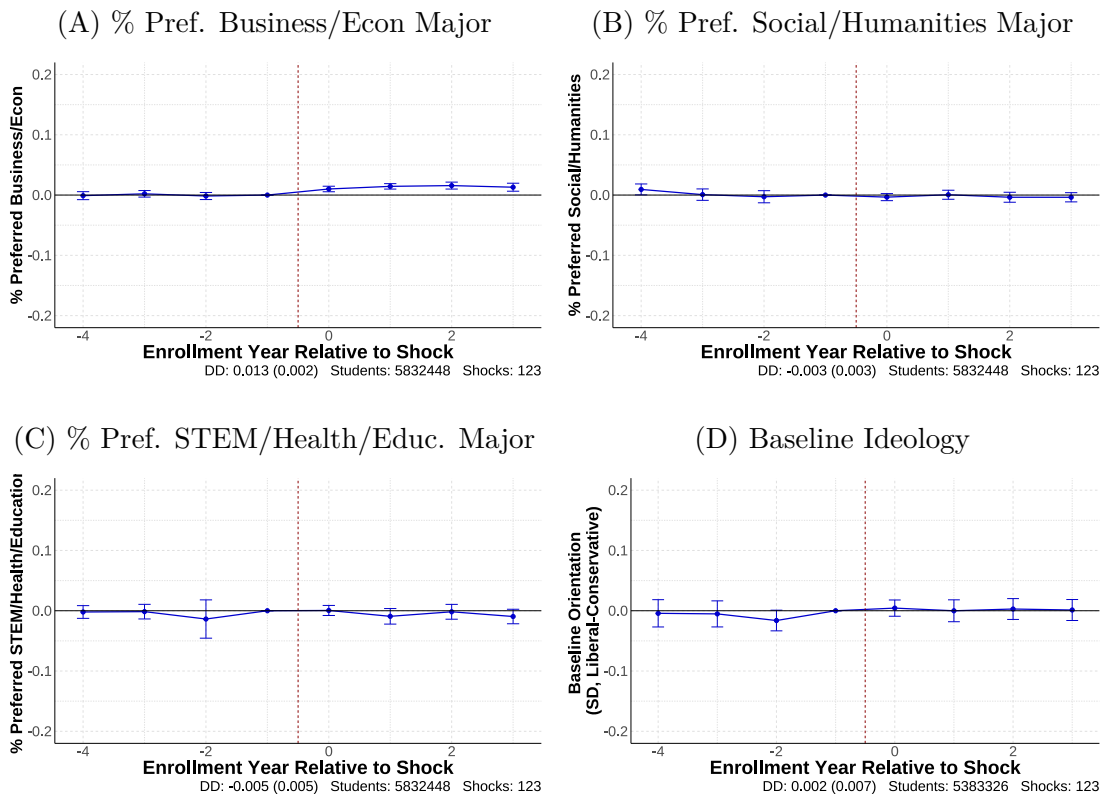
Note: These figures present the negative control exposure test, examining whether major preferences correlate with graduation political ideology, independent of the major chosen. Panel A plots the estimates for both δ_m and the corresponding coefficients of preferred majors from equation 1, along with their 95% confidence intervals. Bold lines represent coefficients from a model grouping majors into three broad categories, with STEM, health, and education as the omitted reference group. Thinner lines represent coefficients from a more detailed model with 28 specific major categories, using biology as the omitted reference group. Panel B displays the coefficients of preferred majors from models excluding the actual major dummies. In all models, the outcome variable is students' self-reported political ideology, measured on a standardized scale. The sample includes 313,466 students with non-missing values for both major and outcome.

Figure A13: Effects of College Majors on Students' Opinions (Index)



Note: This figure plots the estimates for δ_m from equation 1 and their 95% confidence intervals. The estimated coefficients represent the effects of studying each major relative to STEM, health and education (the omitted group of majors). The outcome variable is an index variable, measuring how closely students' policy attitudes align with liberal perspectives (the construction procedure is described in the main text). Estimates are shown in standard deviations. The sample includes only students with non-missing values in the major and outcome (191,080 students). Standard errors are clustered at the college level.

Figure A14: Estimated Impacts of College-Level Shocks to Major Availability on Baseline Survey Responses



Note: This figure plots the estimates for ρ_k from equation 4, representing the effects of college-level shocks to the availability of business and economics majors on students' preferred majors and baseline political ideology, along with their standard errors clustered at the college level. The sample includes all students in the baseline sample. Each figure also reports the equivalent difference-in-difference estimate for the average impact. Estimation is based on the imputation estimator (Borusyak et al., 2024). *** p<0.01, ** p<0.05, * p<0.1

Appendix B Appendix Tables

Table A1: College Majors Classification and Aggregation

Major Group	Majors	Details
Accounting	Accounting	Accounting
Arts	Arts	Art, Other Art Humanities, Music, Theater, Design
Biological	Biological	Biology, Other Biological, Microbiology, Zoology, Agriculture
Business	Business	Business, International Business, Other Business
Chemistry	Chemistry	Chemistry, Biochemistry
Communications	Communications	Communications, Speech
Cs	Cs	Computer Science, Data
Economics	Economics	Economics
Education	Education	Elementary Education, Physical Education, Secondary Education, Business Education, Other Education, Special Education, Art Education
Electronic Engineering	Electronic Engineering	Electronic Engineering, Computer Engineering
Engineering	Engineering	Other Engineering, Architecture, Civil Engineering, Industrial Engineering, Aero Engineering, Chemical Engineering
Environmental	Environmental	Environmental Science
Finance	Finance	Finance
Health	Health	Other Health, Med Dent Vet, Therapy, Health Technology, Pharmacy, Kinesiology
History	History	History
Language	Language	Language
Management	Management	Management
Marketing	Marketing	Marketing
Math	Math	Math
Mechanical Engineering	Mechanical Engineering	Mechanical Engineering
Missing Undecided	Missing Undecided	Undecided
Missing Undecided	Other	Other
Nursing	Nursing	Nursing
Other		Missing
Other	Other	Home Economics, Other, Other Technical, Building Trades
Other Humanities	Other Humanities	Philosophy, Gender Studies, Ethnic Studies
Physical	Physical	Other Physical, Physics, Earth Science, Marine Sciences
Politics	Politics	Politics
Psychology	Psychology	Psychology
Social	Social	Law Enforcement, Other Social, Geography
Social Work	Social Work	Social Work
Sociology Anthropology	Sociology Anthropology	Sociology, Anthropology
Theology	Theology	Theology

Note: The table shows the names of each major as they appear in the baseline and graduation surveys, and then their classification into majors for our analysis, and the aggregation of different majors into broad groups also used in our analysis.

Table A2: Assessing Differential Attrition

	1(graduation survey)					
	(1)	(2)	(3)	(4)	(5)	(6)
Constant	0.167***			0.168***		
	(0.013)			(0.013)		
Econ&Business	-0.001	-0.012***	-0.003*	-0.002	-0.013***	-0.003**
	(0.006)	(0.002)	(0.002)	(0.006)	(0.002)	(0.002)
Social&Humanities	0.014**	-0.006***	0.0010	0.016**	-0.006***	0.001
	(0.007)	(0.001)	(0.001)	(0.007)	(0.001)	(0.001)
Political				-0.008***	-0.005***	-0.003***
				(0.003)	(0.0006)	(0.0005)
Econ&Business × Political				-0.002	0.001	0.0003
				(0.002)	(0.0007)	(0.0007)
Social&Humanities × Political				0.003	0.001	0.0004
				(0.002)	(0.0007)	(0.0007)
College-Year FEs		✓	✓		✓	✓
HS GPA			✓			✓
Observations	1,652,381	1,652,381	1,641,120	1,573,926	1,573,926	1,564,001
R^2	0.0003	0.303	0.311	0.0007	0.305	0.312
Within R^2		0.0002	2.21×10^{-5}		0.0004	8.49×10^{-5}

Note: This table presents the estimation results from regressing an indicator for participation in the graduation survey on students' preferred majors, political ideology, their interactions. The sample includes all students from the colleges and cohorts in our main sample described in the text, who participated in the baseline survey. Standard errors are clustered at the college level.

Table A3: Main Control Variables

Group	**Variables**
Views	*political*, abortion, guns, death penalty, criminal rights, race, gay rights, marijuana
Behaviors (past)	discussed politics, voted in student elections, volunteered, hours on activities (e.g., working, studying)
Behaviors (goals)	environmentalism, community action, racial equality, staying informed, and understanding politics, financial success, social values, family, meaning
Demographics	sex, race, citizenship, religion, parental income, education, and marital status

Note: This table shows the control variable included in our analysis.

Table A4: Robustness analysis of College-Level Shocks

	Base. Orientation	Orientation	Δ Orientation	% BE	% SH	% SHE	% Pref. BE	% Pref. SH	% Pref. SHE
Panel A: Basline									
Shocks: 123	0.020	0.059	0.046	0.036	-0.057	0.021	0.023	-0.014	-0.030
	(0.012)	(0.020)	(0.021)	(0.009)	(0.023)	(0.017)	(0.006)	(0.007)	(0.019)
Panel B: 20% Threshold									
Shocks: 178	-0.018	-0.016	0.002	0.016	-0.052	0.035	0.019	-0.036	0.016
	(0.022)	(0.022)	(0.014)	(0.006)	(0.009)	(0.009)	(0.007)	(0.012)	(0.011)
Panel C: 25% Threshold									
Shocks: 150	0.037	0.058	0.025	0.026	-0.044	0.018	0.021	-0.010	-0.021
	(0.016)	(0.016)	(0.021)	(0.008)	(0.017)	(0.013)	(0.007)	(0.007)	(0.016)
Panel D: 35% Threshold									
Shocks: 103	0.025	0.044	0.029	0.028	-0.023	-0.005	0.014	-0.013	-0.006
	(0.012)	(0.014)	(0.014)	(0.005)	(0.012)	(0.013)	(0.006)	(0.007)	(0.011)
Panel E: 40% Threshold									
Shocks: 91	0.008	0.018	0.018	0.035	-0.041	0.007	0.003	-0.013	0.001
	(0.015)	(0.017)	(0.016)	(0.006)	(0.011)	(0.013)	(0.007)	(0.007)	(0.010)
Panel F: Allowing Multiple Shocks per College									
Shocks: 139	0.014	0.046	0.038	0.030	-0.047	0.016	0.015	-0.012	-0.026
	(0.012)	(0.018)	(0.019)	(0.008)	(0.020)	(0.015)	(0.006)	(0.006)	(0.017)
Panel G: 10% Change in Pre-Period									
Shocks: 93	0.013	0.034	0.030	0.025	-0.032	0.007	0.016	-0.014	-0.022
	(0.009)	(0.012)	(0.011)	(0.005)	(0.011)	(0.011)	(0.006)	(0.008)	(0.011)
Panel H: Requiring 3 Stable Years									
Shocks: 68	0.008	0.044	0.043	0.029	-0.024	-0.005	0.035	-0.018	-0.024
	(0.009)	(0.014)	(0.011)	(0.004)	(0.010)	(0.011)	(0.005)	(0.006)	(0.009)
Panel I: Minimum 30 Students									
Shocks: 102	0.032	0.051	0.028	0.033	-0.051	0.018	0.020	-0.015	-0.034
	(0.012)	(0.021)	(0.022)	(0.009)	(0.024)	(0.017)	(0.006)	(0.007)	(0.019)

Note: This table reports the robustness of the difference-in-differences estimation to changing the definition of shocks.

Appendix C Peer Effects

C.1 Adjusting Peers' ideology Measure

Estimating peer effects in our setting presents a unique challenge since we observe only a (large) fraction of each student's peers rather than the complete peer sample. In this appendix, we demonstrate that a naive approach ignoring the fraction of observed peers leads to attenuation bias in our estimator. We then show how our proposed solution substantially mitigates this bias.

Consider a hypothetical sample containing a complete set of peers. The following version of equation 5 would apply:

$$p_{icmt} = \sigma^F P_{cmt}^{F,-i} + \beta^F \Phi_{cmt}^{F,-i} + \nu_{cm} + \theta_{ct} + \lambda_{mt} + \varepsilon_{icmt} \tag{A1}$$

where superscript F denotes the full peers sample equivalent of each variable. The treatment variable can be decomposed into:

$$P_{cmt}^{F,-i} = \widehat{P_{cmt}^{-i}} + \overline{\eta_{cmt}^{F}} \tag{A2}$$

Here, $\widehat{P_{cmt}^{-i}}$ represents the component predictable by fixed effects and controls, while $\overline{\eta_{cmt}^{F}}$ captures the unpredictable component. Our identification assumption implies that conditional on controls, initial views within the same college major year are uncorrelated. Therefore, $\overline{\eta_{cmt}^{F}}$ can be interpreted as an average of mean-zero idiosyncratic errors across individuals. Applying the Frisch–Waugh–Lovell theorem (Frisch and Waugh, 1933), we can express equation A2 in its residualized form:

$$p_{icmt}^{\perp} = \sigma^F \overline{\eta^F cmt} + \varepsilon_{icmt} \tag{A3}$$

where superscript $\perp$ indicates residualization with respect to $\Phi_{cmt}^{F,-i}$ and the fixed effects from equation A1. The term $\overline{\eta_{cmt}^{F}}$ can be further decomposed into observed and unobserved components:

$$\overline{\eta_{cmt}^{F}} = \alpha_{ct} \overline{\eta_{cmt}^{O}} + (1 - \alpha_{ct}) \overline{\eta_{cmt}^{U}} \tag{A4}$$

where α_{ct} represents the survey coverage rate for students in college c and year t.[9] Substituting A4 into A3 and replacing the second term with mean-zero average error υ, we obtain:

$$p^{\perp}_{icmt} = \sigma^{F}(\alpha_{ct}\overline{\eta^{O}_{cmt}} + \overline{\upsilon_{cmt}}) + \varepsilon_{icmt} \tag{A5}$$

A naive approach attributing observed peers' views to unobserved peers yields the following residualized specification, where the residualized treatment is inflated by the inverse α_{ct} and omits unobserved peers' idiosyncratic errors:

$$p^{\perp}_{icmt} = \sigma^{O}\overline{\eta^{O}_{cmt}} + \varepsilon_{icmt} \tag{A6}$$

Our preferred approach adjusts the average peer view by assigning predicted views to unobserved peers. Leading to:

$$P^{-i}_{cmt} = \widehat{P^{-i}_{cmt}} + \alpha_{ct}\overline{\eta^{O}_{cmt}} \tag{A7}$$

Yielding the residualized specification:

$$p^{\perp}_{icmt} = \sigma\alpha_{ct}\overline{\eta^{O}_{cmt}} + \varepsilon_{icmt} \tag{A8}$$

This specification differs from A3 only by excluding unobserved peers' idiosyncratic errors, resulting in standard attenuation bias from measurement error in the treatment.

[9]Since preferred major is one of the survey questions, we assume that coverage is constant across preferred majors within each college-year pair.

C.2 Robustness

Table A1: Peer Effects at the College-Major-Cohort Level, Unadjusted Treatment

	Own Baseline Orientation		Own Graduation Orientation	
	(1)	(2)	(3)	(4)
Peers Orientation	-0.001	0.007	0.000	-0.003
	(0.003)	(0.012)	(0.011)	(0.009)
Baseline Orientation Controls				✓
Fixed Effects	✓	✓	✓	✓
Smaple	Baseline	Graduation	Graduation	Graduation
Observations	3,995,045	238,022	238,022	238,022
R^2	0.1409	0.3194	0.3360	0.5178
Within R^2	0.0000	0.0001	0.0000	0.0000

Note: This table presents estimates of peer effects on students' political ideology based on equation 5. The outcome variable measures political views using responses to the question "How would you characterize your political views?" from both the baseline survey (columns 1-2, serving as balance tests) and the graduation survey (columns 3-4). The treatment variable captures peers' responses to the same question in the baseline survey, where peers are defined as students from the same college-cohort-preferred major group. The estimates account for exclusion bias using a four-way split-sample approach. Specifications include controls for the average political views of potential peers from adjacent cohorts (two years ahead and behind). Column 4 adds controls for students' baseline political ideology. All estimates are in standard deviation units. The sample is restricted to students with non-missing values for both major and political views, and with information available for at least 30% of their peers. Fixed effects include college-major, college-cohort, and major-cohort combinations.

Table A2: Peer Effects at the College-Major-Cohort Level, Excluding Peers Included in the Graduation Survey

	Own Baseline Orientation		Own Graduation Orientation	
	(1)	(2)	(3)	(4)
Peers Orientation (Adj.)	-0.002	0.008	-0.021	-0.025
	(0.005)	(0.016)	(0.021)	(0.018)
Baseline Orientation Controls				✓
Fixed Effects	✓	✓	✓	✓
Smaple	Baseline	Graduation	Graduation	Graduation
Observations	3,995,045	160,059	160,059	160,059
R^2	0.1409	0.2459	0.2698	0.4565
Within R^2	0.0000	0.0000	0.0000	0.0000

Note: This table presents estimates of peer effects on students' political ideology based on equation 5. The outcome variable measures political views using responses to the question "How would you characterize your political views?" from both the baseline survey (columns 1-2, serving as balance tests) and the graduation survey (columns 3-4). The treatment variable captures peers' responses to the same question in the baseline survey, where peers are defined as students from the same college-cohort-preferred major group. The estimates account for exclusion bias by using only students not included in the graduation survey to define peer groups. The treatment is adjusted for partial coverage, and specifications include controls for the average political views of potential peers from adjacent cohorts (two years ahead and behind). Column 4 adds controls for students' baseline political ideology. All estimates are in standard deviation units. The sample is restricted to students with non-missing values for both major and political views and with information available for at least 30% of their peers. Fixed effects include college-major, college-cohort, and major-cohort combinations.

Table A3: Peer Effects at the College-Major-Cohort Level, Robustness by Min. Coverage

Min. Coverage	Base. Orientation	Base. Orientation	Grad. Orientation	Grad. Orientation	# Freshmen	# Graduates
0%	0.001 (0.005)	0.018 (0.018)	0.001 (0.016)	-0.007 (0.014)	4789834	248017
10%	0.001 (0.005)	0.018 (0.018)	0.001 (0.016)	-0.007 (0.014)	4739085	246800
20%	0.001 (0.005)	0.017 (0.018)	0.000 (0.016)	-0.007 (0.014)	4530966	244641
30%	-0.002 (0.005)	0.017 (0.019)	0.001 (0.016)	-0.007 (0.014)	3994445	238022
40%	-0.002 (0.006)	0.021 (0.019)	-0.001 (0.017)	-0.011 (0.014)	2926270	223123
50%	-0.004 (0.006)	0.027 (0.019)	-0.002 (0.017)	-0.015 (0.014)	1773883	195794
60%	-0.012 (0.010)	0.047** (0.021)	0.016 (0.018)	-0.007 (0.018)	664651	141192
70%	-0.031 (0.025)	0.055* (0.029)	0.016 (0.028)	-0.013 (0.026)	119983	67074
Smaple	Freshmen	Graduates	Graduates	Graduates		
Controls				Base. Orientation		

Note: This table presents estimates of peer effects on students' political ideology based on equation 5. The outcome variable measures political views using responses to the question "How would you characterize your political views?" from both the baseline survey (columns 1-2, serving as balance tests) and the graduation survey (columns 3-4). The treatment variable captures peers' responses to the same question in the baseline survey, where peers are defined as students from the same college-cohort-preferred major group. The estimates account for exclusion bias by using only students not included in the graduation survey to define peer groups. The treatment is adjusted for partial coverage, and specifications include controls for the average political views of potential peers from adjacent cohorts (two years ahead and behind). Column 4 adds controls for students' baseline political ideology. All estimates are in standard deviation units. The sample is restricted to students with non-missing values for both major and political views. Each row presents results from a subsample where students are included only if we observe political views for a minimum percentage of their peers, with this threshold varying across rows. Fixed effects include college-major, college-cohort, and major-cohort combinations.

C.3 Additional Results

Table A4: Peer Effects at the College-Major-Cohort Level, by Major

Major	Base. Orientation	Base. Orientation	Grad. Orientation	Grad. Orientation	# Freshmen	# Graduates
Social Sciences	0.016 (0.015)	0.066 (0.054)	-0.011 (0.051)	-0.042 (0.050)	610155	39688
Business	-0.011 (0.014)	-0.015 (0.041)	-0.007 (0.038)	0.001 (0.035)	671838	44274
Humanities & Arts	-0.019 (0.016)	-0.063 (0.054)	-0.048 (0.048)	-0.014 (0.037)	419279	27816
Health & Education	0.017 (0.013)	0.083 (0.052)	0.018 (0.047)	-0.019 (0.037)	720655	50184
STEM	-0.011 (0.010)	-0.020 (0.044)	0.018 (0.033)	0.031 (0.019)	955152	59349
Sample	Freshmen	Graduates	Graduates	Graduates		
Controls				Base. Orientation		

*Note:*This table presents heterogeneity analysis of peer effects on political views across major fields, extending the baseline estimates from Table 3. For detailed variable definitions and empirical specifications, see the notes to Table 3.