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Unpacking the liberalizing potential of higher education: an analysis of academic majors, anti-Black prejudice, and opposition to immigration

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ABSTRACT

In this article, we challenge the prevailing assumption about the impact of higher education on attitudes toward racial and ethnic minorities by examining whether educational effects are monolithic or manifold instead. Using data from the General Social Survey (1972–2021), we use a variety of measures of education (years, levels, sectors, and majors) to unpack the relationship between higher education and intergroup attitudes, specifically anti-immigration attitudes among native-born Americans and anti-Black attitudes among non-African Americans. Results show that some higher education graduates hold out-group attitudes that are not much different from those without any higher education. Narrowing our focus to respondents only with higher education, we find significant variation in out-group attitudes across educational sectors and academic majors. These results have implications for how we understand previous scholarship on prejudice and higher education, which may have overestimated the impact higher education has, in general, on prejudice.

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In recent years, higher education has become the focus of political debate. Institutions of higher education have been denounced as having a cultural ethos that favors a progressivist agenda (Hunter 1991, 211) and described as bastions of "liberal indoctrination" (Horowitz 2007) and hotbeds for "safetyism" (Lukianoff and Haidt 2018). They have also been accused of fostering a culture of victimhood on college campuses (Campbell and Manning 2018) and promoting "applied postmodernism" or activism-

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scholarship associated with postcolonial, queer and critical race theories (Pluckrose and Lindsay 2020). In short, critics of higher education see the university experience as one that is transformative, though in a detrimental way.

Defenders of higher education agree that the university experience is transformative but view this as something inherently beneficial for society. Indeed, there exists a long-standing belief that higher education functions almost as a panacea, with the potential to remedy a variety of social ills (Perkinson 1995). American President Lyndon B. Johnson once said: "The answer for all our national problems comes down to one single word: 'education'" (Perkinson 1995: vii). Thus, whether one views universities as indoctrination mills or bastions of civic learning and democracy, both narratives assume that the college experience shapes attitudes among young people in a liberal direction.

Social scientific research has certainly reinforced this notion: scholarship on higher education's so-called "liberalizing effect" has long documented that those with tertiary education hold more liberal sociopolitical attitudes (e.g. Campbell and Horowitz 2016; Hyman and Wright 1979; Phelan et al. 1995; Selznick and Steinberg 1979; Stubager 2008). Seminal studies on the impact of college education during these "four critical years" (Astin 1977) suggest that, on average, students' sociopolitical attitudes become more liberal over time (Newcomb 1943; Feldman and Newcomb 1969; Pascarella and Terenzini 1991).

Similarly, decades of research on prejudice has shown, beyond a doubt, that individuals with more education hold more positive attitudes toward ethnic and racial out-groups (e.g. Hainmueller and Hiscox 2007; Hello, Scheepers, and Gijsberts 2002; Hjerm 2001; Hyman and Wright 1979; Maykovich 1975; Nunn, Crockett, and Williams 1978; Quillian 1995; 1996; Velásquez and Eger 2022; Vogt 1997). Arguably, the most important debate within the literature on prejudice has been the extent to which the robust relationship is causal (Hooghe, Meeusen, and Quintelier 2013; Kustov, Laaker, and Reller 2021; Scott 2022; Velásquez and Eger 2022; Weber 2022). Thus, empirical studies have focused on the *quantity* of education, operationalized as either years of education (Quillian 1995) or highest level of educational attainment with a focus on the difference between having a tertiary degree or not (Hainmueller and Hiscox 2007). Although it is never explicitly theorized, this analytical strategy is consistent with the notion that the relationship between education and prejudice is monolithic – that the effects of tertiary education are universal, as if all higher education is *qualitatively* similar or roughly equivalent.

In this article, we challenge the prevailing assumption about the impact of higher education on attitudes towards out-groups by examining whether its effects are monolithic or manifold. To do this, we unpack the liberalizing potential of higher education by analyzing a variety of indicators of it. We begin with those that are standard in the scholarly literature on prejudice:

years of education and highest level of educational attainment. We also incorporate parents' education to speak to self-selection effects stemming from one's formative years (i.e. "unobserved confounding" Wodtke 2018). Then, we move beyond the literature by expanding our focus to the higher education sector itself (e.g. Dey 1997). In our main analyses, we investigate variation in out-group attitudes first in relation to six broad categories of academic majors and, second, to twelve more-specific categories of academic majors. To enhance our ability to draw conclusions from our results, we investigate out-group attitudes among two different in-groups: anti-immigration attitudes among native-born Americans and anti-Black attitudes among non-African Americans.

In the sections that follow, we first discuss the current state of the literature on higher education and prejudice. Then, we review previous studies that have focused on within-higher education variation (e.g. Newcomb 1943) and found different attitudinal patterns across university faculties and academic disciplines (Guimond and Palmer 1990, 1996; Hastie 2007; Surridge 2016; Van De Werfhorst 2020). This line of research examines attitudes indicative of a liberal political orientation but has rarely included analyses of racial prejudice or anti-immigrant sentiment. This body of scholarship shows that not only the quantity of education but also qualitative differences in educational content matter for sociopolitical attitudes. To motivate our analysis further, we also discuss why, theoretically, one's academic major should matter for prejudice by discussing potential mechanisms responsible for the observed relationship. Next, we introduce our data source, the cumulative file of the American General Social Survey (1972-2021), and describe our variables and methods. After presenting our results, we conclude with a discussion of their implications for scholarship on prejudice and higher education. We also consider our findings in relation to possible self-selection effects, which are impossible to rule out using cross-section data, and suggest directions for future research.

Education and prejudice

Most previous research on higher education and prejudice implies a monolithic relationship. To be clear, this literature does not explicitly postulate that the relationship is monolithic, nor does it dismiss the possibility of heterogeneous higher education effects. Rather, the seemingly monolithic relationship is an empirical artifact due to the nature of the hypotheses being tested, specifically *if* and *why* the correlation exists. Regarding the first question, the negative relationship between education and prejudice is one of the most robust correlations in the social sciences. People who have attained at least a bachelor's degree are, on average, less prejudiced than those that have not. This is a statistical relationship that is neither time sensitive nor location specific.

Regarding why this relationship exists, studies of out-group attitudes emphasize different mechanisms though they mostly point to what an individual gains. For example, some scholarship makes an economic argument, where higher levels of education serve as an indicator of a higher socioeconomic status, implying less competition with minority group members (Hello, Scheepers, and Gijsberts 2002; Meeusen, de Vroome, and Hooghe 2013). Others have acknowledged the opportunities universities provide for intergroup contact (Allport 1954), and the reduction of prejudice through social interaction (Bubritzki et al. 2018; Hello et al. 2004). Higher education is also understood as a powerful socializing agent transmitting the dominant norms of democratic societies (Selznick and Steinberg 1979) such as tolerance and anti-racism (Verkuyten and Thijs 2013) via the transmission of knowledge.[1]

This body of research has, due to data limitations, mostly relied on cross-sectional data. Still, for theoretical reasons, much of the literature tends to regard the robust statistical relationship as causal. Recent findings from studies that rely on panel data support this view (Scott 2022; Velásquez and Eger 2022); however, not all longitudinal studies find evidence of higher education's prejudice-reducing effects and conclude that between-individual differences are likely due to self-selection (Lancee and Sarrasin 2015; Weber 2022).

While the literature on prejudice has focused on questions related to causality, it has overlooked variation within higher education itself. As previously stated, we do not view this omission as reflective of theoretical assumptions, but instead see it as an oversight likely stemming from data constraints. Indeed, very few survey programs that gauge sociopolitical attitudes also ask about academic majors. Nevertheless, this gap has theoretical and empirical consequences. Our knowledge about how variation in education, especially differences in academic majors, is related to out-group attitudes remains limited. It is possible that previous research may have overstated the true association between prejudice and higher education in general, which would necessitate reconsidering the theoretical mechanisms involved.

Attitudinal differences between academic disciplines

To better understand what variation in higher education means for out-group prejudice, we build on research focusing on sociopolitical attitudes, such as political ideology, support for civil liberties, and views on gender equality (e.g. Feldman and Newcomb 1969; Hyman and Wright 1979). Early U.S. studies on the effect of a college education focused on freshmen, some following them throughout their university experience (Newcomb 1943). For example, Bugelski and Lester (1940) found that social science majors began as slightly more liberal than freshmen in the physical and biological sciences,

as well as those studying languages, but by their last year were considerably more liberal than other students. Similarly, Selvin and Hagstrom (1960) showed that social science and humanities majors were more likely to be in support of civil liberties than students in engineering, education and business administration, while those in the physical and life sciences were in the middle of the liberal-conservative spectrum. Thumin (1972) also found that students in liberal arts and sciences were more liberal than education and business students.

More recent studies corroborate these early findings. For example, Hanson et al. (2012) found that students majoring in the social sciences and humanities were more likely to self-identify as politically liberal than students in other majors. Even particular courses have been shown to matter for sociopolitical attitudes. For example, Scott and Rothman (1975) found that while all students became slightly more liberal but after completing introductory courses the effect was larger for those in psychology than in economics.[2] Other research shows that social science curriculum is associated with future political engagement (Hillygus 2005). Majoring in the social sciences, humanities or arts, are also the most consistent indicators of moral change and empathy (Brońić and Miles 2021).

Differences in attitudinal outcomes among academic disciplines are not only found in the United States but seem to be ubiquitous, at least in high-income and democratic countries (e.g. Paterson 2009). Although studies focus on various sociopolitical attitudes and behaviors, the common denominator is the finding that those who major in the social sciences and humanities differ in levels of authoritarianism (Carnevale et al. 2020; Stubager 2008), gender bias (Paredes, Paserman, and Pino 2020), ideology (Guimond and Palmer 1990; 1996; Guimond, Bégin, and Palmer 1989) and even participation in voluntary organizations (Van De Werfhorst, Herman, and Kraaykamp 2001).

Theoretical mechanisms

Why, theoretically, should different academic majors vary in their liberalizing potential? Scholarship on the liberalizing effect of higher education has identified three mechanisms by which education may affect attitudes (e.g. Phelan et al. 1995; Stubager 2008; Surridge 2016). First, according to the psychodynamic account, education confers a feeling of "mastering one's own life situation" (Jenssen and Engesbak 1994, 36), thereby enhancing psychological security and stability (McClosky and Brill 1983). Consequently, those with higher education tend to be more adept at psychologically navigating diversity and experiences that deviate from their own. McClosky and Brill (1983, 365) argue that those "who feel confident about the clarity and integrity of society's standards are fairly secure about their own values tend to be strong supporters of civil liberties". Those who are psychologically secure are also better

equipped to deal with "big events" (Blumer 1958). For example, recent longitudinal research shows those with higher education react less strongly to a sudden influx of refugees, suggesting higher education has an "inoculating effect" against prejudice (Velásquez and Eger 2022).

While the psychodynamic model implies that more education, regardless of content, would offer these benefits, we contend that specific majors should vary in their protective benefits. For instance, majors that focus on understanding the human experience or society would theoretically offer more opportunities for students to develop confidence about their own values related to diversity.

Second, according to the cognitive model, knowledge based on the content of education (i.e. what is learned from the curriculum) should matter for attitudes. This relates to both *general* and *specific* knowledge. General knowledge is acquired information/skills that are transferable across situations. This includes, but is not limited to, critical thinking. Higher education imparts new ways of interpreting information, strengthening individuals' capacity to make connections among complicated ideas (Sniderman et al. 1989) and contributing to the potential of life-long learning (Hyman, Wright, and Reed 1975). Thus, higher education increases the likelihood "that one's cognitive development will be characterized by the flexible, rational strategies of thinking which encourage democratic restraint" (Nunn, Crockett, and Williams 1978, 61) and political tolerance (Bobo and Licari 1989, 291). Van De Werfhorst, Herman, and Dirk de Graaf (2004) argue that the cognitive model cannot explain attitudinal variation across academic fields because the development of rational thinking is not discipline-specific. However, we do not make this same claim, because critical thinking challenges one of the important foundations of prejudice: stereotypes (Devine and Elliot 1995). In other words, while all majors theoretically develop critical thinking skills, some majors deal specifically with stereotypes, thus potentially being even more beneficial in countering prejudice.

In regards to specific knowledge, the content of education differs across disciplines, which vary in curriculum and educational goals. Specific knowledge may include content about prejudice and related issues such as multiculturalism and racial and ethnic relations, but these are not a constitutive part of every discipline. Studies on the consequences of multicultural curricula in primary and secondary schools indicate that this educational content may reduce prejudice (Aboud and Levy 2000; Paluck and Green 2009; Verkuyten and Thijs 2013; Wright and Tolan 2009). While variation in specific and general knowledge across academic majors in tertiary education has not been the focus of previous empirical research on prejudice, there is no reason to believe the cognitive mechanism would operate differently there.

A third mechanism is socialization. According to this explanation, which builds on social learning theory (Bandura 1969), students are influenced by

their social environment and interactions with peers and professors. The social tuning hypothesis (see Jost, Ledgerwood, and Hardin 2008) posits that people adjust their attitudes and behavior to others in their surroundings to get along better. In this tradition, Stangor, Sechrist, and Jost (2001) show that providing cues about others' stereotypes affects the reporting of one's own stereotypes, suggesting that learning about other people's views may affect prejudice. Moreover, longitudinal studies show that peer attitudes predict prejudice among secondary school students (Hjerm, Eger, and Danell 2018) and that adolescents' attitudes approach the average level of classroom prejudice (Mitchell 2019) over time. Although studies on prejudice among university students are limited, research has shown that hearing a peer either condone or condemn racist views on campus influences students' attitudes (Blanchard et al. 1994), reinforcing the claim that attitudes are influenced by other students and peer normative context (e.g. Dey 1996, 1997). Further, professors' may communicate their views, either directly or indirectly, to their students. Studies that find that student evaluations of professors' performance are affected by professors' ideologies (Kelly-Woessner and Woessner 2006; Yair and Sulitzeanu-Kenan 2021) suggest that students are aware of professors' social and political attitudes.

Academic disciplines arguably provide different normative contexts for socialization. Some have even claimed that fields of study prepare students differently for social interactions with others (Van De Werfhorst, Herman, and Dirk de Graaf 2004). Ladd and Lipset (1975) argue that professors' subject of study carries a distinctive way of viewing the world, which is not confined to academic boundaries, and that the subject of study brings them into contact with a specific set of values, concerns, and commitments. They found that American professors in the social sciences and humanities were the most liberal while those in agriculture, engineering and other applied fields were the most conservative, with physical and biological sciences being somewhere in the middle. Using European data, van de Werfhorst (2020) came to a similar conclusion. He found that that the dispersion of professors' sociopolitical attitudes does not reflect a high degree of homogeneity, which is what one would expect if professors were uniformly liberal.

Empirical studies using academic majors to test the socialization model have also found supportive evidence. For example, research has shown that individuals from academic fields related to the arts/care/instruction are less authoritarian than those in fields related to production/transportation/technology or service/business/administration in Denmark (Stubager 2008). Similarly, individuals exposed to curriculum that emphasized social skills and competencies held more liberal views on gender and were more inclined to vote for a left-wing party in the Netherlands (Van De Werfhorst, Herman, and Dirk de Graaf 2004). Moreover, panel data from the U.K. reveals that individuals who majored in social sciences, on average, report being more

socially and economical liberal compared to individuals from other academic fields; importantly, this education effect remains after controlling for respondents' attitudes at age 16 (Surridge 2016).

Analytical strategy

In the analyses that follow, we systematically unpack higher education's liberalizing potential on out-group prejudice. We analyze out-group attitudes among two different in-groups: anti-immigration attitudes among native-born Americans and anti-Black attitudes among non-African Americans. Regarding our operationalization of education, we begin with the indicators that are standard in the prejudice literature: years of education and level of education. We also consider parents' education to speak to possible self-selection effects. Second, we move beyond the prejudice literature by analyzing both between- and within-education-level differences. Following studies on education and other sociopolitical attitudes, we compare individuals without higher education to those with higher education but break it down by six categories of academic majors. Additionally, we augment this approach by expanding our focus from differences across only a handful of broad academic areas to 12 categories of majors, while also talking into account second majors and higher educational sectors (public vs. private and 2-year vs. 4-year). To investigate these relationships further, we also zoom in by limiting our sample to respondents with higher education.

Data and methods

Our analyses rely on the General Social Survey (GSS), a nationally representative, cross-sectional survey of adults administered in the United States since 1972. Available for public use, the GSS is widely considered one of the best sources of attitudinal data and often used in analyses of prejudice and other social and political attitudes. In this study, we make exhaustive use of Cumulative File 1972–2021 (version R1a) (Davern et al. 2021), analyzing as many rounds of the survey as data availability on specific variables permits. Questions about racial prejudice first appear in the 1970s while questions regarding immigration do not appear until the 1990s. Additionally, some models focus only on those with higher education (i.e. within-education effects). Thus, our Ns vary across models, ranging from approximately 1,350–28,300.

Dependent variables

To capture attitudes toward out-groups, we use two dependent variables. The first, opposition to immigration[3], asks if immigration to the U.S. should

be increased or decreased. This variable is available in 12 rounds between 1994 and 2021 and has been featured in previous research on anti-immigrant attitudes (e.g. Eger, Mitchell, and Hjerm 2022; Hopkins 2010). Original responses are 1 "increased a lot" 2 "increased a little" 3 "remain the same as it is" 4 "reduced a little" 5 "reduced a lot". To facilitate comparison with our second dependent variable (see below), we rescale this variable by dividing by 5, so that values vary between 0 and 1.

Our second dependent variable is based on a battery of four questions[4] that assesses respondents' causal attributions for black–white inequality. This battery is in 22 rounds between 1977 and 2021 and commonly used in analyses of racial attitudes (e.g. Hunt 2007; Scarborough et al. 2021; Wodtke 2018). Each question begins with the statement: "On the average (Negroes/Blacks/African-Americans) have worse jobs, income, and housing than white people". Respondents answer 1 "yes" or 2 "no" that these differences in outcomes are due to: (1) discrimination; (2) less in-born ability to learn; (3) fewer opportunities to access education; and (4) lack of motivation and willpower. We recode all four variables from 1 and 2–0 and 1; reverse code the second and fourth variables so that 1 is indicative of racist attitudes; and then use row means to combine answers into a continuous measure of anti-Black prejudice, which varies between 0 and 1. For descriptive statistics, see Table A1 in the Appendix.

We acknowledge that our two dependent variables differ and that opposition towards immigration is not a direct measure of prejudice as one could prefer a reduction in immigration for some other reason other than antipathy toward immigrants. Although previous studies using GSS data have found similar patterns in analyses of anti-immigrant sentiment and opposition to immigration (e.g. Eger, Mitchell, and Hjerm 2022), these GSS measures are only moderately correlated ($r = 0.5$). Thus, as a robustness check, we have run additional models using data from 2014, the only GSS round where questions measuring anti-immigrant sentiment and academic majors are both included. Results are reported in Figures A1-A4 in the Appendix.

Key independent variables

Because we are interested in what aspects of education are related to attitudes toward out-groups, we rely on a variety of education variables in the GSS. Not all variables are available in all survey years; however, the two measures of individuals' education most often featured in analyses of prejudice are available in all waves between 1977 and 2021: years of education ($M = 13.39$, $SD = 3.08$) and highest level of education (34% = associate's degree or above). Until 2018, the GSS also asked respondents about their parents' education: father's years ($M = 11.22$, $SD = 4.23$) and father's highest level

(20% = associate's degree or above); and mother's years ($M = 11.23$, $SD = 3.68$) and mother's highest level (16% = associate's degree or above). Descriptive statistics by dependent variable are also reported in Table A2 of the Appendix.

In 2012, 2014, and 2016, respondents who participated in higher education also report institutional sector, which is the combination of control (public, private not-for-profit, and private for-profit) and level (less than 2-year, 2-year, or 4-year or above). We recode the original 7-category variable into one with 4 categories: public 4-year or above (55%); private not-for-profit, 4-year or above (29%); public 2-year (13%); and private, other (3%).

In 2012, 2014, 2016, and 2018, respondents who participated in higher education identify their major field of study and, in some cases, their second major field of study.[5] The GSS lists 78 majors. With the help of the Classification of Instructional Program (CIP) codes[6] originally developed by the U.S. Department of Education's National Center for Education Statistics (NCES), we collapsed 78 majors into 6 broad categories, with the following frequencies: Business (22%); Humanities (17%); Education (13%); Social Sciences (14%); STEM (32%); and General studies/other vocational/other (3%).

We also created a more nuanced, 12-category version of academic majors[7]: Art & Architecture (4%); Business (22%); Computer & Technology (3%); Education (13%); Health and Medicine (13%); Humanities (11%); Law (2%); Legal Studies (2%); Mechanical Arts (2%); Natural Sciences (14%); Social Sciences (13%); and General studies/other vocational/other (3%). 19% of those with higher education identify a second major: Art & Architecture (7%); Business (19%); Computer & Technology (5%); Education (13%); Health and Medicine (9%); Humanities (12%); Law (2%); Legal Studies (2%); Mechanical Arts (2%); Natural Sciences (12%); Social Sciences (15%); and General studies/other vocational/other (3%). Details about the recoding of the 78 majors into both the 6- and 12-category groupings can be found in Table A6. We also report frequencies for both versions by dependent variable in Table A3 of the Appendix.

Control variables

We include a continuous measure of age and age-squared as well as a categorical measure of sex. We also include information about race and ethnicity. Before 2021, the question included only three possible options: white; black, other. In 2021, there were 16 options. In order to use as many waves as possible, we recode the 2021 data to be consistent with the 3-category version. In some models, we also control for inflation-adjusted household income (standardized to USD in the year 2000). For descriptive statistics, see Tables A4-A5 in the Appendix.

Estimation

In models of opposition to immigration, we restrict the sample to U.S.-born (N≈17,300). In models of anti-Black prejudice, we exclude African-Americans from the sample (N≈28,300). All models use ordinary least squares (OLS) regression[8] and include either a linear time trend or year dummies.

Results

Education and out-group attitudes

We first establish the relationship between basic measures of education (i.e. years and highest level) and out-group attitudes. Table 1 reports the relationship between education and native-born opposition to immigration between 1994 and 2021. Table 2 reports identical models except that the dependent variable is anti-Black attitudes among non-Black respondents between 1977 and 2021. Models 0 in both tables indicate that attitudes toward both groups have improved over time. Models 1–3 demonstrate the strong correlation between years of education and out-group attitudes, with model 3 indicating that it is education and not current income that is related to attitudes. This finding is consistent with previous research that shows that education and other SES variables yield separate effects (e.g. Hainmueller and Hiscox 2007; Hello, Scheepers, and Gijsberts 2002)

In model 4, we also control for parents' years of education. Results reported in both Tables 1 and 2 suggest that one's own education has an effect independent of one's family's education. Models 5–8 show similar patterns for levels of education, though important differences emerge. For attitudes about immigration, there is a clear educational divide: having a bachelor's degree or higher is significantly associated with less opposition to immigration, with no significant differences among those with lower levels of education. There is a different pattern for attitudes toward African-Americans. Each level is significantly associated with less anti-Black prejudice, and the magnitude of the relationship increases with each level of education. These patterns are evident in Figure 1, which shows the predicted values with 95% confidence intervals for years and levels of education on out-group prejudice. These relationships hold even when controlling for parents' educational level, and results mirror the patterns for respondents' educational level.

Between-education level differences in out-group attitudes

In our second set of models, we assess whether the so-called liberalizing effect of higher education is universal, or if it is particular types of education that are correlated with less opposition to immigration or lower levels of anti-Black prejudice. Table 3 compares individuals with higher education to those

Table 1. Highest level and years of education and native-born opposition to immigration, 1994–2021.

	(0a)	(1a)	(2a)	(3a)	(4a)	(5a)	(6a)	(7a)	(8a)
Education, years		−0.014***	−0.015***	−0.015***	−0.014***				
		(0.001)	(0.001)	(0.001)	(0.001)				
Father's education, years					−0.003***				
					(0.001)				
Mother's education, years					0.000				
					(0.001)				
Education level (ref = less than high school)									
High school diploma						−0.002	−0.003	−0.002	−0.000
						(0.005)	(0.005)	(0.006)	(0.007)
Associate's degree						−0.000	−0.004	−0.002	0.005
						(0.007)	(0.007)	(0.008)	(0.010)
Bachelor's degree						−0.071***	−0.078***	−0.080***	−0.067***
						(0.006)	(0.006)	(0.007)	(0.008)
Graduate degree						−0.121***	−0.138***	−0.139***	−0.112***
						(0.007)	(0.007)	(0.008)	(0.010)
Father's education level (ref = less than high school)									
High school diploma									−0.007
									(0.005)
Associate's degree									−0.011
									(0.012)
Bachelor's degree									−0.021**
									(0.008)
Graduate degree									−0.037***
									(0.009)
Mother's education level (ref = less than high school)									
High school diploma									−0.006
									(0.005)
Associate's degree									0.001
									(0.010)
Bachelor's degree									−0.018*
									(0.008)
Graduate degree									−0.026*

									(0.011)
Age			0.006***	0.006***	0.006***		0.006***	0.006***	0.006***
			(0.001)	(0.001)	(0.001)		(0.001)	(0.001)	(0.001)
Age2			−0.000***	−0.000***	−0.000***		−0.000***	−0.000***	−0.000***
			(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)
Female			0.004	0.005	0.004		0.003	0.005	0.003
			(0.003)	(0.003)	(0.004)		(0.003)	(0.003)	(0.004)
Race/ethnicity (ref = white)									
Black			−0.044***	−0.042***	−0.042***		−0.044***	−0.041***	−0.044***
			(0.005)	(0.005)	(0.007)		(0.005)	(0.005)	(0.006)
Other			−0.056***	−0.057***	−0.064***		−0.053***	−0.052***	−0.061***
			(0.008)	(0.008)	(0.010)		(0.008)	(0.008)	(0.010)
Income				−0.000				0.000	
				(0.000)				(0.000)	
Year	−0.005***	−0.005***	−0.005***	−0.005***	−0.004***	−0.005***	−0.005***	−0.005***	−0.004***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	11.530***	10.608***	10.674***	10.637***	8.390***	10.456***	10.615***	10.572***	8.503***
	(0.395)	(0.391)	(0.392)	(0.413)	(0.552)	(0.391)	(0.390)	(0.412)	(0.538)
Observations	17,268	17,247	17,247	15,588	10,418	17,268	17,268	15,598	10,954
R-squared	0.042	0.071	0.092	0.091	0.075	0.078	0.102	0.102	0.086

Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a.
Standard errors in parentheses.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table 2. Highest level and years of education and anti-Black prejudice, 1977–2021.

	(0b)	(1b)	(2b)	(3b)	(4b)	(5b)	(6b)	(7b)	(8b)
Education, years		−0.023***	−0.023***	−0.024***	−0.019***				
		(0.001)	(0.001)	(0.001)	(0.001)				
Father's education, years					−0.005***				
					(0.001)				
Mother's education, years					−0.001				
					(0.001)				
Education level (ref = less than high school)									
High school diploma						−0.058***	−0.050***	−0.050***	−0.040***
						(0.005)	(0.005)	(0.005)	(0.007)
Associate's degree						−0.083***	−0.074***	−0.074***	−0.057***
						(0.008)	(0.008)	(0.009)	(0.010)
Bachelor's degree						−0.180***	−0.175***	−0.176***	−0.135***
						(0.006)	(0.006)	(0.007)	(0.008)
Graduate degree						−0.232***	−0.237***	−0.240***	−0.190***
						(0.007)	(0.007)	(0.008)	(0.009)
Father's education level (ref = less than high school)									
High school diploma									−0.018**
									(0.006)
Associate's degree									−0.033*
									(0.015)
Bachelor's degree									−0.053***
									(0.008)
Graduate degree									−0.072***
									(0.010)
Mother's education level (ref = less than high school)									
High school diploma									−0.033***
									(0.006)
Associate's degree									−0.033**
									(0.012)
Bachelor's degree									−0.044***
									(0.009)
Graduate degree									−0.057***

									(0.013)
Age			0.006***	0.006***	0.004***		0.007***	0.007***	0.005***
			(0.001)	(0.001)	(0.001)		(0.001)	(0.001)	(0.001)
Age2			−0.000***	−0.000***	−0.000***		−0.000***	−0.000***	−0.000***
			(0.000)	(0.000)	(0.000)		(0.000)	(0.000)	(0.000)
Female			−0.041***	−0.042***	−0.042***		−0.042***	−0.044***	−0.045***
			(0.003)	(0.004)	(0.004)		(0.003)	(0.004)	(0.004)
Race/ethnicity (ref = white)									
Black			–	–	–		–	–	–
			–	–	–		–	–	–
Other			−0.017**	−0.011	−0.014		−0.004	0.002	−0.011
			(0.007)	(0.007)	(0.009)		(0.007)	(0.007)	(0.008)
Income				−0.000				0.000	
				(0.000)				(0.000)	
Year	−0.003***	−0.002***	−0.002***	−0.002***	−0.001***	−0.002***	−0.002***	−0.002***	−0.001***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Constant	6.462***	4.620***	4.867***	4.916***	2.254***	4.461***	4.870***	4.977***	2.108***
	(0.289)	(0.284)	(0.288)	(0.302)	(0.390)	(0.286)	(0.289)	(0.303)	(0.383)
Observations	28,258	28,212	28,212	25,405	18,592	28,258	28,258	25,433	19,792
R-squared	0.015	0.070	0.082	0.084	0.072	0.070	0.086	0.088	0.086

Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a.
Standard errors in parentheses.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

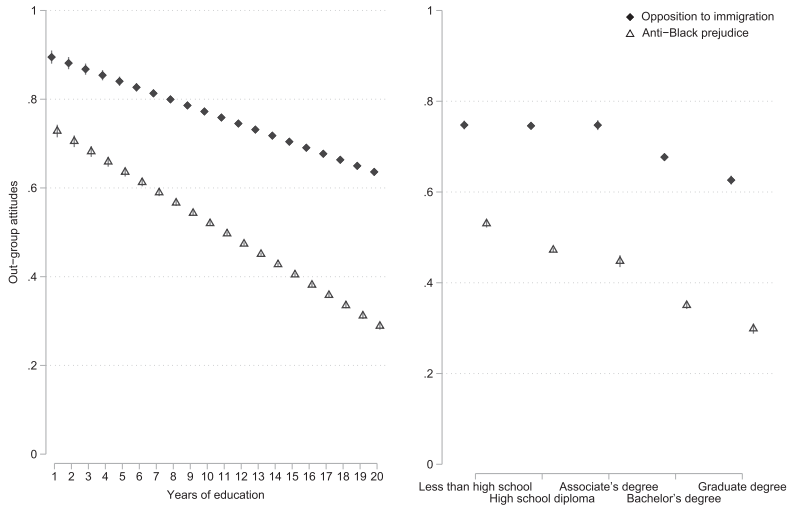

Figure 1. Predicted values, education and out-group attitudes . Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a. Notes: Models 1a and 1b (left) and Models 5a and 5b (right) with 95% confidence intervals (vertical bars).

without higher education, while also distinguishing between different aspects of higher education.[9] Because there are far fewer waves of data included in these models, we use models 9a and 9b to re-establish the relationship between levels of education and out-group attitudes. Despite the reduction in sample size, these patterns bear striking similarity to what is reported in Tables 1 and 2 – not only in regards to significance but also the size of the coefficient. However, models 10a and 10b indicate that not all higher education is associated with less opposition toward immigration or lower levels of anti-Black prejudice. Specifically, only those who have attended 4-year, public or not-for-profit private institutions hold out-group attitudes significantly different from those without any higher education.

Models 11a and 11b, which feature 6 categories of academic majors, demonstrate differences in the extent to which respondents with higher education are less prejudiced than their counterparts without it. For anti-Black prejudice, the differences are clearest. As Figure 2 shows, the education effect is approximately twice as large for non-Black humanities and social science majors compared to those who majored in business, education, STEM, or general or vocational studies. However, in regards to opposition to immigration, the difference between American-born with and without higher education does appear to vary much across these six categories of majors. These relationships are robust to models including second majors (models 12a and 12b), which, save for the relationship between a second

Table 3. Between-education-level differences in out-group attitudes: educational level, sector, and 6 major categories, 2012–2018.

	Opposition to immigration				Anti-Black prejudice			
	(9a)	(10a)	(11a)	(12a)	(9b)	(10b)	(11b)	(12b)
Education level (ref = less than high school)								
High school diploma	−0.008				−0.047***			
	(0.010)				(0.012)			
Associate's degree	−0.012				−0.062***			
	(0.013)				(0.017)			
Bachelor's degree	−0.084***				−0.167***			
	(0.011)				(0.014)			
Graduate degree	−0.126***				−0.221***			
	(0.013)				(0.016)			
Sector (ref = no college/university education)								
Public, 4-year or above		−0.075***				−0.129***		
		(0.008)				(0.012)		
Private not-for-profit, 4-year or above		−0.098***				−0.180***		
		(0.011)				(0.015)		
Public, 2-year		−0.013				−0.019		
		(0.016)				(0.022)		
Private, other		−0.059				−0.054		
		(0.032)				(0.048)		
College/university major (ref = none)								
Business			−0.059***	−0.062***			−0.096***	−0.099***
			(0.010)	(0.011)			(0.014)	(0.015)
Humanities			−0.099***	−0.099***			−0.200***	−0.197***
			(0.012)	(0.012)			(0.015)	(0.016)
Education			−0.073***	−0.074***			−0.102***	−0.100***
			(0.013)	(0.014)			(0.018)	(0.018)
Social Sciences			−0.094***	−0.097***			−0.186***	−0.184***
			(0.012)	(0.013)			(0.017)	(0.017)
STEM			−0.056***	−0.059***			−0.085***	−0.087***
			(0.009)	(0.009)			(0.012)	(0.012)
General studies/other vocational/other			−0.081**	−0.083**			−0.100**	−0.100**
			(0.026)	(0.027)			(0.034)	(0.034)
Second college/university major (ref = none)								
Business				0.021				0.033

(*Continued*)

Table 3. Continued.

	Opposition to immigration				Anti-Black prejudice			
	(9a)	(10a)	(11a)	(12a)	(9b)	(10b)	(11b)	(12b)
				(0.024)				(0.032)
Humanities				0.014				−0.063*
				(0.024)				(0.031)
Education				−0.031				0.011
				(0.030)				(0.044)
Social Sciences				0.017				0.009
				(0.026)				(0.033)
STEM				0.034				0.023
				(0.021)				(0.028)
General studies/other vocational/other				−0.108				0.001
				(0.057)				(0.083)
Age	0.007***	0.007***	0.007***	0.007***	0.007***	0.006***	0.007***	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)	(0.001)
Age2	−0.000***	−0.000***	−0.000***	−0.000***	−0.000***	−0.000***	−0.000***	−0.000***
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.009	0.016*	0.011	0.011*	−0.025***	−0.023*	−0.022**	−0.022**
	(0.006)	(0.006)	(0.006)	(0.006)	(0.007)	(0.009)	(0.008)	(0.008)
Race/ethnicity (ref = white)								
Black	−0.053***	−0.053***	−0.051***	−0.051***	–	–	–	–
	(0.008)	(0.009)	(0.008)	(0.008)	–	–	–	–
Other	−0.041***	−0.031*	−0.040**	−0.039**	0.005	0.002	0.008	0.008
	(0.012)	(0.014)	(0.012)	(0.012)	(0.012)	(0.015)	(0.012)	(0.012)
Year (ref = 2012)								
2014	−0.004	−0.001	−0.004	−0.004	−0.005	0.003	−0.004	−0.004
	(0.008)	(0.008)	(0.008)	(0.008)	(0.011)	(0.011)	(0.011)	(0.011)
2016	−0.026**	−0.025**	−0.027**	−0.027**	−0.056***	−0.051***	−0.057***	−0.058***
	(0.008)	(0.008)	(0.008)	(0.008)	(0.011)	(0.011)	(0.011)	(0.011)
2018	−0.064***	–	−0.064***	−0.064***	−0.077***	–	−0.077***	−0.077***
	(0.009)	–	(0.009)	(0.009)	(0.011)	–	(0.011)	(0.011)
Constant	0.570***	0.569***	0.572***	0.570***	0.361***	0.347***	0.330***	0.330***
	(0.023)	(0.025)	(0.022)	(0.022)	(0.031)	(0.034)	(0.030)	(0.030)
Observations	5,765	4,299	5,757	5,757	5,348	3,848	5,339	5,339
R-squared	0.069	0.051	0.059	0.061	0.081	0.070	0.075	0.076

Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a.
Standard errors in parentheses.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

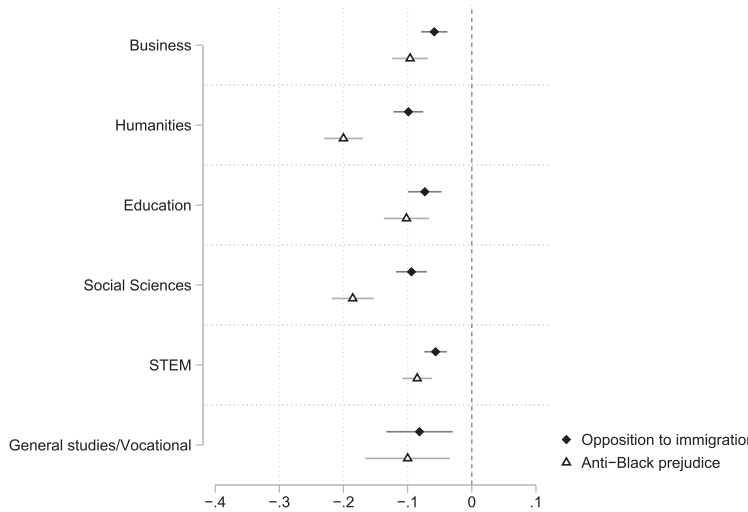

Figure 2. Between-education-level point estimates: 6 categories of college/university academic majors, 2012-2018. Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a. Notes: Models 11a and 11b; the reference group is none (i.e. no higher education).

major in the humanities and anti-Black attitudes, are not strongly associated with either dependent variable.

In Table 4, we continue to unpack higher education's liberalizing potential by expanding the number of major categories from six to twelve. In doing so, a more nuanced picture emerges. When we zoom in, Models 13 and 14 reveal that not all majors are significantly related to out-group attitudes. Specifically, majoring in the mechanical arts (i.e. industry & technology, electronics, mechanics/machine trade, or aviation/aeronautics) or legal studies (i.e. law enforcement and criminology/criminal justice) is not significantly different from not participating in higher education regarding out-group attitudes.[10] Once we distinguish between legal studies, with its explicit focus on crime, and other social science majors (e.g. sociology, social work, psychology, political science, etc.), the effect size of majoring in the social sciences slightly increases compared to models reported in Table 3. Further, when it comes to opposition to immigration, there is no significant difference in majoring in computers and technology compared to no having no higher education. Again, there is little evidence that second majors play a role in attitudes toward out-groups, though additional education in mechanical arts is associated with more opposition to immigration.

Arguably, the most striking finding is the differences in point estimates between dependent variables illustrated in Figure 3. Majoring in arts and architecture, social sciences, humanities, or law is associated with significantly

Table 4. Between-education-level differences in out-group attitudes: 12 major categories, 2012–2018.

	Opposition to immigration		Anti-Black prejudice	
	(13a)	(14a)	(13b)	(14b)
College/university major (ref = none)				
Art & Architecture	−0.101***	−0.099***	−0.191***	−0.189***
	(0.024)	(0.024)	(0.030)	(0.031)
Business	−0.058***	−0.061***	−0.096***	−0.098***
	(0.010)	(0.011)	(0.014)	(0.015)
Computers & Technology	−0.024	−0.027	−0.083*	−0.087**
	(0.027)	(0.027)	(0.033)	(0.034)
Education	−0.073***	−0.075***	−0.102***	−0.100***
	(0.013)	(0.013)	(0.018)	(0.018)
Health and Medicine	−0.048***	−0.051***	−0.063***	−0.064***
	(0.013)	(0.013)	(0.018)	(0.018)
Humanities	−0.097***	−0.099***	−0.192***	−0.188***
	(0.014)	(0.015)	(0.019)	(0.019)
Law	−0.104**	−0.109**	−0.267***	−0.268***
	(0.035)	(0.035)	(0.044)	(0.044)
Legal Studies	0.005	−0.004	−0.025	−0.034
	(0.031)	(0.031)	(0.043)	(0.043)
Mechanical Arts	−0.043	−0.042	−0.092	−0.090
	(0.038)	(0.038)	(0.052)	(0.052)
Natural Sciences	−0.072***	−0.076***	−0.104***	−0.107***
	(0.013)	(0.013)	(0.016)	(0.017)
Social Sciences	−0.111***	−0.115***	−0.212***	−0.211***
	(0.013)	(0.014)	(0.018)	(0.019)
General studies/other vocational/other	−0.081**	−0.089***	−0.100**	−0.105**
	(0.026)	(0.027)	(0.034)	(0.034)
Second college/university major (ref = none)				
Art & Architecture		0.005		−0.051
		(0.040)		(0.053)
Business		0.023		0.038
		(0.024)		(0.032)
Computer & Technology		−0.031		−0.026
		(0.049)		(0.067)
Education		−0.026		0.014
		(0.030)		(0.044)
Health and Medicine		0.052		0.011
		(0.034)		(0.047)
Humanities		0.016		−0.068
		(0.030)		(0.038)
Law		0.115		0.044
		(0.086)		(0.137)
Legal Studies		0.097		0.132
		(0.071)		(0.098)
Mechanical Arts		0.246*		0.163
		(0.106)		(0.138)
Natural Sciences		0.038		0.045
		(0.031)		(0.040)
Social Sciences		0.002		−0.011
		(0.028)		(0.035)
General studies/other vocational/other		−0.105		0.002
		(0.057)		(0.083)
Age	0.007***	0.007***	0.007***	0.007***
	(0.001)	(0.001)	(0.001)	(0.001)
Age2	−0.000***	−0.000***	−0.000***	−0.000***

(*Continued*)

Table 4. Continued.

	Opposition to immigration		Anti-Black prejudice	
	(13a)	(14a)	(13b)	(14b)
	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.010	0.011	−0.023**	−0.023**
	(0.006)	(0.006)	(0.008)	(0.008)
Race/ethnicity (ref = white)				
Black	−0.051***	−0.051***	–	–
	(0.008)	(0.008)	–	–
Other	−0.040**	−0.039**	0.009	0.009
	(0.012)	(0.012)	(0.012)	(0.012)
Year (ref = 2012)				
2014	−0.004	−0.004	−0.005	−0.005
	(0.008)	(0.008)	(0.011)	(0.011)
2016	−0.027***	−0.027**	−0.058***	−0.058***
	(0.008)	(0.008)	(0.011)	(0.011)
2018	−0.064***	−0.064***	−0.078***	−0.078***
	(0.009)	(0.009)	(0.011)	(0.011)
Constant	0.574***	0.571***	0.332***	0.332***
	(0.022)	(0.022)	(0.030)	(0.030)
Observations	5,757	5,757	5,339	5,339
R-squared	0.062	0.065	0.079	0.081

Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a.
Standard errors in parentheses.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

less anti-Black prejudice, though the point estimates for these major categories are on par with other academic fields when it comes to opposition to immigration. Overall, compared to anti-Black prejudice, attitudes toward immigration vary less among major categories.

Within-higher education differences in out-group attitudes

In our third set of models, we narrow our focus to respondents only with higher education, further demonstrating that the effect of higher education is not uniform. In Table 5, models 15–17 show that business and STEM majors are significantly more opposed to immigration and express more anti-Black prejudice compared to social science majors. Additionally, education majors are more prejudiced toward African-Americans compared to those who majored in social sciences. As before, second majors do not appear to play a significant role in attitude. Models 15a and 15b are visualized in Figure 4.

In models 17a and 17b, we control for institutional sector. Results show that attending a 2-year public institution is associated with higher levels of opposition to immigration and anti-Black attitudes compared to attending a 4-year public institution. Moreover, attending a 4-year private but not-for-profit institution is associated with lower levels of anti-Black prejudice compared to attending a 4-year public institute of higher education, highlighting another source of variation within higher education.

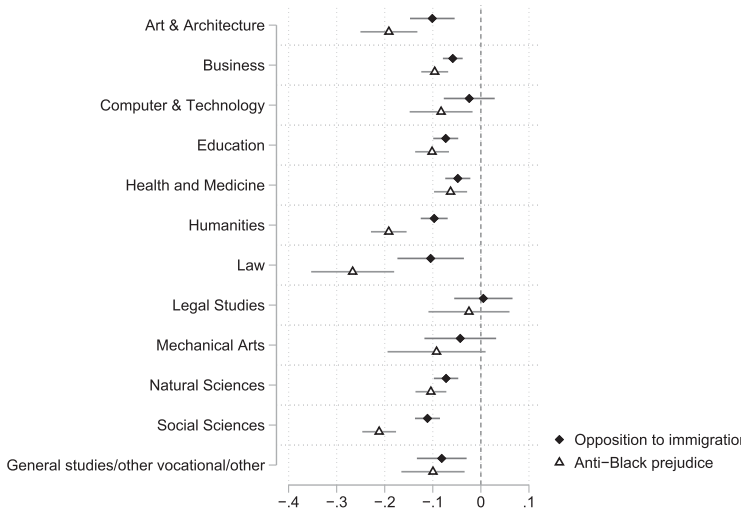

Figure 3. Between-education-level point estimates: 12 categories of college/university academic majors, 2012-2018, Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a, Notes: Models 13a and 13b; the reference group is none (i.e. no higher education).

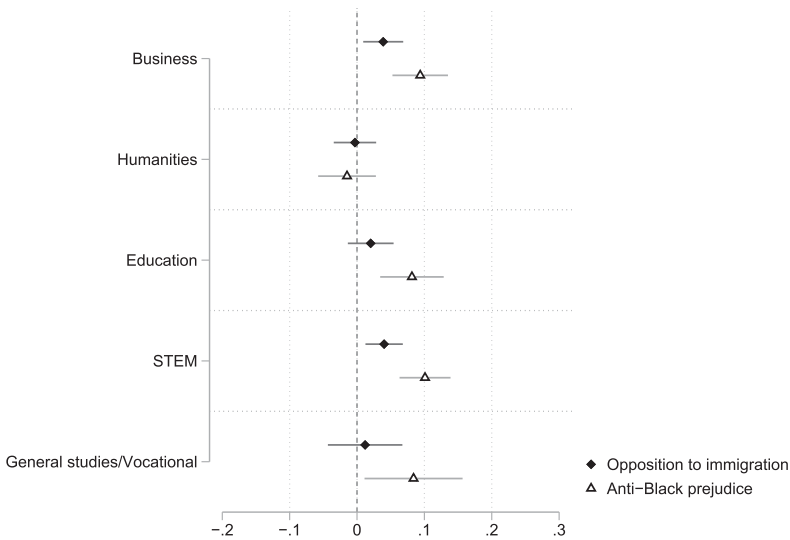

Figure 4. Within-higher education point estimates: 6 categories of college/university academic majors, 2012-2018, Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a, Notes: Models 15a and 15b; the reference group is social sciences.

Last, we exchange the 6-category measure of academic majors for the 12-category version. Results, reported in Table 6, similarly indicate that many majors are associated with higher levels of opposition to immigration and

Table 5. Within-education-level differences in out-group attitudes: educational sector and 6 major categories, 2012–2018.

	Opposition to immigration			Anti-Black prejudice		
	(15a)	(16a)	(17a)	(15b)	(16b)	(17b)
Sector (ref = public, 4-year or above)						
Private not-for-profit, 4-year or above			−0.023			−0.052**
			(0.012)			(0.017)
Public, 2-year			0.062***			0.091***
			(0.016)			(0.023)
Private, other			0.005			0.052
			(0.032)			(0.050)
College/university major (ref = social sciences)						
Business	0.039*	0.038*	0.039*	0.094***	0.089***	0.100***
	(0.015)	(0.015)	(0.018)	(0.021)	(0.021)	(0.026)
Humanities	−0.003	−0.000	0.011	−0.015	−0.013	−0.010
	(0.016)	(0.016)	(0.019)	(0.022)	(0.022)	(0.027)
Education	0.020	0.022	0.027	0.082***	0.082***	0.071*
	(0.017)	(0.017)	(0.020)	(0.024)	(0.024)	(0.028)
STEM	0.040**	0.040**	0.039*	0.101***	0.097***	0.100***
	(0.014)	(0.014)	(0.017)	(0.019)	(0.020)	(0.024)
General studies/other vocational/other	0.012	0.014	−0.063	0.084*	0.082*	0.055
	(0.028)	(0.028)	(0.036)	(0.037)	(0.037)	(0.049)
Second college/university major (ref = social sciences)						
None		−0.016			−0.009	
		(0.026)			(0.033)	
Business		0.005			0.026	
		(0.034)			(0.045)	
Humanities		−0.003			−0.073	
		(0.034)			(0.044)	
Education		−0.046			0.004	
		(0.038)			(0.055)	
STEM		0.018			0.016	
		(0.032)			(0.043)	
General studies/other vocational/other		−0.125*			−0.000	
		(0.061)			(0.089)	
Age	0.005**	0.006**	0.005**	0.002	0.001	−0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)
Age2	−0.000**	−0.000**	−0.000**	−0.000	−0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.026**	0.027**	0.031**	−0.008	−0.006	0.012
	(0.009)	(0.009)	(0.011)	(0.012)	(0.013)	(0.015)
Race/ethnicity (ref = white)						
Black	−0.032*	−0.031*	−0.034*	–	–	–
	(0.014)	(0.014)	(0.017)	–	–	–
Other	−0.064**	−0.062**	−0.052	0.034	0.034	0.022
	(0.024)	(0.024)	(0.028)	(0.021)	(0.021)	(0.030)
Year (ref = 2012)						
2014	0.009	0.009	0.017	−0.022	−0.021	−0.004
	(0.013)	(0.013)	(0.014)	(0.018)	(0.018)	(0.019)
2016	−0.026	−0.026	−0.023	−0.077***	−0.078***	−0.069***
	(0.014)	(0.014)	(0.014)	(0.018)	(0.018)	(0.019)
2018	−0.069***	−0.070***	–	−0.077***	−0.078***	
	(0.014)	(0.014)	–	(0.019)	(0.019)	
Constant	0.512***	0.518***	0.501***	0.278***	0.290***	0.365***
	(0.044)	(0.049)	(0.051)	(0.060)	(0.066)	(0.072)
Observations	2,129	2,129	1,473	2,054	2,054	1,350
R-squared	0.041	0.046	0.048	0.045	0.048	0.070

Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a.
Standard errors in parentheses.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

Table 6. Within-education-level differences in out-group attitudes: educational sector and 12 major categories, 2012–2018.

	(18a)	(19a)	(20a)	(18b)	(19b)	(20b)
Sector (ref = public, 4-year or above)						
Private not-for-profit, 4-year or above			−0.022			−0.052**
			(0.012)			(0.017)
Public, 2-year			0.057***			0.087***
			(0.017)			(0.024)
Private, other			0.005			0.054
			(0.032)			(0.050)
College/university major (ref = social sciences)						
Art & Architecture	0.009	0.015	0.003	0.020	0.022	−0.004
	(0.026)	(0.026)	(0.029)	(0.035)	(0.035)	(0.042)
Business	0.056***	0.058***	0.054**	0.121***	0.118***	0.119***
	(0.016)	(0.016)	(0.019)	(0.022)	(0.022)	(0.027)
Computers & Technology	0.088**	0.090**	0.067	0.131***	0.127***	0.132*
	(0.029)	(0.029)	(0.035)	(0.037)	(0.038)	(0.051)
Education	0.037*	0.040*	0.042*	0.109***	0.109***	0.092**
	(0.018)	(0.018)	(0.020)	(0.025)	(0.025)	(0.029)
Health and Medicine	0.063***	0.064***	0.061**	0.149***	0.147***	0.153***
	(0.018)	(0.018)	(0.021)	(0.024)	(0.025)	(0.030)
Humanities	0.016	0.018	0.040	0.020	0.023	0.032
	(0.018)	(0.019)	(0.022)	(0.025)	(0.025)	(0.031)
Law	0.010	0.010	0.001	−0.051	−0.053	−0.094
	(0.037)	(0.037)	(0.041)	(0.047)	(0.047)	(0.056)
Legal Studies	0.116***	0.111***	0.104**	0.193***	0.183***	0.145*
	(0.033)	(0.033)	(0.038)	(0.046)	(0.047)	(0.057)
Mechanical Arts	0.078*	0.082*	0.086	0.134*	0.137*	0.040
	(0.039)	(0.039)	(0.050)	(0.055)	(0.055)	(0.072)
Natural Sciences	0.044*	0.044*	0.044*	0.108***	0.104***	0.096***
	(0.018)	(0.018)	(0.020)	(0.023)	(0.024)	(0.028)
General studies/other vocational/other	0.029	0.025	−0.046	0.111**	0.106**	0.075
	(0.029)	(0.029)	(0.036)	(0.038)	(0.038)	(0.049)
Second college/university major (ref = social sciences)						
None		−0.002			0.010	
		(0.027)			(0.035)	
Art & Architecture		−0.001			−0.039	
		(0.047)			(0.063)	
Business		0.021			0.051	
		(0.035)			(0.046)	
Computer & Technology		−0.023			−0.007	
		(0.055)			(0.075)	
Education		−0.028			0.026	
		(0.039)			(0.056)	
Health and Medicine		0.040			0.022	
		(0.043)			(0.059)	
Humanities		0.015			−0.059	
		(0.040)			(0.050)	
Law		0.097			0.056	
		(0.089)			(0.142)	
Legal Studies		0.093			0.140	
		(0.074)			(0.104)	
Mechanical Arts		0.249*			0.173	
		(0.108)			(0.143)	
Natural Sciences		0.039			0.057	
		(0.040)			(0.053)	
General studies/other vocational/other		−0.108			0.021	
		(0.062)			(0.090)	
Age	0.005**	0.005**	0.005**	0.001	0.001	−0.002
	(0.002)	(0.002)	(0.002)	(0.002)	(0.002)	(0.003)

Age2	−0.000**	−0.000**	−0.000**	−0.000	−0.000	0.000
	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)	(0.000)
Female	0.026**	0.027**	0.030**	−0.010	−0.009	0.005
	(0.009)	(0.010)	(0.011)	(0.013)	(0.013)	(0.016)
Race/ethnicity (ref = white)						
Black	−0.033*	−0.031*	−0.033	–	–	–
	(0.014)	(0.014)	(0.017)	–	–	–
Other	−0.062**	−0.060*	−0.048	0.036	0.037	0.025
	(0.024)	(0.024)	(0.028)	(0.021)	(0.021)	(0.030)
Year (ref = 2012)						
2014	0.008	0.009	0.016	−0.024	−0.023	−0.006
	(0.013)	(0.013)	(0.014)	(0.018)	(0.018)	(0.019)
2016	−0.026	−0.026	−0.024	−0.079***	−0.080***	−0.071***
	(0.014)	(0.014)	(0.014)	(0.018)	(0.018)	(0.019)
2018	−0.070***	−0.069***	–	−0.079***	−0.080***	–
	(0.014)	(0.014)	–	(0.018)	(0.019)	–
Constant	0.502***	0.489***	0.491***	0.259***	0.248***	0.351***
	(0.045)	(0.051)	(0.051)	(0.060)	(0.068)	(0.073)
Observations	2,129	2,129	1,473	2,054	2,054	1,350
R-squared	0.049	0.057	0.055	0.055	0.061	0.082

Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a.
Standard errors in parentheses.
*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$.

anti-Black racism when compared to those who majored in the social sciences. Only the attitudes of those who majored in the humanities, arts and architecture, and law are not significantly different from the attitudes of social science majors. Models 18a and 18b are illustrated in Figure 5.

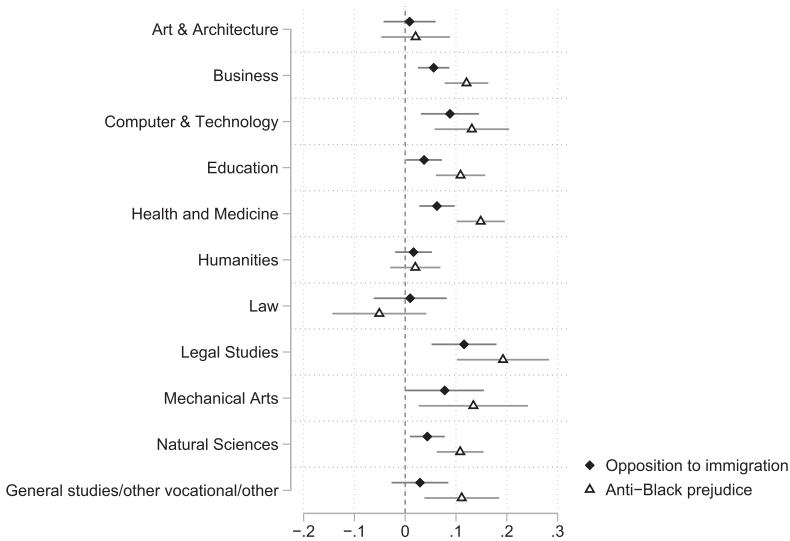

Figure 5. Within-higher education point estimates: 12 categories of college/university academic majors, 2012-2018, Source: General Social Survey (GSS) Cumulative File 1972–2021 R1a, Notes: Models 18a and 18b; the reference group is social sciences.

In the final set of models, we again control for institutional sector. Models 20a and 20b show that those who only attend a 2-year public institution articulate higher levels of opposition to immigration and anti-Black attitudes than those who attend a 4-year public institution. Additionally, model 20b indicates that those who attend a 4-year private but not-for-profit institution report lower levels of anti-Black prejudice compared to those who attend a 4-year public institute of higher education.

Taken together, these results demonstrate significant variation in educational effects across majors and sectors. Importantly, the magnitude of educational effects differs between opposition to immigration and anti-Black prejudice, suggesting that the liberalizing potential of higher education in reducing prejudice not only depends on academic major but also in regards to the minority group in question.

Conclusion

Research on prejudice has consistently shown that more educated individuals hold more positive attitudes toward racial and ethnic out-groups (Hello, Scheepers, and Gijsberts 2002; Hjerm 2001; Maykovich 1975; Velásquez and Eger 2022; Weber 2022). Previous studies in this literature have treated education as a uniform or monolithic entity, quantifying it as either the number of years of schooling (Quillian 1995, 1996) or the level of degree attainment (Hainmueller and Hiscox 2007). This empirical strategy has overlooked potential nuances in the relationship between higher education and out-group prejudice, which has important implications for how we understand the relationship theoretically. Therefore, in this article, we aimed to provide a more accurate understanding of this robust statistical relationship and designed comprehensive research to unpack higher education's liberalizing potential.

First, our results demonstrate that not all higher education drives the statistical relationship between education and out-group prejudice. Compared to those without higher education, we find substantial between-education differences in the relationships among academic majors and out-group prejudice, and this variation is most visible with anti-Black attitudes. Further, our analysis of within-higher education effects showed that individuals from most academic majors hold more negative out-group attitudes than those who majored in the social sciences. For some majors like business and health/medicine, these differences are more pronounced for anti-Black prejudice. There are two related yet distinct implications of these results: not all higher education has the same potential to be liberalizing, and this distinction has been obfuscated in previous empirical studies of prejudice. Admittedly, we cannot empirically demonstrate or adjudicate among the mechanisms responsible for the difference in the observed effects.

However, our results are nevertheless consistent with psychodynamic, cognitive, and socializations models.

Our results also imply that learning about the human experience, whether through art, literature, history, or science, contributes to the development of anti-racist views and a greater tolerance of increasing ethnic diversity. We interpret these results as consistent with both the psychodynamic and cognitive models. Further, what students learn in these particular majors is also likely to be reinforced via socialization by peers and professors. Indeed, we find a striking resemblance between Ladd and Lipset's (1975) seminal study that ranked professors' liberalism and conservatism across academic fields and our patterns of out-group attitudes across academic majors. This suggests that professors' own views may influence or reinforce those of their students. Further corroborating this interpretation are the attitudinal differences between people attending different types of educational institutions, which may be evidence of institutional variation in norms and peer influence (Dey 1996, 1997; Guimond 1997; Hanson et al. 2012).

Second, our results reveal important differences in specific manifestations of out-group prejudice. In accordance with previous research, we found a distinct educational divide in opposition to immigration. Those with a bachelor's degree or higher are less likely to oppose immigration. However, this pattern is not replicated for attitudes toward African-Americans; instead, each additional level of education is associated with lower levels of prejudice. Although explicating these different patterns is not the focus of our research, one possible explanation is the development of an anti-racist norm in the United States since the 1960s (Ivarsflaten, Blinder, and Ford 2010). Thus, each level of education should theoretically reinforce anti-racist norms, providing more knowledge about American history and make more likely the internalization of democratic values (e.g. Selznick and Steinberg 1979). Our results also show that within-higher education variation in the educational effect across majors is much greater for anti-Black prejudice, which reinforces this idea that American higher education content related to the human experience specifically reinforces anti-racist norms during this period of time. Our results also imply then that norms against opposition to immigration and anti-immigrant sentiment in the United States are comparatively weaker between 2012 and 2018, possibly making individuals' attitudes more susceptible to negative political rhetoric about immigration (Bohman 2011; Flores 2018; Hopkins 2010).

We acknowledge several limitations to our study. First, with cross-sectional data, we cannot rule out selection effects. While we have controlled for important selection criteria such as parental education, we cannot be sure: (1) that attitudes about out-groups were not solidified prior to matriculation in higher education, making the correlation between higher education and out-group prejudice spurious; and/or, (2) that attitudes toward out-groups

did not contribute to the decision to pursue higher education and specific academic majors, making the relationship between higher education and prejudice causal, but in the opposite direction.

However, we find it unlikely that selection effects are the only explanation. If individuals self-select into higher education based on their attitudes toward out-groups, we would expect to find consistent between-education level differences regardless of academic major. On the contrary, we find that individuals in some academic majors do not differ significantly in their attitudes from individuals with no higher education. This contradicts the generic self-selection hypothesis that it is individuals with lower levels of prejudice who pursue higher education. Yet, our results do not contradict the idea that individuals with lower levels of prejudice self-select into specific majors (Elchardus and Spruyt 2009).

Although we do not dispute that a correlation likely exists between individuals' attitudes toward out-groups and the academic major they choose, we find it improbable that these attitudes are driving factor in choice of *any* major. Certainly, some students choose a social science or humanities major because of their interest in topics related to race and ethnicity in the United States. However, we find it unlikely (although not impossible) that individuals who oppose immigration or are prejudiced toward African-Americans *actively choose a different major because of those attitudes. Assuming this ignores the actual interests of those students and other known factors in choice of major such as labor market opportunities and future earnings (Kirkeboen, Leuven, and Mogstad 2016), as well as cognitive abilities, math and language skills (Windolf 1995).*

Moreover, if all higher education is equal in its liberalizing potential, our findings would imply that individuals in certain academic majors had even *higher* levels of prejudice before matriculation than those who did not pursue higher education. We find this premise highly unlikely, but if true, it would be inconsistent with the self-selection hypothesis that those with more positive attitudes toward out-groups pursue tertiary education. Thus, we believe there are logical reasons not to rule out liberalization. In light of recent longitudinal evidence of educational effects (e.g. Scott 2022; Velásquez and Eger 2022), we call upon future panel studies to collect more fine-grained details about higher education to clarify causality as well as within-higher education effects.

Other data limitations imply additional promising avenues for future research. As previously mentioned, we cannot test empirically the mechanisms theoretically underpinning the relationships among majors and levels of prejudice toward out-groups; future research should examine these mechanisms in greater detail. Finally, our empirical analysis is limited to one country, though theoretically there is little to suggest that our results regarding attitudes about immigration would be limited to the U.S. Nevertheless,

future research should broaden the scope of inquiry to other countries, especially countries without a tradition of liberal arts education, which is an approach to higher education that requires students to take courses in the humanities, natural sciences, and social sciences regardless of their academic major. It is possible that when students are not required to take *any* courses outside of their degree program, the differences across academic majors would be even larger and the differences between non-social science or humanities majors and those without higher education even smaller. Such findings would not only corroborate our results here, but also lend credence to the notion that scholars may have previously overestimated the impact higher education, in general, has on social and political attitudes.

In conclusion, our comprehensive analyses contribute to a more refined understanding of the relationship between higher education and prejudice towards ethnic and racial out-groups, which we argue has implications for how we understand previous scholarship on prejudice and higher education. While assuming uniform effects of higher education may be convenient in empirical analyses, our findings imply that previous research may have overestimated the impact that higher education has, *in general*, on prejudice and prejudice-adjacent phenomena. Therefore, whenever possible, future empirical research on prejudice as well as political cleavages (e.g. Ford and Jennings 2020) should differentiate among various academic fields.

Our study also has implications for how we understand the increasing politicization of higher education. Given our results, the paradigms of "higher education as liberal indoctrination" and "panacea for societal ills" both seem crude oversimplifications. Instead, the impact of higher education may itself be diverse, which suggests a variety of potential consequences for intergroup relations. Nevertheless, our analyses support the idea that learning about human societies, whether through art, literature, history, or science, has the potential to decrease prejudice, especially anti-Black racism. They also serve as a reminder that "there is little reason to conclude that a more educated populace (unless we consider content of that education) will necessarily lead to a more enlightened one in terms of addressing racial inequality" (Schaefer 1996, 11).

Notes

1. Some studies find that social desirability may partly account for the inverse relationship between education and out-group attitudes (Michaelis and Eysenck 1971; Sigall and Page 1971). Other research shows that its influence is limited (Heerwig and McCabe 2009).
2. An outlier in the literature, Ma-Kellams et al. (2014) found that those in the hard sciences compared to social sciences were more likely to espouse political liberalism.

3. letin, letin1, letin1a.
4. racdif1, racdif2, racdif3, racdif4.
5. If individuals in the 2012–2018 waves did not provide a major, they were classified as having no higher education if they also reported that their highest level of educational attainment was less than junior college/associate's degree. This process generated 8 and 9 missing cases for the first and second samples respectively.
6. The Classification of Instructional Programs (2020). U.S. Department of Education's National Center for Education Statistics (NCES). https://nces.ed.gov/ipeds/cipcode/Default.aspx?y=56, Accessed 7-Jan-2022.
7. The 12-category version also overcomes potential limitations/controversies associated with the 6-category one. For instance, in his study of professor's attitudes, van de Werfhorst (2020) combines law and legal studies into one of seven categories. In our 6-category version, we treat law as part of "Humanities" and legal studies as part of "Social Sciences", but they are both their own separate categories in our 12-category version.
8. It is common practice to apply parametric methods to Likert scale items. However, we are aware of the longstanding debate concerning, foremost, the question of equidistance between response categories. We side with Harpe (2015) on this issue and take a pragmatic approach by first ensuring a normal distribution and, when possible, aggregating battery items to approach continuous data.
9. Given those without higher education constitutes the reference category for models in tables 3 and 4, sector and major are highly correlated and therefore not included in the same models.
10. We note that small sample sizes in some majors may prevent the observation of statistically significant effects due to low sample size inflating the size of standard errors.

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References

Aboud, Frances E., and Sheri R. Levy. 2000. "Interventions to Reduce Prejudice and Discrimination in Children and Adolescents." In *Reducing Prejudice and Discrimination*, edited by S. Oskamp, 269–293. New York: Lawrence Erlbaum Associates Publishers.

Allport, Gordon W. 1954. *The Nature of Prejudice*. Cambridge, MA: Addison-Wesley.

Astin, Alexander W. 1977. *Four Critical Years. Effects of College on Beliefs, Attitudes, and Knowledge*. San Francisco: Jossey-Bass Publishers.

Bandura, Albert. 1969. "Social-Learning Theory Of Identificatory Processes." In *Handbook of Socialization Theory and Research*, edited by D. A. Goslin, 213–262. Chicago: Rand McNally & Company.

Blanchard, Fletcher A., Christian S. Crandall, John C. Brigham, and Leigh Ann Vaughn. 1994. "Condemning and Condoning Racism: A Social Context Approach to Interracial Settings." *Journal of Applied Psychology* 79 (6): 993–997. https://doi.org/10.1037/0021-9010.79.6.993.

Blumer, Herbert. 1958. "Race Prejudice as A Sense of Group Position." *Pacific Sociological Review* 1 (1): 3–7.

Bobo, Lawrence, and Frederick C. Licari. 1989. "Education and Political Tolerance: Testing the Effects of Cognitive Sophistication and Target Group Affect." *Public Opinion Quarterly* 53 (3): 285–308. https://doi.org/10.1086/269154.

Bohman, Andrea. 2011. "Articulated Antipathies: Political Influence on Anti-Immigrant Attitudes." *International Journal of Comparative Sociology* 52 (6): 457–477. https://doi.org/10.1177/0020715211428182.

Brońić, Miloš, and Andrew Miles. 2021. "College and the "Culture War": Assessing Higher Education's Influence on Moral Attitudes" *American Sociological Review* 86 (5): 856–895. https://doi.org/10.1177/00031224211041094.

Bubritzki, Swantje, Frank van Tubergen, Jeroen Weesie, and Sanne Smith. 2018. "Ethnic Composition of the School Class and Interethnic Attitudes: A Multi-Group Perspective." *Journal of Ethnic and Migration Studies* 44 (3): 482–502. https://doi.org/10.1080/1369183X.2017.1322501.

Bugelski, Richard, and Olive P. Lester. 1940. "Changes in Attitudes in a Group of College Students During Their College Course and After Graduation." *The Journal of Social Psychology* 12 (2): 319–332. https://doi.org/10.1080/00224545.1940.9921476.

Campbell, Colin, and Jonathan Horowitz. 2016. "Does College Influence Sociopolitical Attitudes?" *Sociology of Education* 89 (1): 40–58. https://doi.org/10.1177/0038040715617224.

Campbell, Bradley, and Jason Manning. 2018. *The Rise of Victimhood Culture. Microaggressions, Safe Spaces, and the New Culture Wars, The Rise of Victimhood Culture: Microaggressions, Safe Spaces, and the New Culture Wars*. Cham: Palgrave Macmillan.

Carnevale, Anthony P., Nicole Smith, Lenka Dražanová, Artem Gulish, and Kathryn Peltier Campbell. 2020. *The Role of Education in Taming Authoritarian Attitudes*.

Davern, Michael, Rene Bautista, Jeremy Freese, Stephen L. Morgan, and Tom W. Smith. 2021. General Social Survey 1972-2021 Cumulative File. [Machine-readable data file]. NORC ed. Chicago. https://gss.norc.org/Get-The-Data.

Devine, Patricia G., and Andrew J. Elliot. 1995. "Are Racial Stereotypes Really Fading? The Princeton Trilogy Revisited." *Personality and Social Psychology Bulletin* 21 (11): 1139–1150. https://doi.org/10.1177/01461672952111002.

Dey, Eric L. 1996. "Undergraduate Political Attitudes: An Examination of Peer, Faculty, and Social Influences." *Research in Higher Education* 37 (5): 535–554. https://doi.org/10.1007/BF01724937.

Dey, Eric L. 1997. "Undergraduate Political Attitudes: Peer Influence in Changing Social Contexts." *Journal of Higher Education* 68 (4): 398–413.

Eger, Maureen A., Jeffrey Mitchell, and Mikael Hjerm. 2022. "When I Was Growing Up: The Lasting Impact of Immigrant Presence on Native-Born American Attitudes Towards Immigrants and Immigration." *European Sociological Review* 38 (2): 169–188. https://doi.org/10.1093/esr/jcab038.

Elchardus, Mark, and Bram Spruyt. 2009. "The Culture of Academic Disciplines and the Sociopolitical Attitudes of Students: A Test of Selection and Socialization Effects." *Social Science Quarterly* 90 (2): 446–460. https://doi.org/10.1111/j.1540-6237.2009.00626.x.

Feldman, Kenneth A., and Theodore M. Newcomb. 1969. *The Impact of College on Students*. San Francisco: Jossey-Bass Publishers.

Flores, René D. 2018. "Can Elites Shape Public Attitudes Toward Immigrants?: Evidence from the 2016 US Presidential Election." *Social Forces* 96 (4): 1649–1690. https://doi.org/10.1093/sf/soy001.

Ford, Robert, and Will Jennings. 2020. "The Changing Cleavage Politics of Western Europe." *Annual Review of Political Science* 23 (1): 295–314. https://doi.org/10.1146/annurev-polisci-052217-104957.

Guimond, Serge. 1997. "Attitude Change During College: Normative or Informational Social Influence?" *Social Psychology of Education* 2 (3–4): 237–261. https://doi.org/10.1023/A:1009662807702.

Guimond, Serge, Guy Bégin, and Douglas L. Palmer. 1989. "Education and Causal Attributions: The Development of "Person-Blame" and "System-Blame" Ideology" *Social Psychology Quarterly* 52 (2): 126–140. https://doi.org/10.2307/2786912.

Guimond, Serge, and Douglas L. Palmer. 1990. "Type of Academic Training and Causal Attributions for Social Problems." *European Journal of Social Psychology* 20 (1): 61–75. https://doi.org/10.1002/ejsp.2420200106.

Guimond, Serge, and Douglas L. Palmer. 1996. "The Political Socialization of Commerce and Social Science Students: Epistemic Authority and Attitude Change[1]." *Journal of Applied Social Psychology* 26 (22): 1985–2013. https://doi.org/10.1111/j.1559-1816.1996.tb01784.x.

Hainmueller, Jens, and Michael J. Hiscox. 2007. "Educated Preferences: Explaining Attitudes Toward Immigration in Europe." *International Organization* 61 (2): 399–442.

Hanson, Jana M., Dustin D. Weeden, Ernest T. Pascarella, and Charles Blaich. 2012. "Do Liberal Arts Colleges Make Students More Liberal? Some Initial Evidence." *Higher Education* 64 (3): 355–369. https://doi.org/10.1007/s10734-011-9498-8.

Harpe, S. E. 2015. "How to Analyze Likert and Other Rating Scale Data." *Currents in Pharmacy Teaching and Learning* 7 (6): 836–850. https://doi.org/10.1016/j.cptl.2015.08.001.

Hastie, Brianne. 2007. "Cold Hearts and Bleeding Hearts: Disciplinary Differences in University Students' Sociopolitical Orientations." *The Journal of Social Psychology* 147 (3): 211–241. https://doi.org/10.3200/SOCP.147.3.211-241.

Heerwig, Jennifer A., and Brian J. McCabe. 2009. "Education and Social Desirability Bias: The Case of a Black Presidential Candidate." *Social Science Quarterly* 90 (3): 674–686. https://doi.org/10.1111/j.1540-6237.2009.00637.x.

Hello, Evelyn, Peer Scheepers, and Mérove Gijsberts. 2002. "Education and Ethnic Prejudice in Europe: Explanations for Cross-National Variances in the Educational Effect on Ethnic Prejudice." *Scandinavian Journal of Educational Research* 46 (1): 5–24. https://doi.org/10.1080/00313830120115589.

Hello, Evelyn, Peer Scheepers, Ad Vermulst, and Jan R. M. Gerris. 2004. "Association between Educational Attainment and Ethnic Distance in Young Adults." *Acta Sociologica* 47 (3): 253–275. https://doi.org/10.1177/0001699304046222.

Hillygus, D. Sunshine. 2005. "The Missing Link: Exploring the Relationship between Higher Education and Political Engagement." *Political Behavior* 27 (1): 25–47. https://doi.org/10.1007/s11109-005-3075-8.

Hjerm, M. 2001. "Education, Xenophobia and Nationalism: A Comparative Analysis." *Journal of Ethnic and Migration Studies* 27 (1): 37–60. https://doi.org/10.1080/13691830124482.

Hjerm, M., Maureen A. Eger, and Rickard Danell. 2018. "Peer Attitudes and the Development of Prejudice in Adolescence." *Socius: Sociological Research for a Dynamic World* 4:237802311876318–11. https://doi.org/10.1177/2378023118763187.

Hooghe, Marc, Cecil Meeusen, and Ellen Quintelier. 2013. "The Impact of Education and Intergroup Friendship on the Development of Ethnocentrism. A Latent Growth Curve Model Analysis of a Five-Year Panel Study among Belgian Late Adolescents." *European Sociological Review* 29 (6): 1109–1121. https://doi.org/10.1093/esr/jcs086.

Hopkins, Daniel J. 2010. "Politicized Places: Explaining Where and When Immigrants Provoke Local Opposition." *American Political Science Review* 104 (1): 40–60. https://doi.org/10.1017/S0003055409990360.

Horowitz, David. 2007. *Indoctrination U.: The Left's War Against Academic Freedom*. New York: Encounter Books.

Hunt, Matthew O. 2007. "African American, Hispanic and White Beliefs About Black/White Inequality, 1977-2004." *American Sociological Review* 72 (3): 390–415. https://doi.org/10.1177/000312240707200304.

Hunter, James Davison. 1991. *Culture Wars. The Struggle to Define America. Making Sense of the Battles Over the Family, Art, Education, Law, and Politics*. New York: Basic Books.

Hyman, Herbert H., and Charles R. Wright. 1979. *Education's Lasting Influence on Values*. Chicago: The University of Chicago Press.

Hyman, Herbert H., Charles R. Wright, and John Shelton Reed. 1975. *The Enduring Effects of Education*. Chicago and London: University of Chicago Press.

Ivarsflaten, Elisabeth, Scott Blinder, and Robert Ford. 2010. "The Anti-Racism Norm in Western European Immigration Politics: Why we Need to Consider it and How to Measure it" *Journal of Elections, Public Opinion and Parties* 20 (4): 421–445. https://doi.org/10.1080/17457289.2010.511805.

Jenssen, Anders Todal, and Heidi Engesbak. 1994. "The Many Faces of Education: Why are People with Lower Education more Hostile Towards Immigrants than People with Higher Education?." *Scandinavian Journal of Educational Research* 38 (1): 33–50. https://doi.org/10.1080/0031383940380103.

Jost, John T., Alison Ledgerwood, and Curtis D. Hardin. 2008. "Shared Reality, System Justification, and the Relational Basis of Ideological Beliefs." *Social and Personality Psychology Compass* 2 (1): 171–186. https://doi.org/10.1111/j.1751-9004.2007.00056.x.

Kelly-Woessner, April, and Matthew C. Woessner. 2006. "My Professor Is a Partisan Hack: How Perceptions of a Professor's Political Views Affect Student Course Evaluations." *PS: Political Science & Politics* 39 (3): 495–501. https://doi.org/10.1017/S104909650606080X.

Kirkeboen, Lars J., Edwin Leuven, and Magne Mogstad. 2016. "Field of Study, Earnings, and Self-Selection." *The Quarterly Journal of Economics* 131 (3): 1057–1111. https://doi.org/10.1093/qje/qjw019.

Kustov, Alexander, Dillon Laaker, and Cassidy Reller. 2021. "The Stability of Immigration Attitudes: Evidence and Implications." *The Journal of Politics* 83 (4): 1478–1494. https://doi.org/10.1086/715061.

Ladd, Everett Carl Jr., and Seymour Martin Lipset. 1975. *The Divided Academy. Professors and Politics*. New York: McGraw-Hill.

Lancee, Bram, and Oriane Sarrasin. 2015. "Educated Preferences or Selection Effects? A Longitudinal Analysis of the Impact of Educational Attainment on Attitudes Towards Immigrants." *European Sociological Review* 31 (4): 490–501. https://doi.org/10.1093/esr/jcv008.

Lukianoff, George, and Jonathan Haidt. 2018. *The Coddling of the American Mind: How Good Intentions and Bad Ideas Are Setting up a Generation for Failure*. New York: Penguin.

Ma-Kellams, Christine, Aida Rocci Ruiz, Jacqueline Lee, and Andrea Madu. 2014. "Not All Education Is Equally Liberal: The Effects of Science Education on Political Attitudes." *Journal of Social and Political Psychology* 2 (1): 143–163. https://doi.org/10.5964/jspp.v2i1.259.

Maykovich, Minako K. 1975. "Correlates of Racial Prejudice." *Journal of Personality and Social Psychology* 32 (6): 1014–1020. https://doi.org/10.1037/0022-3514.32.6.1014.

McClosky, Herbert, and Alida Brill. 1983. *Dimensions of Tolerance: What Americans Believe About Civil Liberties*. Russell Sage Foundation.

Meeusen, Cecil, Thomas de Vroome, and Marc Hooghe. 2013. "How Does Education Have an Impact on Ethnocentrism? A Structural Equation Analysis of Cognitive, Occupational Status and Network Mechanisms." *International Journal of Intercultural Relations* 37 (5): 507–522. https://doi.org/10.1016/j.ijintrel.2013.07.002.

Michaelis, W., and H. J. Eysenck. 1971. "The Determination of Personality Inventory Factor Patterns and Intercorrelations by Changes in Real-Life Motivation." *The Journal of Genetic Psychology* 118 (2): 223–234. https://doi.org/10.1080/00221325.1971.10532611.

Mitchell, Jeffrey. 2019. "Prejudice in the Classroom: A Longitudinal Analysis of Anti-Immigrant Attitudes." *Ethnic and Racial Studies* 42 (9): 1514–1533. https://doi.org/10.1080/01419870.2018.1493209.

Newcomb, Theodore M. 1943. *Personality and Social Change*. New York: Holt, Rinehart & Winston.

Nunn, Clyde Z., H. J. Crockett, and J. A. Williams. 1978. *Tolerance for Nonconformity*. San Francisco: Jossey-Bass Publishers.

Paluck, Elizabeth Levy, and Donald P. Green. 2009. "Prejudice Reduction: What Works? A Review and Assessment of Research and Practice." *Annual Review of Psychology* 60 (1): 339–367. https://doi.org/10.1146/annurev.psych.60.110707.163607.

Paredes, Valentina, M. Daniele Paserman, and Francisco J. Pino. 2020. "Does Economics Make You Sexist ?" *NBER Working Paper Series 27070*.

Pascarella, Ernest T., and Patrick T. Terenzini. 1991. *How College Affects Students: Findings and Insights from Twenty Years of Research*. San Francisco: Jossey-Bass Publishers.

Paterson, Lindsay. 2009. "Civic Values and the Subject Matter of Educational Courses." *Oxford Review of Education* 35 (1): 81–98. https://doi.org/10.1080/03054980802351801.

Perkinson, Henry J. 1995. *The Imperfect Panacea: American Faith in Education*. 4th ed. Boston, MA: McGraw-Hill.

Phelan, Jo, Bruce G. Link, Ann Stueve, and Robert E. Moore. 1995. "Education, Social Liberalism, and Economic Conservatism: Attitudes Toward Homeless People." *American Sociological Review* 60:126–140. https://doi.org/10.2307/2096349.

Pluckrose, Helen, and James A. Lindsay. 2020. *Cynical Theories: How Activist Scholarship Made Everything About Race, Gender, and Identity—and Why This Harms Everybody*. Durham, NC: Pitchstone Publishing.

Quillian, Lincoln. 1995. "Prejudice as a Response to Perceived Group Threat: Population Composition and Anti-Immigrant and Racial Prejudice in Europe." *American Sociological Review* 60 (4): 586–611. https://doi.org/10.2307/2096296.

Quillian, Lincoln. 1996. "Group Threat and Regional Change in Attitudes Toward African-Americans." *American Journal of Sociology* 102 (3): 816–60. https://doi.org/10.1086/230998.

Scarborough, William J., Joanna R. Pepin, Danny L. Lambouths, Ronald Kwon, and Ronaldo Monasterio. 2021. "The Intersection of Racial and Gender Attitudes, 1977 Through 2018." *American Sociological Review* 86 (5): 823–855. https://doi.org/10.1177/00031224211033582.

Schaefer, Richard T. 1996. "Presidential Address Education and Prejudice: Unraveling the Relationship." *The Sociological Quarterly* 37 (1): 1–16. https://doi.org/10.1111/j.1533-8525.1996.tb02328.x.

Scott, Ralph. 2022. "Does University Make You More Liberal? Estimating the Within-Individual Effects of Higher Education on Political Values." *Electoral Studies* 77:1–10.

Scott, James H., and Mitchell P. Rothman. 1975. "The Effect of an Introductory Economics Course on Student Political Attitudes." *The Journal of Economic Education* 6 (2): 107–112. https://doi.org/10.1080/00220485.1975.10845410.

Selvin, Hanan C., and Warren O. Hagstrom. 1960. "Determinants of Support for Civil Liberties." *The British Journal of Sociology* 11 (1): 51–73. https://doi.org/10.2307/587043.

Selznick, Gertrude J., and Stephen Steinberg. 1979. *The Tenacity of Prejudice: Anti-Semitism in Contemporary America*. Westport, CT: Greenwood Press.

Sigall, Harold, and Richard Page. 1971. "Current Stereotypes: A Little Fading, a Little Faking." *Journal of Personality and Social Psychology* 18 (2): 247–255. https://doi.org/10.1037/h0030839.

Sniderman, Paul M., Philip E. Tetlock, James M. Glaser, Donald Philip Green, and Michael Hout. 1989. "Principled Tolerance and the American Mass Public." *British Journal of Political Science* 19 (1): 25–45.

Stangor, Charles, Gretchen B. Sechrist, and John T. Jost. 2001. "Changing Racial Beliefs by Providing Consensus Information." *Personality and Social Psychology Bulletin* 27 (4): 486–496. https://doi.org/10.1177/0146167201274009.

Stubager, Rune. 2008. "Education Effects on Authoritarian–Libertarian Values: A Question of Socialization." *The British Journal of Sociology* 59 (2): 327–350. https://doi.org/10.1111/j.1468-4446.2008.00196.x.

Surridge, Paula. 2016. "Education and Liberalism: Pursuing the Link." *Oxford Review of Education* 42 (2): 146–164. https://doi.org/10.1080/03054985.2016.1151408.

Thumin, Fred J. 1972. "The Relation of Liberalism to Sex, Age, Academic Field and College Grades." *Journal of Clinical Psychology* 28 (2): 160–164. https://doi.org/10.1002/1097-4679(197204)28:2<160::AID-JCLP2270280209>3.0.CO;2-Y.

Van De Werfhorst, Herman G. 2020. "Are Universities Left-Wing Bastions? The Political Orientation of Professors, Professionals, and Managers in Europe." *The British Journal of Sociology* 71 (1): 47–73.

Van De Werfhorst, Herman G., and Nan Dirk de Graaf. 2004. "The Sources of Political Orientations in Post-Industrial Society: Social Class and Education Revisited." *The British Journal of Sociology* 55 (2): 211–235. https://doi.org/10.1111/j.1468-4446.2004.00016.x.

Van De Werfhorst, Herman G., and Gerbert Kraaykamp. 2001. "Four Field-Related Educational Resources and Their Impact on Labor, Consumption, and Sociopolitical Orientation." *Sociology of Education* 74 (4): 296–317. https://doi.org/10.2307/2673137.

Velásquez, Paolo, and Maureen A. Eger. 2022. "Does Higher Education Have Liberalizing or Inoculating Effects? A Panel Study of Anti-Immigrant Sentiment Before, During, and After the European Migration Crisis." *European Sociological Review* 38 (4): 605–628. https://doi.org/10.1093/esr/jcab062.

Verkuyten, Maykel, and Jochem Thijs. 2013. "Multicultural Education and Inter-Ethnic Attitudes." *European Psychologist* 18 (3): 179–190. https://doi.org/10.1027/1016-9040/a000152.

Vogt, W. Paul. 1997. *Tolerance & Education: Learning to Live with Diversity and Difference*. Thousand Oaks, CA: Sage Publications, Inc.

Weber, Hannes. 2022. "The Educational Divide Over Feelings About Ethnic Minorities: Does More Education Really Lead to Less Prejudice?" *Journal of Ethnic and Migration Studies* 48 (1): 228–247. https://doi.org/10.1080/1369183X.2020.1810540.

Windolf, Paul. 1995. "Selection and Self-Selection at German Mass Universities" *Oxford Review of Education* 21 (2): 207–231. https://doi.org/10.1080/0305498950210206.

Wodtke, Geoffrey T. 2018. "The Effects of Education on Beliefs About Racial Inequality." *Social Psychology Quarterly* 81 (4): 273–294. https://doi.org/10.1177/0190272518804145.

Wright, Alan N., and Jan Tolan. 2009. "Prejudice Reduction Through Shared Adventure: A Qualitative Outcome Assessment of a Multicultural Education Class." *Journal of Experiential Education* 32 (2): 137–154. https://doi.org/10.1177/105382590903200204.

Yair, Omer, and Raanan Sulitzeanu-Kenan. 2021. "Distance Breeds Alienation: Perceived Ideological Distance Lowers Students' Evaluations of Their Professors." *Journal of Political Science Education* 17 (S1): 794–806. https://doi.org/10.1080/15512169.2021.1913178.