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How Public Confidence in Higher Education Varies by Social Context

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ABSTRACT

Some research suggests a crisis of public confidence in universities and colleges in the United States. But approaches to theorizing confidence in higher education do not examine how confidence varies across social contexts, while empirical efforts to document confidence are characteristically limited by weak construct validity. Drawing on a nationally-representative survey of 10,241 Americans, we develop a conceptual framework that examines how political ideology, religion, parental career encouragement, and demographic factors correlate with confidence in higher education. Only fourteen percent of the US public reports "a great deal" of confidence in higher education. Evangelical Protestants, Catholics, Jews, individuals who perceive a conflict between science and religion (and are on the side of religion), and political conservatives are significantly less likely to report confidence in higher education, while parents who report the strongest encouragement of professional career paths for their children are significantly more likely to report confidence in higher education.

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Introduction

> *"Public trust is the single most important asset of higher education in this nation."* (Leveille, 2006, p. 81)

Public trust may be one of the most important assets of higher education in the United States, but what do we know about it? How confident *is* the public in colleges and universities, and how does confidence vary across social contexts? Existing research makes it difficult to answer these questions. Some research indicates that only 42% of the general public has a great deal of confidence in how colleges and universities are run (Gross & Simmons, 2006), yet a recent poll suggested that 77% of Americans believe that U.S. universities offer "high-quality education" (Gallup, 2013). It is possible that the higher education system could be perceived as offering a good product while failing in other respects. For example, two thirds of parents who have high school children believe that qualified students in their state lack the

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opportunity to go to college (Immerwahr, 2004). Differing measures produce a mixed picture, making it a challenge to obtain a concrete sense of public confidence in higher education.

Alongside this mixed picture is a corpus of perennial criticism that suggests there is a crisis of confidence in higher education resulting from factors such as declining educational standards, radical professors, immorality, and corruption (Birnbaum & Shushok, 2001; Prewitt, 1993). Although these critiques are often perceived as overblown, empirical scholarship suggests there is some basis for concern about the performance of universities. In *Academically Adrift*, a longitudinal study of 2,000 students enrolled at 24 institutions, Arum and Roksa (2011) found that 45% of students showed no gains in critical thinking, complex reasoning, or writing skills. The study received extensive media coverage and was viewed by the *Chronicle of Higher Education* as a "damning indictment of the American higher-education system" (Glenn, 2011). Whether through screed or scholarship, the question of confidence in higher education steadily percolates in the U.S. public sphere.

Why is public confidence in higher education important? Organizational theorists have argued that public confidence operates as a normative control system that when present, signifies legitimacy (Ruef & Scott, 1998), which is crucial to organizational survival (Suchman, 1995). For universities to have a legitimate claim to public and private financial support, their goals and the means by which they pursue them must be congruent with wider societal values. While colleges and universities can operate as long as they possess state charters and financial resources, universities would whither without public trust: "[W]here there is suspicion, control and regulation enter the picture, accompanied by limitations on budgets … and challenges to all current practices" (Leveille, 2006, p. 9). Low confidence would therefore be problematic because it could empower politicians to increase state power over colleges and universities through increased accountability measures, thereby weakening internal governance of higher education institutions (Trow, 1996).

Given this importance and the limited knowledge of who has confidence in higher education and who does not, the goal of this study was to situate public confidence in the social context. To the extent that surveys have assessed public perceptions of higher education, research tends to treat the public as a homogenous entity whose view of higher education does not vary across social identities and demographics. We conceived of the public as being composed of multiple groups with different interests and assessed whether and how public confidence in higher education differs across group contexts—namely, political, religious, and parental characteristics. Knowing how specific groups feel about higher education is important for understanding whether colleges and universities are viewed as socially

legitimate organizations. Understanding differences across groups is also important for developing policies that could strengthen relations with constituencies that lack confidence in higher education.

Background

Existing knowledge of public confidence in higher education falls into two broad areas. One area, consisting of essays, books, and to a lesser extent research, argues that there is a crisis of public confidence in higher education (cf. Birnbaum & Shushok, 2001; Prewitt, 1993). There may be merit in the claims made in this literature about the challenges that colleges and universities face, but no rigorous empirical evidence has been provided to support assertions that such challenges substantially erode public confidence in higher education.

An illustration of this pattern can be found in research on commercialization, where some claim that commercialization of academic research could undermine public trust (cf. Bok, 2009). Bok, 2009, for example, argued that commercial activities "can … damage the university's standing in the eyes of the public. Over the past 40 years, confidence has declined sharply in the United States … in all kinds of institutions, including universities" (pp. 115–116). Similar claims have appeared about crises of confidence in research on misconduct of professors (Knight & Auster, 1999), collegiate sports scandals (Cullen, Latessa, & Byrne, 1990), and university ethical lapses (Kelley & Chang, 2007). We do not dispute the logic that these and other problems in universities may erode confidence, nor are we seeking to test such claims. The problem is that these studies treat the public as one homogenous entity and fail to recognize that public confidence may vary across social contexts.

A common reason for the muddled image of confidence is low construct validity of the General Social Survey measures commonly referenced by higher education scholars, which include confidence in education and confidence in science. The education measure has weak validity because survey respondents could consider K–12 institutions in addition to colleges and universities when asked about confidence in education. Confidence in science could prompt considerations of technology companies and federal science organizations. Both measures adequately characterize the broad social institutions of education and science, but given the variation of organizational fields that comprise each institution, they cannot be applied precisely to colleges and universities.

A second area of knowledge on public confidence in higher education is found in opinion polls conducted by interest groups that offer disparate assessments. A nationwide survey of 1,188 individuals conducted in the early 1980s suggests that—at that point in time—67% of Americans

characterized the quality of higher education as excellent or good (Group Attitudes Corporation, 1984). More recent nationwide surveys conducted by the nonprofit organization Public Agenda suggest that about half of the U.S. public considers the performance of colleges in their states as excellent or good (Immerwahr, 2004; Immerwahr et al., 2009, 2010). The most recent data, a 2013 Gallup poll of 1,000 U.S. adults, revealed that 77% of the public agrees or strongly agrees that "traditional colleges offer high-quality education" (Gallup, 2013).

The core problem is that these scholars have not situated confidence in higher education in the social context. By simply reporting overall levels of confidence, "the public" is treated as a homogenous group whose attitudes are invariant. Yet attitudes—such as confidence in higher education—lack existence without context. Meanings, beliefs, and attitudes originate and acquire their significance within the social contexts of individual lives (Collins, 2004). Context matters because it focuses individuals' attention toward some objects and away from others and provides a system of meaning to interpret what is going on in higher education (Nardon & Steers, 2014). Consequently, evaluations of how colleges and universities are run should differ among parents, minorities, political ideologues, and religious fundamentalists, for example.

It is therefore unsurprising that there have been calls to understand how confidence in higher education varies across social contexts. Henry (1975, p. 37) pointed out that because "higher education operates in a political and social context … [m]ore bridges between the campus and the public must be built and the traffic sped up" among groups who distrust higher education. Prewitt (1993) similarly called for research on public opinion of higher education and its variance across constituencies such as university donors, industrial leaders, and public officials in government, while Leveille (2006, p. 85) discussed various "stakeholders" who are cynical that future generations will not benefit from higher education. Researchers thus assume but rarely examine variation in confidence across social contexts. An exception is a white paper by Gross and Simmons (2006), who emphasized the importance of political ideology and showed that Democrats and independents have more confidence in higher education than do Republicans.

Examining how confidence varies across social contexts is also of theoretic importance to our understanding of sociopolitical legitimacy of higher education, or the extent to which the general public, stakeholders, or government officials accept an organizational form as appropriate and right, given existing norms (Aldrich & Fiol, 1994). As Leveille (2006, p. 85) argued, universities "can easily lose their legitimacy and standing in the public trust if … their actions are inconsistent with the values they espouse …." A necessary first step toward evaluating this claim is to examine where the sociopolitical legitimacy of higher education is subject to contestation. We know that

universities engage in practices that seek to perpetuate their legitimacy—for example, through the use of mission statements that signal to various constituencies that a given organization understands "the rules of the game" of what it means to be a university (Morphew & Hartley, 2006). But the public is made up of diverse constituencies, meaning individuals are unlikely to agree on the "rules of the game." Measuring overall confidence levels provides a false picture of institutional legitimacy because it fails to recognize the fact that group norms and goals are rarely objects of consensus.

We provide new insights into confidence in higher education by situating public attitudes in the social context. Because institutional theorists and scholars who discuss confidence in higher education have emphasized social values in arguments about institutional legitimacy, we considered the role of political ideology, religiosity, and family characteristics, in addition to demographic categories. Politics, religion, and family are spheres that specify group values and should therefore shape perceptions of higher education. Political ideology has already been recognized as important to considerations of confidence in higher education (Gross & Simmons, 2006), and given that 79% of U.S. citizens identify as religious and participate in diverse religious traditions (Smith et al., 2014), we examined the role of religion. Finally, because parents of prospective college students are important stakeholders in the higher education community, we modeled the influence of family characteristics.

Political ideology

A considerable amount of rhetoric in the public sphere suggests that one's confidence in how colleges and universities are run is closely associated with political ideology (D'Souza, 1991; Horowitz, 2006). The most vocal concerns have come from conservatives, who have voiced claims of liberal bias and corruption in higher education resulting from the political makeup of the professoriate. Only 14% of the American professoriate identify as and vote Republican, while close to two thirds identify as and vote Democrat, with the remaining independently registered professors leaning Democratic (Gross & Simmons, 2006).

Much of the conservative critique of higher education institutions as liberal is part of a broader critique of "liberal elites," a strategy thought to foster resource acquisition for political organizations and legitimate the authority of nonacademic intellectuals who work in think tanks (Gross, 2013). Conservative distrust of universities may also be bolstered by disenchantment with science (Mooney, 2005), given that universities are one of the core organizational fields in which science is conducted.

To be sure, university leaders have embraced a number of practices that are aligned with conservative political ideologies, including the

commercialization of research and corporatization of management (Bok, 2009), privatization (Kirp, 2009), and reliance on deregulated student loans (Price, 2004). Furthermore, 95% of professors perceive themselves as an "honest broker" of political views in the classroom, and students indicate that politics and discussion of political issues are generally absent from educational activities in higher education (Smith, Mayer, & Fritschler, 2008). Therefore, concerns about bias may be overblown. Nevertheless, the *perception* that higher education faculty are pursuing partisan political goals (Gross, 2013) suggests that conservatives lack confidence in the ability of individuals running colleges and universities to foster political neutrality and control bias among the professoriate. We therefore hypothesized that:

H1. Political groups will differ by level of confidence in higher education, with conservatives and moderates showing less confidence than liberals.

Religion

Many U.S. universities emerged under the patronage of various religious traditions, required church attendance, and sought to fulfill religious ideals. The place of religion, however, in higher education overall has significantly declined during the 20th century due to disestablishment, the emphasis on disciplinary competence over the moral development of students (Burtchaell, 1998; Marsden, 1994). Although there is little evidence that contemporary universities must abandon religious missions or affiliations to achieve a reputation for academic excellence (Mixon, Lyon, & Beaty, 2004), little is known about whether and how religious identities of various publics shape confidence in how colleges and universities are run.

Sociological research suggests that some religious traditions may lack confidence in higher education due to the secular nature of educational institutions. Whereas religion emphasizes sacred beliefs, morals, and values, higher education is composed predominantly of secular organizations, which embody formally rational elements such as science and technical standards (Meyer & Rowan, 1977). Indeed, natural and social scientists at elite research universities are significantly less religious compared with the U.S. population, with 53% of scientists claiming no religious affiliation compared with only 16% of the general population (Ecklund, 2010). In primary and secondary education, Evangelical Protestants in particular have mobilized against secular characteristics of schools (Johnson, Scheitle, & Ecklund, 2016), suggesting this group in particular may have a pronounced distrust of colleges and universities.

Historical research suggests that part of the decline of religion in higher education was due to hostility toward religion (Roberts & Turner, 2000) and

progressive marginalization of moral education from academic culture (Reuben, 1996). While mainstream Protestant institutions pioneered the early waves of secularization in U.S. higher education, Catholic colleges and culturally withdrawn Evangelical Protestant institutions such as Liberty and Wheaton have resisted this trend primarily through unapologetic governance by sponsoring churches, tight organizational linkages, and explicit profession of religious commitment (Burtchaell, 1998). Coupled with broader concerns among Evangelical Protestants that public education promotes secular humanism and damages morality (McCarthy, 1996), we therefore expected that:

H2. Religious groups will differ by level of confidence in higher education, with Evangelicals exhibiting lower confidence than all other groups.

However, mechanisms more specific than religious tradition are likely to shape how religious individuals view higher education. The social scientific literature on conflict between religion and science implies two reasons for why some religious individuals would lack confidence in colleges and universities (Ecklund, 2010; Evans & Evans, 2008; Johnson, Scheitle, & Ecklund, 2015). Universities, for example, disseminate knowledge that is thought to be in epistemological conflict with religious claims about the world. Science and religion employ different methods for making truth claims about the origins of man and the universe, for example, resulting in a tendency of some religious people to oppose the scientific method and avoid exposure to science. Some groups, such as Evangelical Protestants and Catholics, also perceive moral conflict in some areas of academic science, as they believe that certain areas of genetics and stem cell research are examples of scientists "playing God." These views would suggest that individuals lack confidence in colleges and university leaders because they promote and privilege secular scientific knowledge over religious understandings and because they encourage investment in areas of scientific research that some religious groups find morally inappropriate. Our third hypothesis then was:

H3. Individuals who perceive a conflict between religion and science (and view themselves on the side of religion) will lack confidence in higher education.

Parental career encouragement

Parental expectations for their children's academic and occupational careers are a critical predictor of college academic preparation (Cabrera & LaNasa, 2001) and enrollment (Perna & Titus, 2005; Rowan-Kenyon, 2007). Indeed, a number of studies have made clear that—for *some* parents—higher education is on their mind well before their children set foot on a university campus. Lareau (2003, p. 235), for example, described how middle-class families who practice "concerted

cultivation"—a type of parenting focused on preparing children for the types of interactions they would encounter as white-collar workers—had "little doubt that their children would attend college." Armstrong and Hamilton (2013, p. 13) similarly documented achievement-oriented students whose families were engaged in a "parenting arms race" early on to ensure their children's success in challenging professions. But not all parents stress the pursuit of careers requiring higher education or devote resources to evaluating opportunities in the postsecondary landscape. A childrearing approach to which Lareau (2003) referred as "the accomplishment of natural growth," for example, entails much less active parental direction toward and awareness of colleges and universities or occupations requiring higher education.

Presumably, parents who encourage their children to pursue occupations requiring baccalaureate degrees have an especially salient relationship with higher education. Indeed, parents falling into this category stand to directly benefit from higher education (e.g., through one's collegiate child receiving a positive and formative education and/or increased employability) and/or be directly harmed by higher education (e.g., through accumulation of loan debt). Given the stakes at hand, they are much more likely to scrutinize the performance of colleges and universities relative to parents who would not encourage their children to pursue occupations requiring higher education or individuals who do not have children.

Competing hypotheses can be generated, regarding whether parents who have high career aspirations for their children will have higher or lower confidence in higher education. Individuals without children or parents who do not actively encourage their children to pursue careers requiring college are likely to pay less attention to higher education, presumably leading to nonextreme levels of confidence in it. In contrast, parents who strongly encourage their children to pursue careers requiring higher education have more at stake, leading to more careful scrutiny of it and, we argue, increased likelihood of accentuated confidence or the lack thereof. The literature on the crisis of confidence would suggest confidence would be lowest among these parents because they could have more to lose from how colleges and universities are run. Prewitt (1993, p. 94), for example, raised the possibility of reluctance on the part of "the most gifted and intelligent high school graduates" to invest time and money in the pursuit of a college degree, implying that colleges are not providing an ideal return on investment. These arguments led us to expect that:

H4a. Parents who encourage their children to pursue careers requiring higher education will have lower confidence in higher education than those who do not (or those who are not parents).

A persistent increase in college enrollment during the last several decades offers a competing perspective. Examining the percentage of college-aged students enrolled in degree-granting institutions over time, one can see that enrollment increased from 25% of college-aged students in 1967 to 41% in 2012 (U.S. Department of Commerce, 2013). This observation could suggest that despite rising costs of college, confidence in higher education is strong among parents who encourage their children to pursue careers requiring higher education because they continue to send their children to college. This led to the expectation that:

H4b. Parents who encourage their children to pursue careers requiring higher education will have higher confidence in higher education than those who do not (or those who are not parents).

Data

The data used for this analysis came from the Religious Understandings of Science (RUS) survey. This nationally representative survey was conducted by the firm GfK using its KnowledgePanel. The KnowledgePanel is an online research panel that is representative of the entire U.S. population. The survey was conducted from December 27, 2013, to January 13, 2014. Panel members were recruited using a statistically valid sampling method with a published sampling frame of residential addresses that covered approximately 97% of U.S. households, reflecting the U.S. Census. When non-Internet households were recruited, they were provided a computer and free Internet service so they could also participate as online panel members. The KnowledgePanel consists of about 50,000 adult members (ages 18 years and older) and includes persons living in cellphone-only households. The RUS survey produced 10,241 total valid respondents from 16,746 invited panelists.[1] We utilized a poststratification weight that adjusted for this study's oversample of individuals employed in science-related fields and nonresponse patterns based on population benchmarks from the October 2012 Current Population Survey.[2]

Dependent variable

The outcome of interest in this article was *confidence in higher education*. This measure is a component of a battery of measures that derive from the following prompt: "I am going to name some institutions in this country. As far as the people running these institutions are concerned, how much confidence do you have?" To this prompt, respondents chose from the answer categories of "a great deal," "some," or "hardly at all" for each of the

following institutions: corporations, religious organizations and leaders, the press, colleges and universities, the scientific community, U.S. Congress, and the military. Our question-and-answer categories mirrored those used by the General Social Survey, except that we added higher education to the social institutions considered. In this study, we predicted the response to "colleges and universities," which we labeled higher education. We operationalized *confidence in higher education* as an ordinal variable that ranged from 1 (hardly at all) to 3 (a great deal).

One potential cause for concern is that the measure we used as our dependent variable referred to "the people running these institutions," but we were theoretically interested in confidence in higher education, a more general construct. Research by scholars who study confidence in the government has shown that confidence in institutions and confidence in the leaders running them may not be equivalent (Hibbing & Theiss-More, 2002). It is likely, however, that this distinction is unique to the political system relative to other social institutions because government leaders such as Nancy Pelosi or Ted Cruz are more likely to be known by the public (due to media exposure) than are leaders of other social institutions like higher education or science institutions. For example, Francis Collins, the director of the National Institutes of Health—an occupant of one of the highest levels of formal organizational authority in science—is relatively unknown to the American public. The RUS survey asked a subset of 5,044 respondents, "Have you heard of a scientist named Dr. Francis Collins?" and *only* 4% of respondents answered affirmatively.

We assumed the public is similarly unfamiliar with higher education leadership, but it is difficult to know whether the institution-incumbent distinction is critical to how respondents answer about higher education. At least one study suggests it is not important. A methodological study conducted in the General Social Survey, from which our question wording was derived, asked who people think of when asked about confidence in leaders of institutions (medicine, science, military, and the press). Data revealed that many different types of people and groups are thought of with no impact on levels of confidence (Smith, 1978). When asked about confidence in the people running medicine, for example, most respondents reported doctors and not the Surgeon General of the United States or the senior management of the American Medical Association (Smith, 1978). It is a limitation that we cannot be sure whether respondents were thinking of professors versus university presidents or boards of trustees, but the Smith (1978) analysis implies that this limitation should have minimal impact on one's degree of confidence in higher education. As we note in more detail in the Discussion section, improving such instruments is an important direction for future research.

Key independent variables

Political conservatism is measured by a question asking, "Would you describe your political views as extremely liberal, liberal, slightly liberal, moderate, slightly conservative, conservative, or extremely conservative?" We operationalized this question as an ordinal variable ranging from 1 (extremely liberal) to 7 (extremely conservative). Although it would be useful to compare this measure with other measures of politics, most party affiliation measures do not indicate strength of party affiliation. Furthermore, the self-identification variable can be modeled as a continuous rather than nominal variable and is more theoretically connected to attitudes.

There are different ways to measure religious affiliation and, more specifically, Evangelicalism (Hackett & Lindsay, 2008). We borrowed from Steensland et al. (2000) to help code dozens of Protestant denominations (to which survey respondents belonged) into the following larger religious affiliation categories: Evangelical, mainline Protestant, and Black Protestant. Our remaining religious affiliation indicator variables included: Catholic, Jewish, Mormon, non-Western religions (Muslim/Hindu/Buddhist/Jain/Sikh), none/atheist/agnostic, and other.[3]

To measure a belief that religion and science are in conflict, we utilized the following survey question and answer categories: "Which of the following BEST represents your view? 'For me personally, my understanding of science and religion can be described as a relationship of 1) conflict … I consider myself to be on the side of religion, 2) conflict … I consider myself to be on the side of science, 3) independence … they refer to different aspects of reality, 4) collaboration … each can be used to help support the other.'" We coded individuals who selected the first answer category (i.e., conflict … I consider myself to be on the side of religion) as *conflict: religion* > *science* = 1. Remaining respondents (including those who refused to answer the question) were coded as *conflict: religion* > *science* = 0.

To measure which individuals had *strong parental career encouragement* we relied on the following two components: the presence of children in the household who were younger than 18 years old and a strong recommendation that children (in general) enter occupations that require a college degree. Because the RUS survey does not include a direct measure of whether or not each respondent has a child who is currently attending college, we used a proxy measure of the presence of a child in the household who is 17 years of age or younger. We argue this measure is adequate because it helps measure the potential that the respondent will have a family member who will attend college. Of course, not all parents expect or encourage their children to attend college, and even if they do, not all children will be able to or choose to attend college.

To help identify parents whose children are likely to attend college, we borrowed a battery of survey questions that measured the extent to which

the respondent would encourage a child to enter an occupation that surely requires a college degree. The precise survey question, answered by all respondents, was as follows: "How much would you recommend to a child of yours to enter the following occupations as an adult? Biologist, engineer, plumber, anthropologist, TV weather forecaster, high school chemistry teacher, psychologist, physician/doctor, pastor, minister or clergyperson, electrician, sociologist, physicist, and nurse. Would you 1) not recommend at all, 2) recommend somewhat, or 3) recommend strongly?" We reasoned that all but plumbers, pastors, and electricians require a college degree and therefore created a standardized average score across the remaining occupational categories. We argued this method affectively "ranks" individuals in order from least encouraging that their child attend college to most encouraging.

Combining these two components, we operationalized *strong parental career encouragement* = 1 as individuals with children younger than the age of 18 years in the household *and* those who rank in the upper half of the occupational scale described earlier. We also tested 25th percentile and 75th percentile cutoffs for the same scale, which yielded results that mirror the results to be presented (See the Appendix). Remaining individuals (i.e., *strong parental career encouragement* = 0) did not have children younger than the age of 18 years or did have children but ranked in the lower half of the occupational scale.

Covariates

Research on confidence in institutions suggests that a lack of confidence in specific institutions is driven by a broader lack of confidence in *all* institutions, conceived of as institutional alienation (Gauchat, 2011). The argument here is that low confidence is not explained by the operation of individual institutions, but it is a function of a broader lack of confidence in society. We therefore controlled for institutional confidence to ensure that a lack of confidence in higher education is not driven by one's attitudes toward social institutions in general. We measured *institutional confidence* by averaging the degree of confidence (where 1 = "hardly at all," 2 = "some," and 3 = "a great deal") respondents have in the following five institutions: corporations, religious organizations and leaders, the press, U.S. Congress, and the military. From the previously mentioned battery of institutions, we omitted colleges and universities and the scientific community from this measure because of high collinearity between the two measures. The resulting continuous variable average ranged from 1 to 3.

Given that higher education is an important vehicle for class mobility (Jackson, Goldthorpe, & Mills, 2005), we controlled for traditional class variables (i.e., education and income). Education was measured with an ordinal variable that ranged from 1 (less than high school) to 4 (bachelor's

degree or higher). *Household income* was measured with an ordinal variable that ranged from 1 (less than $5,000) to 19 ($175,000 or more). A squared transformation of the ordinal variable was also included in the model to allow for potential curvilinear effects of household income.

While our religion hypothesis was motivated by research on the importance of tradition, it is important to recognize that religiosity can also include identity (viewing one's self as religious) and practices such as church attendance. *Religious person* represented the self-reported religiosity, measured by the following question: "To what extent do you consider yourself a religious person?" The ordinal variable employed here ranged from 1 (not religious at all) to 4 (very religious). *Attend* measured how often the respondent attended "religious services." The ordinal variable we used ranged from 1 (never) to 9 (several times a week).

We controlled for gender with *female* = 1 for women and *female* = 0 for men. Age was measured continuously. We used the only race/ethnicity categories provided by this survey: White, Black, Other, Hispanic, and Two or More. Unfortunately, Asians and Native Americans were captured under the "Other" category, so we were unable to specifically analyze confidence among these important groups.

Methodology

Given the ordinal structure of our outcome of interest, we employed ordered logistic regression. This means odds ratios coefficients of greater than 1.00 indicated increased likelihood of having confidence in higher education, while coefficients of less than 1.00 indicated a decreased likelihood. Single regression analysis was used to predict 319 missing values for political conservatism, 105 values for religious attendance, and 61 values for religious person. Three hundred and nineteen observations were dropped from the analysis due to missing data on our dependent variable, confidence in higher education. Four observations were dropped from the analysis due to missing data on the *institutional confidence* covariate. This created a sample size of 9,918 for analysis (see Table 1). Poststratification weights were used for all analyses, enabling generalizations to be made to noninstitutionalized people living in the United States.

Results

Relative to other institutions in society, higher education garners a moderate amount of public confidence. Figure 1 indicates that only 3% of the American population had a great deal of confidence in the U.S. Congress, while 26% had a great deal of confidence in the military. Higher education falls roughly in the middle of this range, with 14% espousing a great deal of confidence. Interestingly, more of the population (19%) had a great deal of confidence in the scientific community.

Table 1. Descriptive statistics of weighted data used in analysis (N = 9,918)

	Mean	*SD*	Min	Max
Confidence in Higher Education (HE)				
(1) Hardly any	0.20	0.40	0	1
(2) Some	0.65	0.48	0	1
(3) A Great Deal	0.14	0.35	0	1
Political Conservatism	4.12	1.50	1	7
Religious Tradition				
Evangelical	0.26	0.44	0	1
Mainline Protestant	0.15	0.36	0	1
Black Protestant	0.05	0.22	0	1
Catholic	0.24	0.43	0	1
Jewish	0.02	0.14	0	1
Mormon	0.02	0.13	0	1
Muslim, Hindu, Buddhist, Sikh, Jain	0.02	0.15	0	1
None, Atheist, Agnostic	0.16	0.36	0	1
Other	0.09	0.29	0	1
Conflict: Religion > Science	0.14	0.35	0	1
Strong Parental Career Encouragement	0.15	0.36	0	1
Confidence in Non-HE Institutions	1.67	0.39	1	3
Education	2.76	1.01	1	4
Income	11.76	4.61	1	19
Attending Religious Services	4.15	2.75	0.88	9
Religious Person	2.55	1.02	1	4
Female	0.52	0.50	0	1
Age	47.40	16.98	18	93
Race/Ethnicity				
White	0.68	0.47	0	1
Black	0.11	0.31	0	1
Other race	0.06	0.24	0	1
Hispanic	0.14	0.35	0	1
Two or more	0.01	0.11	0	1

Source: Religious Understandings of Science Survey 2014.
Note. The *attending religious services* minimum value is not an integer due to imputation of missing values.

Models 1 and 5 (see Table 2) showed that political conservatives were much less likely than political liberals to have confidence in higher education. This finding confirms Hypothesis 1. To help interpret the odds ratio of 0.67, we predicted the probability of respondents having "a great deal" of confidence in higher education (i.e., *confidence in higher education* = 3), holding all other values in Model 5 at their respective means. Respondents who were extremely liberal (i.e., *political conservatism* = 1) had a 30% predicted probability of having a great deal of confidence, while extreme conservatives (*political conservatism* = 7) only had a 5% predicted probability. This was, by far, the largest substantial effect of our hypothesized predictions.

Our results in Models 2 and 5 showed that religious tradition also predicted *confidence in higher education*. Model 5 showed that relative to Evangelicals (our statistical reference category), mainline Protestant, Black Protestant, Catholic, non-Western religions, and none/atheists/agnostics were more likely to have confidence in higher education. Jewish, Mormon, and "other groups," by contrast, did not exhibit statistically significant

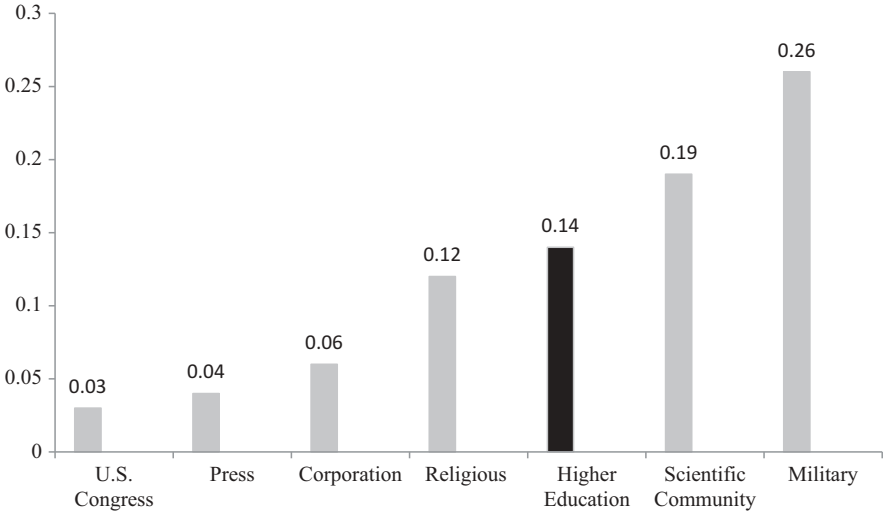

Figure 1. Weighted proportion: Great deal of confidence in institution. Source: Religious Understandings of Science Survey 2014. *Note*. The 95% confidence interval for the higher education estimate is 0.133 to 0.151. Because this confidence interval does not overlap with the confidence interval of other estimates (not shown here), we conclude the difference in confidence between higher education and each other institution is statically significant.

differences from Evangelicals. This finding provides partial support for Hypothesis 2. Interpreting our coefficients from Model 5 with predicted probabilities, Evangelicals had a 12% probability of having a great deal of confidence in higher education, relative to a 20% predicted probability (the highest probability) among the non-Western religion category.

Confirming Hypothesis 3, Models 3 and 5 showed that those who perceived a conflict between religion and science and "sided with" religion were less likely to have confidence in higher education. Such individuals had an 11% predicted probability of having a great deal of confidence in higher education, relative to a 15% predicted probability for everyone else (derived from Model 5).

We also found support for Hypothesis 4b (see Models 4 and 5), with *strong parental career encouragement* having an 18% predicted probability of having a great deal of confidence, relative to a 14% predicted probability for individuals who did not fall into our *strong parental career encouragement* binary measure.

We now turn to the results of the covariates in our model. As anticipated, a high level of confidence in multiple institutions increased the likelihood of confidence in higher education. The magnitude of the *institutional trust* coefficient was very large, emphasizing the importance of this variable. Importantly, all of our hypothesized effects remained statistically significant with this important factor in the model.

Table 2. Ordered logistic regression predicting confidence in higher education (N = 9,918)

	M1	M2	M3	M4	M5
Political Conservatism	0.66***				0.67***
Religious Tradition					
Evangelical (Referent)		—–			—–
Mainline Protestant		1.47***			1.23*
Black Protestant		1.90***			1.52*
Catholic		1.51***			1.23*
Jewish		1.52*			1.04
Mormon		1.47			1.42
Non-Western Religion		2.80***			2.05**
None, Atheist, Agnostic		2.44***			1.79***
Other		1.23			0.97
Conflict: Religion > Science			0.62***		0.70***
Strong Parental Career Encouragement				1.51***	1.49***
Confidence in Institutions	20.42***	16.82***	16.45***	16.24***	20.81***
Education	1.26***	1.30***	1.29***	1.33***	1.23***
Income	1.04	1.02	1.02	1.02	1.03
Income Squared	1.00	1.00	1.00	1.00	1.00
Attending Religious Services	0.98	0.96**	0.96**	0.95***	0.99
Religious Person	0.99	1.00	0.90**	0.87***	1.09
Female	0.98	1.08	1.08	1.07	0.99
Age	1.00	1.00	1.00	1.00	1.00
Race/Ethnicity					
White (Referent)	—–	—–	—–	—–	—–
Black	0.83	0.99	1.23*	1.18	0.76*
Other race	1.11	1.02	1.24	1.27	0.99
Hispanic	1.20	1.39***	1.47***	1.45***	1.16
Two or more	0.78	0.84	0.83	0.85	0.75
F Value	96.23	57.16	84.86	84.38	55.42
Prob > F	0.00	0.00	0.00	0.00	0.00

Source: Religious Understandings of Science Survey 2014.

Among the remaining covariates, only *education* and *Black* had a statistically significant effect on confidence in higher education in Model 5. Those with higher education had more confidence, while relative to Whites, Blacks had less confidence in higher education.

Discussion

It has long been assumed that there is a crisis of confidence in universities and colleges in the United States. In this article, we showed that most empirical research on confidence in higher education is either based on invalid indicators that do not exclusively measure attitudes toward colleges and universities or is muddled by the use of indirect and different measures related to the notion of confidence. More importantly, approaches to theorizing confidence in higher education have been limited by conceptual frameworks that treat "the public" as a homogenous entity and that do not address the ways in which attitudes toward higher education vary across social contexts. To be sure, the diversity of constituencies of colleges and universities has been acknowledged in essays (Leveille, 2006; Prewitt, 1993) and, to

a lesser extent, modeled (Gross & Simmons, 2006). This article provides the first thorough examination of confidence in how colleges and universities are run that accounts for variation in attitudes across contexts.

The findings presented here showed only 14% of Americans indicated a great deal of confidence in higher education. This outcome is substantially different than the outcome of the survey conducted by Gross and Simmons (2006), who found that 42% of Americans reported "a lot of confidence" in colleges and universities. A more broadly construed interpretation of confidence emerges if one combines those who express a great deal of confidence with those who express "some confidence," which would suggest that 79% of the American public has confidence in colleges and universities. Although it is difficult to compare our outcome to other surveys due to distinctions in question wording, the broad interpretation of confidence observed here is generally higher than that previously measured. Confidence in higher education was lower than confidence in the military, which among social institutions historically tends to hold the highest amount of public support. Given that this study offers the first comparison of confidence in higher education and in the scientific community, it is worth noting that the higher education community is not as highly regarded as the scientific community. A possible explanation for this difference includes the potential associations of "the scientific community" with technologies such as new medical discoveries that improve human well-being. Despite this overall attitude, one in five adult Americans has hardly any confidence in how colleges and universities are run. To our knowledge, this survey is the first to report confidence in higher education in comparison with other social institutions.

In addition to these univariate statistics of interest, the multivariate analysis results featured in this article are interesting and theoretically important. Overall, they underscore the importance of understanding aspects of social context, such as identifying with a religious tradition, encouragement for careers that require higher education, or identifying with a political ideology, to explain why confidence in higher education is unevenly distributed in society. More specifically, the results point to societal contexts where higher education has contested legitimacy, which according to both institutional theorists and higher education scholars could pose a threat to internal governance of colleges and universities (Leveille, 2006; Suchman, 1995; Trow, 1996). One of the challenges in sustaining organizational legitimacy is the diversity of external constituencies and their varying group values and goals (Morphew & Hartley, 2006; Suchman, 1995). That there are significant differences in confidence—between many religious traditions and the nonreligious, between political conservatives and liberals, between science skeptics and science supporters, and between African Americans and Whites—is suggestive of areas of cultural contestation over what universities should do and how they should operate. If part of maintaining legitimacy is "telling

important stakeholders outside the institution that 'we understand what you want and we're going to deliver it to you'" (Morphew & Hartley, 2006, p. 469), the results presented here suggest that contested legitimacy occurs among some groups because universities do not actually know what is important to particular groups, they fail at communicating their legitimacy, or they underperform in the eyes of some. It is equally possible that low confidence among some groups in the public is the result of a poor understanding of what universities, professors, and students do. The content of these doubts is thus an important area for future research.

Evangelicals, Jews, Mormons, and political conservatives were particularly unlikely to have confidence in higher education, even after controlling for broader confidence in social institutions. An interesting attribute of this pattern is that, among religious traditions, Evangelicals represent one of the largest religious groups in the United States (Hackett & Lindsay, 2008) and were among the least likely to have confidence in higher education. But perhaps more surprising is the finding that those who are Jewish and Mormon were no different from Evangelicals in terms of low degrees of confidence in higher education. One might expect otherwise given that Jews are overrepresented in the professoriate relative to the general U.S. population (Ecklund & Scheitle, 2007; Hollinger, 1996) and because Jewish students are more likely to graduate than their peers from other religious traditions (Astin, 1993; Vélez, 1985). And while some Mormon leaders have decried the marginalization of moral education in universities (cf. Thompson, 1991), there is little evidence to explain why members of this religious tradition were unlikely to have confidence in higher education. Minority religious groups such as Muslims and Hindus had the highest probability of confidence in higher education. The confidence of these minority groups may potentially be the result of immigration to the United States among these traditions, who contain large proportions of highly educated professionals and intellectual exiles (Portes & Rumbaut, 1996).

There are a number of other surprising findings in these results. It is noteworthy, for example, that general measures of religiosity (attendance and identity) were unrelated to confidence, but membership in particular religious traditions significantly predicted confidence. That is, net of education, perception of conflict between science and religion, confidence in social institutions, and other factors, Evangelicals, Mormons, and Jews had lower confidence than other particular religious groups. This finding suggests that there is something unique about group membership in a particular religious tradition that produces a group-specific attitude toward higher education. Could it be that members of these religious traditions are concerned that students who are exposed to higher education will become less religious? Such a concern would be unfounded among Evangelicals, as Evangelical college students are less likely than members of other religious traditions to

experience a decrease in religious commitment during college (Scheitle, 2011). What makes these groups exhibit different levels of confidence in colleges and universities is difficult to explain and would be a fruitful avenue for future research.

Politics, however, was a more important predictor of confidence than religious tradition. Indeed, the largest substantial hypothesized effect we found was related to political ideology, with individuals at the opposite ends of the political spectrum having vastly disparate levels of confidence in colleges and universities. This finding may indicate that much of what drives lower confidence in higher education may be concern about the political bias of professors or the notion that universities represent an elite liberal sphere of society.

Given recent examples of racial unrest on college campuses (which our survey preceded), the results of our study offer a timely and important contrast to research on race and confidence in education (broadly speaking) in the United States. One of the key findings in this literature is that compared with Whites, Blacks have a lower level of trust in public institutions—with the exception of education (Lipset & Schneider, 1987). Even after controlling for income, Alesina and La Ferrara (2002) found blacks were *more* confident in education than Whites, and Klugman and Xu (2008) found the Black–White confidence gap has persisted since the 1970s. Our focus on confidence in *higher education*, however, revealed that Blacks have *lower* confidence than Whites. Inequity in higher education relative to primary and secondary schooling may be at the root of the difference. Given that Black–White differences in educational attainment are much wider when comparing completion of college to completion of high school (Kena, Musu-Gillette, Robinson, & Velez, 2015), it is possible that blacks are more pessimistic toward higher education in general due to a perception that colleges and universities are less equitable than educational institutions broadly speaking. It is also important to note we included Black Protestant as a religious tradition indicator variable (which is positively correlated with confidence in our full model) and that Klugman and Xu (2008) did not. Future research on the Black–White gap in confidence in education should further scrutinize which particular education level is driving this gap and also the role that Black Protestantism plays.

Despite its strengths, this study has limitations that provide important areas for future inquiry. For one, the cross-sectional survey data prohibit the pronouncement of strong causal claims. For example, we cannot empirically verify whether becoming more politically conservative causes a lack of confidence in higher education or whether decreasing confidence in higher education causes one to become more politically conservative. Also, future research will benefit from more refined survey questionnaire items. Although our survey questionnaire followed the convention of decades of General

Social Survey institutional confidence measures by asking respondents to think about "the people running these institutions," scholars would benefit from more detailed measures that inquire about overall confidence in higher education, confidence in university leaders, and confidence in professors. Our survey did not permit identification of individuals with children currently enrolled in college. Although examining parental career encouragement represents a modest step forward in understanding confidence in higher education, much greater progress would result from studying enrolled students and their parents as these groups are critical stakeholders.

It would similarly be interesting to know whether public opinion would be different for distinctive institutional types, such as research universities, 4-year universities, and community colleges. It is possible, for example, that religious groups would respond differently to questions about religiously affiliated universities. From 1991 to 2004, enrollment at religiously affiliated institutions grew by 13% and 19% among Whites and Blacks, respectively (Meredith & Mustard, 2009), meaning lack of confidence among some religious groups could be specific to nonreligious universities. Surveys that provide more richly detailed questions about individuals' attitudes toward specific political and religious characteristics of universities would help explain some of the effects we have identified here.

Despite these limitations, our results have important practical implications for universities. Overall, the results suggest the need for improving confidence among Evangelicals and politically conservative groups, given that both comprise large segments of the U.S. population. Although it may be true that universities have survived without extensive public engagement, public funding for research is tied to expectations for social accountability and public outreach (Reddy, 2009). The need for public confidence is tied to a more indirect pressure. Institutional theory suggests that in states where groups lacking confidence are prevalent, universities may be susceptible to government-based accountability measures and budget cuts because such groups would call for, support, or allow such measures to go unchallenged (Suchman, 1995; Trow, 1996). In Louisiana, for example, where the governor recently recommended an 82% cut in higher education funding (Kelderman, 2015), the Louisiana State University system is perhaps unlikely to find allies among the public because it is composed of large proportions of political conservatives, Evangelicals, and African Americans. Dialogue with such groups would not require departing from higher education's attempt to be disinterested, but it could simply focus on improving understanding of higher education and listening to the needs of diverse constituencies.

Although the professoriate leans liberal (Gross, 2013) and tends to be nonreligious (Ecklund, 2010), colleges and universities would benefit from illustrating that they are not exclusively composed of "liberal atheists." Universities could develop community engagement and public event

activities that target these groups. A national model can be found in the American Association for the Advancement of Science, which has established the Program of Dialogue on Science, Ethics, and Religion to foster communication among scientific and religious communities through public engagement events and other activities.

Universities could embrace similar practices with both religious and conservative groups: Lacking confidence in what universities and their faculty do may be based on unfounded assumptions. Our suggestion is predicated on the contact hypothesis, which maintains that intergroup contact providing accurate and favorable information may be generalized into a positive perception of other groups (Powers & Ellison, 1995). Religious individuals and groups that lack confidence in universities due to a perceived conflict between religion and science, for example, would benefit from knowing that only a minority of faculty in the sciences at elite universities (37%) agree that a conflict exists between science and religion (Ecklund, Johnson, Scheitle, Matthews, & Lewis, 2016). Similarly, conservatives concerned about political bias would benefit from knowing that professors are reticent to discuss politics at all (Smith et al., 2008). Intergroup contact promotes positive attitudes particularly when it occurs under the support of powerful authorities (Desforges et al., 1991), meaning universities would benefit from partnering with local religious and political authorities when creating outreach activities.

Notes

1 Taking into account stages of recruitment into the panel and the completion of a panel profile, the cumulative response rate for the RUS survey was 5.6% (Callegaro & DiSogra, 2008). Although this response rate may appear lower than that of other surveys, it is important to recognize that comparing response rates for a long-term panel and a one-time survey involves different dynamics and demands on individuals. Furthermore, there are significant advantages to surveys derived from online panels. In research comparing sample representativeness and response quality between a random-digit dial telephone survey and an online panel survey, Chang and Krosnick (2009) found that the latter provided the representativeness of the former while reducing measurement error, survey satisficing, and social desirability response bias. In short, online panels provide an ideal balance between representativeness and response quality.

2 The specific benchmarks were for gender, race and Hispanic ethnicity, education, household income, region, household Internet access, and household primary language.

3 The traditions classified as non-Western are vastly different, yet small numbers precluded analysis of each separately.

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References

Aldrich, H., & Fiol, M. (1994). Fools rush in? The institutional context of industry creation. *Academy of Management Journal*, *19*, 645–670.

Alesina, A., & La Ferrara, E. (2002). Who trusts others? *Journal of Public Economics*, *85*, 207–324. doi:10.1016/S0047-2727(01)00084-6

Armstrong, E. A., & Hamilton, L. T. (2013). *Paying for the party*. Cambridge, MA: Harvard University Press.

Arum, R., & Roksa, J.(2011).*Academically adrift: Limited learning on college campuses*. Chicago, IL: University of Chicago Press.

Astin, A. (1993). *What matters in college? Four critical years revisited*. San Francisco, CA: Jossey-Bass.

Birnbaum, R., & Shushok, F. Jr.(2001). The 'crisis' crisis in higher education. In P. G. Altbach, P. J. Gumport, & D. B. Johnstone (Eds.), *In defense of American higher education* (pp. 59–84). Baltimore, MD: Johns Hopkins University Press.

Bok, D. (2009). *Universities in the marketplace*. Princeton, NJ: Princeton University Press.

Burtchaell, J. T. (1998). *The dying of the light*. Grand Rapids, MI: William B. Eerdmans Publishing.

Cabrera, A., & La Nasa, S. (2001). On the path to college: Three critical tasks facing America's disadvantaged. *Research in Higher Education*, *42*, 119–149.

Callegaro, M., & DiSogra, C. (2008). Computing response metrics for online panels. *Public Opinion Quarterly*, *72*, 1008–1032. doi:10.1093/poq/nfn065

Chang, L., & Krosnick, J. A. (2009). National surveys via RDD telephone interviewing versus the Internet: Comparing sample representativeness and response quality. *Public Opinion Quarterly*, *73*, 641–678. doi:10.1093/poq/nfp075

Collins, R. (2004). *Interaction ritual chains*. Princeton, NJ: Princeton University Press.

Cullen, F. T., Latessa, E. J., & Byrne, J. P. (1990). Scandal and reform in collegiate athletics: Implications from a national survey of head football coaches. *The Journal of Higher Education*, *61*, 50–64. doi:10.2307/1982034

Desforges, D. M., Lord, C. G., Ramsey, S. L., Mason, J. A., Van Leeuwen, M. D., West, S. C., & Lepper, M. R. (1991). Effects of structured cooperative contact on changing negative attitudes toward stigmatized social groups. *Journal of Personality and Social Psychology*, *60*, 531–544. doi:10.1037/0022-3514.60.4.531

D'Souza, D. (1991). *Illiberal education: The politics of race and sex on campus*. New York, NY: Simon & Schuster.

Ecklund, E. H. (2010). *Science vs. religion: What scientists really think*. New York, NY: Oxford University Press.

Ecklund, E. H., Johnson, D. R., Scheitle, C. P., Matthews, K. R., & Lewis, S. W. (2016). Religion among scientists in international context: A new study of scientists in eight regions. *Socius*, *2*, 1–9.

Ecklund, E. H., & Scheitle, C. P. (2007). Religion among academic scientists: Distinctions, disciplines, and demographics. Social Problems, 54, 289–307.

Evans, J. H., & Evans, M. S. (2008). Religion and science: Beyond the epistemological conflict narrative. *Annual Review of Sociology*, *34*, 87–105. doi:10.1146/annurev.soc.34.040507.134702

Gallup. (2013). *What America needs to know about higher education redesign*. Retrieved from https://www.luminafoundation.org/files/resources/2013-gallup-lumina-foundation-report.pdf

Gauchat, G. (2011). The cultural authority of science: Public trust and acceptance of organized science. *Public Understanding of Science*, *20*, 751–770. doi:10.1177/0963662510365246

Glenn, D. (2011, January 18). New book lays failure to learn on the colleges' doorsteps. *The Chronicle of Higher Education*. Retrieved from http://chronicle.com/article/New-Book-Lays-Failure-to-Learn/125983

Gross, N. (2013). *Why are professors liberal and why do conservatives care?* Cambridge, MA: Harvard University Press.

Gross, N., & Simmons, S. (2006). *The social and political views of American professors*. Unpublished manuscript.

Group Attitudes Corporation. (1984). *American attitudes toward higher education, 1984: Results of a comprehensive nationwide survey*. New York, NY: Group Attitudes Corporation.

Hackett, C., & Lindsay, D. M. (2008). Measuring Evangelicalism: Consequences of different operationalization strategies. *Journal for the Scientific Study of Religion*, *47*, 499–514. doi:10.1111/jssr.2008.47.issue-3

Henry, D. (1975). *Challenges past, challenges present: An analysis of American higher education science 1930*. San Francisco, CA: Jossey-Bass.

Hibbing, J., & Theiss-More, E. (2002). *Congress as public enemy: Public attitudes toward political institutions*. New York, NY: Cambridge University Press.

Hollinger, D. (1996). *Science, Jews, and secular culture*. Princeton, NJ: Princeton University Press.

Horowitz, D. (2006). *The professors: The 101 most dangerous academics in America*. Washington, DC: Regnery.

Immerwahr, J. (2004). *Public attitudes on higher education: A trend analysis, 1993–2003*. Unpublished manuscript. San Jose, CA: The National Center for Public Policy and Higher Education.

Immerwahr, J., Johnson, J., Gasbarra, P., Ott, A., & Rochkind, J. (2009). *Squeezeplay 2009*: *The public's views on college costs today*. San Jose, CA: The National Center for Public Policy and Higher Education.

Immerwahr, J., Johnson, J., Ott, A., & Rochkind, J. (2010). *Squeeze play 2010*: *Continued public anxiety on cost, harsher judgments on how colleges are run*. San Jose, CA: The National Center for Public Policy and Higher Education.

Jackson, M., Goldthorpe, J. H., & Mills, C. (2005). Education, employers and class mobility. *Research in Social Stratification and Mobility*, *23*, 3–33. doi:10.1016/S0276-5624(05)23001-9

Johnson, D. R., Scheitle, C., & Ecklund, E. H. (2015). Individual religiosity and orientation towards science: Reformulating relationships. *Sociological Science*, *2*, 106–124. doi:10.15195/issn.2330-6696

Johnson, D. R., Scheitle, C., & Ecklund, E. H. (2016). Conservative Protestantism and anti-evolution curricular challenges across states. *Social Science Quarterly*, *97*, 1227–1244. doi:10.1111/ssqu.12267

Kelderman, E. (2015, May 13). LSU chancellor fights budget cuts with candor and swagger. *Chronicle of Higher Education*.

Kelley, P. C., & Chang, P. L. (2007). A typology of university ethical lapses: Types, levels of seriousness, and originating location. *The Journal of Higher Education*, *78*, 402–429. doi:10.1353/jhe.2007.0024

Kena, G., Musu-Gillette, L., Robinson, J., & Velez, E. (2015). *The condition of education 2015*. Washington, DC: U.S. Department of Education, National Center for Education Statistics.

Kirp, D. L. (2009). *Shakespeare, Einstein, and the bottom line: The marketing of higher education*. Cambridge, MA: Harvard University Press.

Klugman, J., & Xu, J. (2008). Racial differences in public confidence in education: 1974–2002. *Social Science Quarterly*, *89*, 155–176. doi:10.1111/ssqu.2008.89.issue-1

Knight, J., & Auster, C. J. (1999). Faculty conduct: An empirical study of ethical activism. *Journal of Higher Education*, *70*, 188–210. doi:10.2307/2649127

Lareau, A. 2003. *Unequal childhoods: Race, class, and family life*. Berkeley, CA: University of California Press.

Leveille, D. E. (2006). *Accountability in higher education: A public agenda for trust and cultural change*. Unpublished manuscript. Berkeley, CA: Center for Studies in Higher Education.

Lipset, S., & Schneider, W. (1987). *The confidence gap*. Baltimore, MD: Johns Hopkins University Press.

Marsden, G. (1994). *The soul of the American university: From Protestant establishment to established nonbelief*. New York, NY: Oxford University Press.

McCarthy, M. (1996). People of faith as political activists in public schools. *Education and Urban Society*, *28*, 308–326. doi:10.1177/0013124596028003004

Meredith, N. R., & Mustard, D. B. (2009). A postsecondary revival: The importance of religiosity for postsecondary enrollment growth. *Social Science Research Electronic Journal, 14*. doi:10.2139/ssrn.1470744

Meyer, J. W., & Rowan, B. (1977). Institutionalized organizations: Formal structure as myth and ceremony. *American Journal of Sociology*, *83*, 340–363. doi:10.1086/226550

Mixon, S. L., Lyon, L., & Beaty, M. D. (2004). Secularization and national universities: The effect of religious identity on academic reputation. *Journal of Higher Education*, *75*, 400–419. doi:10.1353/jhe.2004.0023

Mooney, C. (2005). *The Republican war on science*. New York, NY: Basic Books.

Morphew, C. C., & Hartley, M. (2006). Mission statements: A thematic analysis of rhetoric across institutional type. *The Journal of Higher Education*, *77*, 456–471. doi:10.1353/jhe.2006.0025

Nardon, L., & Steers, R. (2014). Managing cross-cultural encounters: Putting things in context. *Organizational Dynamics*, *43*, 138–145. doi:10.1016/j.orgdyn.2014.03.008

Perna, L., & Titus, M. (2005). The relationship between parental involvement as social capital and college enrollment: An examination of racial/ethnic group differences. *Journal of Higher Education*, *76*, 485–518. doi:10.1353/jhe.2005.0036

Portes, A., & Rumbaut, R. G. (1996). *Immigrant America: A portrait*. Berkeley, CA: University of California Press.

Powers, D., & Ellison, C. G. (1995). Interracial contact and black racial attitudes: The contact hypothesis and selectivity bias. *Social Forces*, *74*, 205–226.

Prewitt, K. (1993). America's research universities under public scrutiny. *Daedalus*, *122*(4), 85–99.

Price, D. (2004). *Borrowing inequality: Race, class, and student loans*. Boulder, CO: Lynne Rienner Publishers.

Reddy, C. (2009). Scientist citizens. *Science*, *323*, 1405. doi:10.1126/science.1173003

Reuben, J. (1996). *The making of the modern university*. Chicago, IL: University of Chicago Press.

Roberts, J. H., & Turner, J. (2000). *The sacred and the secular university*. Princeton, NJ: Princeton University Press.

Rowan-Kenyon, H. (2007). Predictors of delayed college enrollment and the impact of socioeconomic status. *Journal of Higher Education*, *78*, 188–214. doi:10.1353/jhe.2007.0012

Ruef, M., & Scott, W. R. (1998). A multidimensional model of organizational legitimacy: Hospital survival in a changing institutional environment. *Administrative Science Quarterly*, *43*, 877–904.

Scheitle, C. (2011). Religious and spiritual change in college. *Sociology of Education*, *84*, 122–136. doi:10.1177/0038040711401811

Smith, T., Marsden, P., Hout, M., & Kim, J. (2014). *General Social Surveys*, *1972–2014*. [machine-readable data file] Chicago, IL: National Opinion Research Center, University of Chicago. Retrieved from gssdataexplorer.norc.org.

Smith, B. L., Mayer, J. D., & Fritschler, A. L. (2008). *Closed minds? Politics and ideology in American universities*. Washington, DC: Brookings Institution Press.

Smith, T. (1978). *Can we have confidence in confidence? Revisited* (GSS Methodological Report No. 1). Chicago, IL: National Opinion Research Center, University of Chicago.

Steensland, B., Robinson, L. D., Wilcox, W. B., Park, J., Regnerus, M., & Woodberry, R. (2000). The measure of American religion: Toward improving the state of the art. *Social Forces*, *79*, 291–318. doi:10.2307/2675572

Suchman, M. (1995). Managing legitimacy: Strategic and institutional approaches. *Academy of Management Review*, *20*, 571–610.

Thompson, D. L. (1991). *Moral values and higher education: A notion at risk*. Albany, NY: State University of New York Press.

Trow, M. (1996). Trust, markets and accountability in higher education: A comparative perspective. *Higher Education Policy*, *9*, 309–324.

U.S. Department of Commerce, Census Bureau. (2013). *Current population survey*, *1967–2012*. Washington, DC: U.S. Department of Commerce, Census Bureau

U.S. Department of Commerce, Census Bureau, Current Population Survey, October, 1967 through 2012. (2013).

Vélez, W. (1985). Finishing college: The effects of college type. *Sociology of Education*, *58*, 191–200. doi:10.2307/2112419

Appendix. Ordered Logistic Regression Predicting Confidence in Higher Education (*N* = 9,918)

	M1	M2
Strong Parental Career Encouragement (25th percentile measure)	1.31***	—-
Strong Parental Career Encouragement (75th percentile measure)	—-	1.44**
Political Conservatism	0.67***	0.67***
Religious Tradition		
Evangelical (Referent)	—-	—-
Mainline Protestant	1.23*	1.23*
Black Protestant	1.53*	1.51*
Catholic	1.23*	1.24*
Jewish	1.03	1.03
Mormon	1.44	1.45
Non-Western Religion	2.02**	2.06**
None, Atheist, Agnostic	1.79***	1.79***
Other	0.98	0.97
Conflict: Religion > Science	0.70***	0.70***
Confidence in Institutions	20.80***	20.81***
Education	1.23***	1.23***
Income	1.03	1.03
Income Squared	1.00	1.00
Attending Religious Services	0.99	0.99
Religious Person	1.09	1.09
Female	1.00	0.99
Age	1.00	1.00
Race/Ethnicity		
White (Referent)	—-	—-
Black	0.77*	0.77*
Other race	0.98	0.97
Hispanic	1.16	1.18
Two or more	0.76	0.75
F Value	55.00	55.42
Prob > *F*	0.00	0.00

Source: 2014 Religious Understandings of Science Survey.