Who Do Students Trust? An Exploratory Analysis of Undergraduates' Social Trust

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## Abstract

Trust is a necessary precondition for social cohesion, and by extension, institutional cohesion. However, there is minimal understanding as to what trust looks like among undergraduates attending college. This study documents the trust investments of 8,351 college students currently enrolled at 29 U.S. colleges and universities to document how trust levels may vary for different groups of students and across different geographies. To capture these trends in overall trust, we relied upon data derived from a supplement of the 2020 administration of the National Survey of Student Engagement (NSSE). An analysis of trust self-assessments indicates a diverse and seemingly nuanced trust landscape on our nation's colleges and universities. In particular, we found disparate levels of trust across racial/ethnic lines and disability status, indicating that institutions need to recapture important yet historically marginalized constituencies' trust.

*Keywords: social trust, undergraduates, social cohesion, postsecondary institutions*

**Introduction**

Historians of higher education have noted that in many ways, colleges and universities mirror the social, cultural, and economic dispositions of the country as a whole. Indeed, evidence suggests this is true in the case of trust as applied to higher education institutions (Pew Research Center, 2017; Busteed & Newport, 2018). The public narrative on postsecondary participation's economic benefits suggests that a degree remains an essential conduit to improved economic and social mobility (Schanzenbach, Bauer, & Breitwieser, 2017). However, there is an emergent, competing narrative that suggests colleges and universities are less trustworthy. This lack of trust is acute in areas related to tuition costs and rising postgraduate debt (Goldrick-Rab, 2016; Popescu, 2018), post-college returns on investment (Bennett & Wilezol, 2013), and quality of preparation (Arum & Roksa, 2011; Johnson, & Peifer, 2017). Internal to the institution, we also see evidence of fragmentation in trust due to increasing campus social and political unrest (Johnson & Peifer, 2017; Morgan, Zilvinskis, & Dugan, 2018). This fragmentation leads to a host of residual effects that have measurably diminished the quality of campus relations as a whole (Myers, Davis, Schreuder, & Seibold, 2016).

Prior work examining trust in higher education has primarily relied upon near-proxies such as the negative impact of college costs, the diminishing quality of campus public discourse, and unmet expectations in an effort to describe the shifts in public trust (Bok, 1992). Public trust, in this case, represents the public response to higher education, i.e. the public discourse surrounding the role of public education within society at large (Bok, 1992). Less attended to, however, is an exploration of the trust environment internal to the institution. We have little shared understanding, for instance, as to how trust and cohesion might describe the state of campus cohesion. Likewise, we have seen little empirical work designed to measure the breadth

and depth of trust expression among college students. This literature gap is particularly surprising as trust would appear to be fundamental to the college choice process, persistence decisions, and campus environment perceptions, all popular topics in higher education literature.

This study addresses this gap by examining students' self-reported trust perceptions. More specifically, we sought to measure the extent to which students maintained trust in individuals, social institutions, and key campus actors like faculty, academic advisors, and campus leadership. Our interests also extended to examining differences in trust levels across group characteristics like race and urbanicity. Thus, we analyzed student responses from a supplement to the annual 2020 National Survey of Student Engagement (NSSE) focusing on student trust levels in individuals, social institutions, including higher education, state and federal governments, the media, and civil society. The following research questions guided our analyses:

1. How does trust vary across student demographic groups?
2. How do differences in students' home communities influence trust?

**Literature Review**

At its core, trust is a fundamental expression of expectation (Hardin, 2002; Farrell, 2009). However, trust investments are induced primarily through situational ambiguity. In other words, we engage in trust choices (to trust or not to trust) based upon our assessment of the quality of a given relationship. In such moments, we assess the perceived risk of a potential relationship and invest accordingly. In this way, trust is a form of "beneficent reciprocity" used to maximize our self-interest (Foddy & Yamagishi, 2009). When we place trust in someone or something, we anticipate that harm will not befall us. In the absence of such assurances, we may do the opposite – distrust (Foddy & Yamagishi, 2009).

There is also dimensionality to the trust construct. While trust is commonly understood to be an interpersonal exchange of goodwill and beneficence, there is scalability to who serves as the recipients of our trust. To this point, social trust reflects an implicit faith that individuals have for one another; a basic shared set of values predicated upon a common-sense connection with the "other" (Urslaner, 2002; Huang, et.al., 2011).  It is distinct from individual-level trust by its embeddedness in social group affiliations and interactions, social institutions, and even the nation-state level (Urslaner, 2002; Huang, et.al., 2011). We describe these forms of social trust in turn.

**Group Trust**

While there is a good deal of productive discussion around enacting trust, less is known about why some may be more predisposed to trusting or distrusting others (Hardin, 2001). There is evidence to suggest that we may possess a host of dispositions that result in a greater propensity for trusting. These might include our spiritual or moral commitments, specific personality traits, mindsets, and dispositional outlooks (Hardin, 2001). We also routinely direct trust to those who share the most in common with us. Group trust reflects the propensity to align trust investments in accordance with our group affiliation, including gender, race, class, age, sexuality, ability, and other salient characteristics. Group level-trust gets expressed in two different ways. The first is in-group trust, which represents the trust we invest in those with whom we share group affiliation. In-group trust is the more common form of group trust as assumed familiarity dampens the need for substantial trust-risk calculations (Hardin, 2002). The second form of group trust is out-group trust, reflecting the degree to which we trust those outside our immediate group affiliations (Hardin, 2002).

The existing research on group trust offers important insight into out-group trust in the United States. The Pew Research Center has reported extensively on the state of trust in the U.S. (e.g., Taylor, Funk, & Clark, 2007; Ramie & Perrin, 2019). In a recent report on the impact on trust following the 2020 COVID-19 outbreak, Rainie & Perrin (2019) identified sizeable trust gaps according to race, age, marital status, and income. For example, 61% of whites felt most people could be trusted, while fewer Blacks (36%) and Hispanic/Latinos (29%) shared similar beliefs. Likewise, 66% of high earners ($75,000+) reported high levels of trust (66%) compared to low-income earners (35%). They also saw differences in trust by age, with 18 to 29-year-olds trusting at demonstrably lower levels (34%) than 65+ (74%) (Rainie & Perrin, 2019). One common pattern they found was that higher levels of education suggested a greater propensity for social trust. Accordingly, 65% of college graduates (and 71% of postgraduates) reported high levels of social trust as compared to 42% of respondents with a high school education or less. These trust patterns are consistent with earlier trust work by the Pew Research Center's (2007), particularly across race, income, and age (Pew Research Center, 2007).

There are multiple justifications for these disparate levels of generalized trust across racial and class lines. Most common among them is the belief that perceived vulnerability leads to increased social guardedness (Wuthnow, 1998; Paxton, 2005). Subsequent research has also identified correlates such as urbanicity, social heterogeneity, crime rates, and governmental corruption as rationales for waning levels of social trust (Urslaner, 2002)

**Institutional Trust**

In the case of institutions, the dynamics of trust shift from more targeted individual-level assessments to broader, more diffuse assessments of trust. According to Fuller (2009), within formal institutional settings like colleges and universities, rules, policies, and codes regulate how

different actors interact. These rules and regulations reflect the power asymmetries between these classes. Individual-level trust or lack of trust depends on the extent to which actors feel they can bargain for their interests. In cases where such bargaining fails, trust or lack of trust between classes of actors may result. Therefore, trust in institutions is contingent upon the historical, current, and anticipated distribution of institutional resources between classes of actors. In this way, (1) there will be variability in institutional trust within classes of actors; and (2) that variability will be a product of the accumulation of experiences (and assessments of fairness) between individuals and institutions that have occurred over time.

Student trust in colleges or universities is fundamentally contingent and in constant negotiation and re-negotiation. Given the decision-making leverage of key institutional actors (institutional leaders, faculty, and other professional supports), trust levels may be a product of students' generalized historical fairness assessments in their overall treatment by educational institutions. Given the decision-making leverage of key institutional actors (institutional leaders, faculty, and other professional supports), trust levels may be a product of students' assessments as to the overall fairness in their treatment by educational institutions. However, the depth of institutional inequities may be felt differently by different subgroups of students, and therefore, students may experience institutional trust differently. This is particularly the case in terms of race, income, first-generation status. These fissures are consistent with longstanding claims that greater social inequity can lead to higher generalized distrust (Rothstein & Uslaner, 2005).

**Generalized Social Trust**

A third important form of trust is generalized or abstract trust (Cleary & Stokes, 2009). Generalized trust reflects an individual assessment of faith in the motivations and intentions of social and democratic institutions (Uslaner, 2002). It reflects our belief in the work of social

institutions in serving our best interests and informs the degree to which we engage with those institutions (Fukuyama, 1995; Putnam, 2000; Welch et al., 2005). For this reason, much has been written about generalized social trust as the hallmark of a stable democratic state (Clearly & Stokes, 2009; Fukuyama, 1995; Putnam, 2000). Nation-states boasting high levels of social trust typically enjoy a host of other positive social and political outcomes. These may include high levels of civic engagement, limited social inequality, low-levels of government corruption, as well as a relatively high assessment of overall quality of life by its citizenry (Rothstein & Stolle, 2008). As such, generalized trust is a vital precondition for overall social cohesion and vibrant, engaged citizenship within a well-functioning and thriving democracy (Putnam, 2000).

According to the 2018 Edelman Trust Barometer, the United States experienced an unprecedented decline in trust across all social institutions between 2017 and 2018. While current social, cultural, and political divisions account for this rapid decay, U.S. trust levels have, on the whole, been in a state of decline since the 1950s (Putnam, 2000; Welch et al., 2005). The arrival of COVID-19 and the recent 2020 election cycle have spurred further interest in the social divides Edelman has documented. Rainie & Perrin (2019) report that 53% of American adults stated that most people could not be trusted. Furthermore, Dimock (2020) found that nearly 6 out of 10 Americans expressed little faith in other Americans' collective political wisdom, with more than half (53%) reporting their willingness to engage in political discussions with others. Americans also held generally pessimistic views on policymakers' capacity to agree on the most basic sets of issues. Young adults appear to be the most skeptical of their fellow Americans. Gramlich (2019) found that 18 to 29-year-olds expressed less confidence in the military, religious leaders, media, and politicians than their older counterparts. These current patterns of

American generalized trust reinforce Putnam's (2000) longstanding concerns regarding the

degradation of American civic life and discourses.

**Trust & Education**

Trust's dimensionality and conceptual flexibility help us make sense of how we engage in

the diverse, multi-faceted work occurring within schools. Trust helps to explain how schools,

districts, and postsecondary institutions operate internally as bounded entities. Likewise, it helps

to explain how schools engage with a host of diverse, external stakeholders. Trust can bring

clarity to the micro-level exchanges of risk and faith embedded in the lives of students, faculty,

staff, and administrators, and in classroom spaces where learners are asked to be "brave" in order

to facilitate their own learning (Rockenbach et al., 2018).

A cursory review of the literature on trust in education illustrates the diversity of ways

trust influences education. For instance, K-12 research has extensively used trust to depict how

schools and districts may engage in school improvement, change, and reform efforts. Bryk &

Scheider (2002) and Tschannen-Moran (2004) view trust as an essential conduit to greater group

cohesion and relational connection in school settings. Tschannen-Moran argues that trust is a

critical leadership concern as creating a sense of trust within school buildings begins with

attention to school culture, communication and messaging, and a general willingness to surface

criticisms and create opportunities for staff to voice their opinions. Consequently, trust

encourages cohesion that allows schools to be flexible and open to meeting complex challenges

and implementing educational programming changes. Thus, trust is a productive feature of

institutional collaboration, shared values, and, ultimately, democratic practice. We see similar

rationales extended to the work on school boards and superintendents (Bowers, 2016) and in

accountability and assessment (Herman, 2008), parent-school relations (Adams & Christenson,

2000), and teacher professional learning communities (Park, Henkin, & Egley, 2005), among other areas of educational practice.

Trust research on higher education institutional practice has tread somewhat similar conceptual ground. Certainly, the bulk of existing research on trust in higher education has generally focused on the notion of public trust in higher education (Alfred & Weissman, 1987; Leveille, 2006; Mishra, 2017; Trow, 1996; Winston, 1992). Of particular interest to researchers has been to document the changing nature of public perception on higher education as a system and the impact of these changes on its social role as a public good. Research has examined how external focuses like rising accountability (Leveille, 2006), college costs (Massy, 2003), student consumerism (Gibbs & Dean, 2015; Naidoo & Jamieson, 2005), and meritocracy and equal access (Taylor & Cantwell, 2018) have historically served to undermine the public's trust in higher education.

A limited body of work has sought to document the internal trust landscape of colleges and universities. Tierney (2008) broke some conceptual ground in this area by framing trust within higher education's organizational culture. Given the high-risk environment of higher education institutions, the instability of the marketplace, and the dynamics of accountability, Tierney suggests that trust is vital to institutional culture and cohesion. Through these micro-level "networks of social relations" (p. 39), colleges and universities can take risks and meet stated goals in keeping with their institutional mission and vision.

While Tierney (2008) rationalizes how trust functions at the institutional level, documenting trust expression among diverse institutional actors has also served as a focal point for research in this area. Ream and colleagues (2014) offer one of the more intriguing sets of insights into the role of trust in their study on undergraduate science mentoring efficacy. They

considered how trust factored into the growth and development of students participating in a science mentorship program. Their findings indicate that trust is an overlooked feature of cognitive learning and development and must be considered a pedagogical tool in undergraduate student learning. Smith and Shoho's (2007) study on faculty institutional trust and Huang et al. 's (2011) work on British college students' generalized trust have also served as examples of how trust flows through the "network of social relations" Tierney referenced.

Trust is a necessary precondition for social cohesion and institutional cohesion (Huang et al., 2011). However, we have a limited understanding of the trust environments on our nation's campuses. This study documents the trust investments of college students currently enrolled in a cross-section of colleges and universities in order to determine (1) the extent to which colleges and universities create trustworthy spaces for students; and (2) to determine the extent to which college students readily trust one another as well as their generalized faith in social institutions.

**Methods**

**Data**

We utilized data from the 2020 administration of the National Survey of Student Engagement (NSSE). NSSE is an annual survey designed to inquire about student engagement in effective educational activities, perceptions of the college environment, satisfaction, and other topics and captures important demographic information. In the 2020 administration, several trust questions were appended to the core NSSE instrument, making it an ideal data source for this study. Only students attending a subset of schools received the questions, so our analyses focused on the 8,351 first-year and senior students attending 29 U.S. colleges and universities who responded to the model.

The additional trust items were based on items from the World Values Survey (n.d.). We modified the items to conform to the core NSSE instrument's practices and removed some items that would not be well understood by the college student population. We also added items inquiring about trust in your college that combined the WVS framing and language from NSSE's quality of interactions engagement indicator. A list of the items and their codings is available in Appendix A.

We applied an exploratory factor analysis to the items in the additional item set to data derived from a random half of the sample to identify different trust types. Due to the items' ordinal nature, we used a weighted least square mean and variance adjusted (WLSMV) estimator, as it is a robust estimator that does not assume normally distributed variables. We rotated the loadings using a direct obilmin rotation, as we assumed that the latent trust variables would be correlated. To identify the appropriate number of factors to extract, we initially relied upon the scree plot. The plot suggested that five or six factors would be optimal but did not give a definitive signal on which was the better choice. Therefore, we reviewed the EFA results for the five and six factor solutions and determined that the five factors were preferable. The six factor model's additional factor had relatively low rotated loadings and included items that had a poor conceptual fit. The rotated loadings for the five factor model are available in Table 1.

Next, we sought to confirm the factors using a confirmatory factor analysis (CFA). This analysis used the remaining half of the data and fit models using the WLSMV estimator. To assess fit, we used Hu and Bentler's (1999) standards. A good fit was achieved by a comparative fit index (CFI) and Tucker-Lewis index (TLI) were greater than or equal to .95, with a root mean square error of approximation (RMSEA) was less than or equal to .05. The bar for adequate fit was CFI and TLIs above .90 and RMSEA less than or equal to .06. We did not use the $\chi^2$ metric

due to its sensitivity to sample size. The CFI and TLI statistics met the good fit standard in the final CFA model, while the RMSEA statistic met the adequate threshold after correlating a handful of model terms. Consequently, the trust factors meet widely accepted standards for social science research. Figure 1 displays the standardized estimates from the CFA model.

The first factor is out-group trust, which inquired about trust in people of another religion, race/ethnicity, and nationality. The college trust factor included items about trust in leadership, academic advisors, faculty, student services staff, and other administrative staff at their institution. The trust in institutions factor asked about confidence in the churches, the military, the police, the courts, the federal government, political parties, congress, government employees, large corporations, and banks. The trust in media items included confidence in the press, T.V. news, and social media companies. Finally, trust in civil society asked about confidence in environmental, women's, and charitable organizations and the United Nations. The five factors served as the study's dependent variables. For ease of interpretation, we standardized the factors to have a mean of 0 and a standard deviation of 1.

Due to the lack of prior research on trust among college students, we used an exploratory approach to our independent variable selection. Three variables were reported by students' institutions: class (first-year vs. senior), enrollment intensity, and sex. From the demographics portion of the core NSSE instrument, we also included data on the following demographic items and college experiences: major field, transfer status, educational expectations, parental education, age, race/ethnicity (collapsed to Asian, Black or African American, Hispanic or Latino, White, another race, and multiracial; missing data was imputed from the institution-reported race), living arrangements, student-athlete status, veteran status, and disability status (coded as no, yes, and prefer not to respond). We also merged in data about the students' home

communities. The per capita income in the students' zip code from 2018 was obtained from the Internal Revenue Service (2020) to serve as a proxy for students' household income before enrolling in college. We also captured the students' home communities' urbanicity through the U.S. Department of Agriculture's (2019) Rural-Urban Continuum Codes (2013 version). We collapsed the codes into four categories: urban, suburban, town, and rural.

We did not include institutional characteristics in our analyses for multiple reasons. The institutions were not randomly sampled and limited in size; therefore, the institution-level results' generalizability is questionable. The limited number of institutions could also reveal institution-specific results, which would violate the NSSE (2020) Participation Agreement.

**Methods**

To analyze the independent variables' influence on our trust measures, we utilized Bayesian linear regression analysis. Bayesian regression utilizes ordinary least squares (OLS) regression but uses a Bayesian framework, not a frequentist framework, to express the results. The major difference between the framework is that the frequentist approach focuses on a single point estimate like the mean or a regression coefficient and applies a null hypothesis significance test. In the Bayesian framework, a statistic is assumed to be within a probability distribution, and the method seeks to identify the posterior distribution for the statistic of interest. The Bayesian model seeks to start with an initial estimate (the prior) and gather additional evidence to arrive at a less wrong range than the prior. Nate Silver's fivethirtyeight.com website has frequently used Bayesian analysis to predict political and sporting outcomes in the popular press. Bayesian methods also conform with the American Statistical Association's statement on the proper use of $p$-values (Wasserstein & Lazar, 2016) and the American Psychological Association's (2010) recommendations on reporting statistics. For more details on the Bayesian framework, Kruschke

and Liddell (2018) provide an easily understood primer on the topic. A full treatment of the framework is available in books by Gelman et al. (2013) and Kruschke (2014).

Bayesian linear regression seeks to identify a regression model's posterior distribution using a samples of sample approach. It uses Markov chain Monte Carlo (MCMC) methods to draw samples to model the posterior distribution of the model's parameters using OLS. As the number of models is estimated, the posterior distribution converges into the credible interval, which is a range of credible or generalizable estimates. We set the credible interval to be the highest density interval that includes 95 percent of the estimates. In this study, we estimated the results using a Gibbs sampler with an MCMC sample of 10,000 and a burn-in period of 2,500. We estimated three chains, as multiple chains allow for estimating the Gelman-Rubin convergence statistic, allowing for a model convergence assessment. Models were deemed to converge when the statistic was less than 1.2 (Brooks and Gelman, 1998). Given the lack of prior research on undergraduates and trust, we used uninformative priors.

**Limitations**

Our analyses are limited to a handful of limitations. First, our results are exploratory and correlational. The results should not be viewed as causal. Due to the lack of research on trust among the college student population, our analyses may be subject to omitted variable bias; however, we sought to include all plausible data to which we had access in our multivariate models. Our sample is a convenience sample and may not represent the undergraduates attending four-year institutions as a limited number of institutions were administered the additional item set and were not randomly selected (however, census sampling was used at the student-level). During the data collection period, the COVID-19 pandemic altered the nation's lives and the students who responded to the survey. The data collection was roughly 90 percent complete

before the pandemic significantly impacted campus operations. Calderone and Fosnacht (2020) investigated how COVID-19 influenced trust using the same sample and found little difference overall between students who responded before and after the campus operations were interrupted by the pandemic. However, specific subgroups exhibited substantial differences.

## Results

The Bayesian regression results are presented in Tables 2 & 3. The tables have the same format. The mean is the average estimate from the posterior distribution. The SD column represents the standard deviation of the prior distribution for the statistic. The HDI columns represent the credible interval. The lower and upper bounds represent the highest density interval, which contains 95% of the posterior distribution. As our dependent variables were standardized, the results represent the expected change in effect size units. Rocconi and Gonyea (2018) researched the distribution of NSSE effect sizes. They recommended classifying the results into the following ranges (in absolute values): less than .10 as trivial, .10 to .29 as small, .30 to .49 as medium, and greater or equal to .50 as large. Below we will discuss variables where the mean and HDI distribution of the regression coefficients suggest a non-trivial relationship. All of the differences discussed are when other variables are controlled for in the model. Similarly, the results are correlational, and causation should not be assumed.

### Out-group trust

Males tended to have lower levels of out-group trust than females $(M = -0.11$, highest density interval [HDI] [-0.17, -0.06]). Students with parents who did not complete high school typically reported lower out-group trust than their peers who had a bachelor's parental education level $(M = -0.21$, HDI [-.032, -0.11]). Substantial differences were observed by race. Black students reported lower out-group trust levels than White students $(M = -0.58$, HDI [-0.65, -

0.51]) on average. A similar but smaller in magnitude relationship was observed for Hispanic or Latinos *(M = -0.20, HDI [-0.28, -0.11])*, multiracial students *(M = -0.18, HDI [-0.27, -0.10])*, and students in the catch-all category of another race or ethnicity *(M = -0.21, HDI [-0.40, -0.03])*. Relative to social science majors, arts and humanities majors exhibited higher out-group trust *(M = 0.12, HDI [0.02, 0.22]*. In contrast, students majoring in the biological sciences reported lower out-group trust *(M = -0.12, HDI [-0.22, -0.03])*. Compared to students who lived on-campus, students who took all of their courses online reported lower levels of out-group trust *(M = -0.19, HDI [-0.33, -0.05])*. Students who lived in the suburbs before high school tended to have higher out-group trust levels than their peers who lived in urban areas *(M = 0.09, HDI [0.03, 0.15])*. In contrast, students from rural areas reported lower levels of trust than their urban counterparts *(M = -0.16, HDI [-0.31, -0.03])*.

**College Trust**

Age was positively correlated with college trust. The mean estimate for a ten-year increase was 0.11 (HDI [0.07, 0.15]). Substantial differences in college trust were exhibited across racial lines. Black or African American *(M = -0.47, HDI [-0.54, -0.40])*, Hispanic or Latino *(M = -0.16, HDI [ -0.24, -0.07])*, Multiracial *(M = -0.23, HDI [ -0.32, -0.15])* , and the catch-all another race *(M = -0.34, HDI [-0.52, -0.15])* student groups all reported lower levels of college trust than their White peers. A similar finding was observed for disability status. Students who indicated they had a disability were less likely to trust their college *(M = -0.15, HDI [-0.22, -0.09])*, and those who preferred not to answer the question reported lower college trust *(M = -0.27, HDI [ -0.38, -0.16])* than students who no disabilities. Senior students tended to trust their college less than first-year students *(M = -0.16, HDI [-0.22, -0.11])*. Education majors tended to trust their college more than social science majors *(M = -0.14, HDI [0.05, 0.24])*.

**Institutional Trust**

Males reported lower institutional trust levels than females *(M = -0.11, HDI [-0.16, -0.06])*. Considerable differences were observed by race. Relative to White students, Black *(M = -0.54, HDI [-0.61, -0.47])*, Hispanic *(M = -0.37, HDI (-0.45, -0.29])*, multiracial *(M = -0.29, HDI [-0.37, -0.20])*, and the catch-all another category *(M = -0.38, HDI [-0.56, -0.20])* reported lower levels of institutional trust. Students with a disability *(M = -0.30, HDI [-0.37, -0.24])* and preferred not to disclose their disability status *(M = -0.30, HDI [-0.41, -0.20])* tended to have lower levels of institutional trust than their peers without a disability. Seniors *(M = -0.17, HDI [-0.22, -0.11))* tended to have lower levels of institutional trust than first-year students. Students majoring in a number of professional fields exhibited greater levels of institutional trust than social science majors: business *(M= 0.30, HDI [0.21, 0.39])*, education *(M = 0.26, HDI [0.17, 0.36])*, engineering *(M = 0.28, HDI [0.07, 0.49])*, health professions *(M = 0.17, HDI [0.06, 0.28])*, and social service professions *(M = 0.16, HDI [0.05, 0.27])*. Student athletes *(M = 0.30, HDI [0.22, 0.38])* reported higher levels of institutional trust than non-athletes.

**Trust in Media**

Males on average reported lower trust in the media *(M = -0.15, HDI [-0.20, -0.09])*. Asian *(M = 0.28, HDI [0.15, 0.40]* and Black *(M = -0.12, HDI [0.04, 0.19])* students tended to trust the media more than white students. However, students from the catch-all "another" racial category *(M= -0.20, HDI [-0.39, -0.01])* tended to trust the media less than their white peers. Students with a disability *(M = -0.16, HDI [-0.23, -0.09])* and those who preferred not to disclose their disability status *(M = -0.18, HDI [ -0.29, -0.07])* trusted the media less on average than White students. Relative to their peers expecting to earn only a bachelor's degree, students who did not expect to complete college *(M = -0.11, HDI [-0.20, -0.01]*, master's degree seekers *(M = -0.11,*

HDI [-0.17, -0.05]), and doctoral or professional degree seekers *(M = -0.14, HDI [-0.21, -0.07])* reported lower levels of media trust. Students majoring in the biological sciences *(M = -0.12, HDI [ -0.22, -0.02]* and engineering *(M = -0.27, HDI [ -0.49, -0.05])* tended to trust the media less on average than social science majors. However, students majoring in communications *(M = 0.45, HDI [ 0.31, 0.59]* and education *(M = 0.11, HDI [0.02, 0.21]* majors trusted the media more on average than social science majors. Transfer status was negatively related to trust in the media *(M = 0.13, HDI [-0.19, -0.06])*. Student athletes tended to trust the media more on average *(M = 0.16, HDI [ 0.08, 0.24])*.

**Trust in Civil Society**

Males tended to trust civil society less than females *(M = -0.26, HDI [-0.32, -0.21])*. Age was negatively correlated with trust in civil society *(M = -0.08, HDI [-0.12, -0.03])*. Black *(M = -0.34, HDI [-0.41, -0.27])*, Hispanic or Latinos *(M = -0.16, HDI [-0.24, -0.07])*, multiracial *(M = -0.15, HDI [-0.24, -0.07])*, and students in the catch-all "another" racial category *(M = -0.38, HDI [-0.56, -0.19])* trusted civil society less on average than White students. Students who were homeless or in transitional housing tended to trust civil society groups less than students who lived on campus *(M = -0.63, HDI [-1.09, -0.17])*. Veterans tended to trust civil society groups less than non-veteran students *(M = -0.31, HDI [-0.46, -0.17])*. Students who grew up in rural areas tended to exhibit less trust in civil society than their peers who grew up in urban areas *(M =-0.16, HDI [-0.31, -0.02])*.

## Discussion

This study sought to improve understanding as to how college undergraduates deployed diverse forms of trust. We examined group-level trust, specifically out-group trust, forms of specific institutional trust, including college, media, civil society trust, and generalized

institutional trust. To this end, we sought to address two central research questions. First, we attempted to clarify how trust might vary in intensity across different demographic and affiliation groups. Second, we sought to better understand how differences in originating home communities might have also influenced student trust investments. We address each of these concerns in order.

**Trust Outcomes by Sub-Groups**

Specific patterns emerged from our analyses of trust to specific demographic subgroups. Notably, we saw clear delineation lines in the case of sex, race, and ability status. For sex, male-identified students seem to indicate lower overall trust as opposed to women. This sex difference was true for men's out-group trust and more abstract trust represented by trust in social institutions, the media, and civil society. By contrast, women indicated higher levels of out-group trust and trust in social institutions and civil society.

Likewise, we saw stark differences across racial groupings. In particular, white students demonstrated higher trust levels across nearly all trust dimensions than Black, Latino, multiracial, and the catch-all "another" student groups. White students were more likely to possess higher out-group trust and trust in their college. In abstract trust areas, white students possessed higher trust levels in social institutions and civil society. Interestingly, white students reported low levels of trust in the media. The opposite was reported by Black, Latino, multiracial, and catch-all "another" racial groups. White students expressed high levels of trust in nearly all trust categories; students of color consistently indicated lower levels of trust across all trust dimensions. The one exception was media, where they reported a higher level of trust – where once again, the opposite outcome was reported by white students.

Ability, parental education, and student class subgroups offered meaningful outcomes about trust. Those identifying as disabled and ability non-reporters indicated low levels of trust in their college, media, and institutions (generalized). By contrast, those not reporting a disability indicated higher levels of trust in these same areas. We also learned that parental education levels indicated differing positions on out-group trust. Those whose parents have a Bachelor's report higher trust than those whose parents did not complete high school. Interestingly, parental education differences did not emerge in any other trust category. Finally, class standing factored into the trust outcomes that emerged. First-year undergraduate students expressed higher college trust and trust in social institutions than seniors. This finding is surprising as seniors had committed to their institutions for several years. Thus, it suggests that seniors had negative interactions or perhaps perceived no bargaining power with their college and social institutions.

Interesting trust patterns emerged in our analyses by academic major. On the whole, those majoring in arts and the humanities tended to report the highest levels of out-group trust yet indicated distrust for social institutions relative to their social science major peers. A likely reason for this difference is the arts and humanities curricular critique of social institutions and the promotion of diversity efforts. On the other hand, education majors reported higher levels of college trust, trust in social institutions, and trust in the media, making them perhaps the most consistent trusters among all academic majors. Also notable is that trust in social institutions generated the most trust among the professional fields (education, engineering, health professions, social service professions, and all other). Similarly, communications majors exhibited greater trust in the media. A likely rationale for these differences may include an awareness by students that majoring in professional fields requires a commitment or alliance to

these larger institutions (formal or by association) making them particularly predisposed to trust social institutions more than their liberal arts peers.

**Trust Differences & Home Communities**

There were only two notable findings for issues of students' home communities. We find that those students from the suburbs were more likely to maintain high out-group trust. Those from urban cities were trusting, but at lesser levels by comparison. By contrast, students from rural areas exhibited low levels of trust. We also note that rural students placed less trust in civil society than those who grew up in urban centers. We observed no clear relationship for our income proxy.

## Implications

This study represents one of the most comprehensive attempts to measure trust across the college undergraduate population. From this exploratory study, we learned of consequential differences in how college undergraduates experience trust across a host of different trust dimensions. These differences have implications for how we understand the quality of students' sense of connection to one another and their institutions but also offers insight into the impact college may have on students' perception of their well-being relative to the world beyond the boundaries of their college campus. We consider these ideas further in the discussion that follows.

*Racial Cohesion on Campuses*

As reflected in our findings and subsequent discussion, undergraduates exhibit unequal levels of trust across racial groups. With few exceptions, white students reported higher trust levels across our trust measures relative to various racial and ethnic groups. This trust gap between whites and students of color is consistent with the patterns observed within the general

population as non-White groups have historically expressed lower out-group trust relative to whites (Pew Research Center, 2007; Smith, 2010). As Smith (2010) suggests, our history of racial animus and discrimination is a primary cause of these trust disparities and social closures within historically marginalized communities. We surmise that the cause of the racial trust disparities on college campuses is due to similar factors. This finding coexists rather seamlessly with the wealth of prior empirical work that has documented the sense of exclusion and alienation felt by students of color on our nation's campuses (Espenshade & Radford, 2013; Espinosa, Turk, Taylor, & Chessman, 2019; Johnston, 2014; Park, 2020; Solorzano, Ceja, & Yosso, 2000). A precondition for greater social cohesion is social trust. In that case, the racial trust disparities indicate that many students of color (at predominately white institutions) perceive a lack of agency in our diverse democracy.

Further indications of racial alienation may be in evidence when looking at the differences in college-level trust across racial subgroups. Once again, we find that white students maintain greater trust in institutional actors (e.g., faculty, campus leadership, housing) than students of color. This finding suggests that colleges and universities are not doing a sufficient job in convincing students of color that their campuses have their best interests in mind. While we cannot definitively assess why students of color maintain less trust in campus personnel, we can speculate that this may be in part due to a lack of faculty and leadership diversity on campuses or institutions not accommodating to the needs of minority students (Luedke, 2017; Lundberg, 2010; McKinley & Brayboy, 2003). Lower trust may also be a product of campus racial conflict and microagression (Hurtado, 1992; Park, 2020; Solorzano, Ceja, & Yosso, 2000) as well as racial battle fatigue (Smith, Mustaffa, Jones, Curry, & Allen, 2016; Gorski, 2019).

*Academic Major and the Trust Construct*

Our analysis of academic major relative to abstract or generalized trust offered a few meaningful insights. For one, education majors tend to be the greatest abstract trusters among all academic majors. Interestingly, we see other professional fields following suit, particularly in generalized faith in social institutions (e.g., churches, banks, government). A surprising finding is that professional majors like business, engineering, health sciences, social services fields exhibit higher trust in social institutions than social science and arts and humanities majors. At the same time, we see arts & humanities majors reporting higher out-group trust levels than other majors.

There is an immediate question as to why we would see these differing responses between arts and humanities and the professional majors. Tay, Pawelski, & Keith (2018) suggest that the arts and humanities enhance outcomes like embeddedness, socialization, and reflectiveness, all necessary features of out-group trust and social institutions. The argument here is not that professional majors inadequately prepare students in these areas, but rather that the arts and humanities may attract those more predisposed to possess these traits into their respective majors. Certainly, more insight is needed to move beyond the mere speculative in this regard.

*Higher Education, Social Trust & Democratic Outcomes*

If social cohesion and social trust are fundamental features of a democratic society, such outcomes should be an aspirational outcome for all colleges and universities. The research on the democratizing effects of higher education suggests that civic identity is inextricably linked to education (Dewey, 1997; Huang et al., 2009; Putnam, 2000; Uslaner, 2002). The reasons are numerous. More education encourages a greater willingness to trust others and social institutions broadly defined (Knack and Keefer, 1997; 2002). There is evidence to suggest that we develop

habits of mind that predispose us to become more trusting of others through the learning process (Knack and Keefer, 2002). Indeed, Huang et al. (2009) found that just one additional year of schooling leads to a boost in individual social trust by .05 standard deviations. Helliwell and Putnam (2009) suggest that education may be correlated to creating climates of trust that encourage greater trust. The evidence also suggests that college attendance offers important opportunities for more diverse interaction, both in terms of diverse ideas and engagement with diverse others. Such diverse exchanges, proponents argue lead to greater trust and a host of other democratic outcomes (Hurtado, 2019; Uslaner, 2002).

Our results are suggestive that any interpretation as to the relationship between social trust and higher education requires further nuance. The evidence that undergraduates have greater trust in social institutions and trust in media and civil society is mixed to a lesser extent. Perhaps the tempering of trust assessments related to civil society, and the media could be explained as a lack of individual interaction with or understanding of how either functions within society. Complicating this issue, is the apparent tempering effect on trust occurring between the first year to senior year. We observed first-year students exhibiting higher levels of college trust than seniors as well as trust in social institutions.

Our findings indicate a lack of evidence suggesting a strong connection between social trust and undergraduate education. The findings contradict the abundance of prior evidence suggesting otherwise. There are multiple potential explanations for why this might be the case.

(1) There is the chance that, in the case of U.S. higher education, the link between undergraduate education and social trust is a tenuous one. We see only mixed evidence that undergraduates maintain trust in social institutions, media, and civil

society. Taken together, one might go so far as to argue that there is an overall diminishment in generalized social trust among the undergraduates surveyed.

(2) There is the distinct possibility that social trust is not predicated upon the undergraduate experience but maybe a product of other a priori factors such as race, geography, ability, homelessness, veteran status, and so on. Students may be relying upon prior life experiences and their respective positionalities in making trust assessments.

(3) There is the possibility that the general state of racial out-group trust may predispose students to exhibit either higher or lower generalized social trust. This may be particularly the case for students of color, many of whom expressed lower out-group trust and generalized trust (outside of trust perceptions over the media) than white students. If indeed students of color have diminished out-group trust relative to white students, it follows that their generalized trust may also be tempered as a result.

(4) There is the possibility that the de-emphasis on the arts and humanities may have also dampened the longstanding "liberalizing effect" of higher education. Mounting pressures related to freedom of speech, the rise in credentialism, the shift to "students as consumers,", not to mention instructional differences in emphases across academic major, may stifle opportunities for students to confront difference, controversy, or change. This lack of confrontation may not only have a detrimental effect upon the kind of education that an undergraduate may receive, but also shelters them from the hard work of engaging meaningfully with others outside of their immediate in-group.

**Recommendations for Future Research**

Our findings leave ample opportunities for future research. Among them is a closer examination of the connections between race, racial climate, and trust on our nation's campuses. There are clear indications that existing campus efforts to create a more welcoming and inclusive environment for all students have not had their desired effects. Understanding how specific institutional policies and practices strain or undermine the trust levels of students of color is necessary for greater institutional cohesion in the short-term and improved social trust over the lifespan. Likewise, there is still much work to be done around social trust and higher education. To what extent does higher education provide a space that fosters social trust? Moreover, to what extent *can* higher education institutions play a role in encouraging such growth? These are areas that warrant further exploration. Finally, in what ways might trust-related interventions improve student outcomes?

Each of these questions are critical given the recent spate of national crises such as COVID-19, police violence, and the escalation and demonstrable volatility of contemporary American political discourse. These moments of national tension undoubtedly influence students sense of well-being and optimism for the future. Higher education has a role to play in assuaging these tensions through intentional commitments to civic engagement and civil discourse. This starts with the capacity to trust. As Dewey (1997) famously states, "(a) democracy is more than a form of government; it is primarily a mode of associated living, of conjoint communicated experience. (pg. 101)". The manner in which higher education encourages such experience must be taken up in meaningful fashion if higher education is to serve as a conduit for greater social cohesion and civic engagement for its graduates and the nation as a whole.

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Table 1: Exploratory factor analysis results

| | Out group trust | College Trust | Trust: Institutions | Trust: Media | Trust: Civil Society |
|---|---|---|---|---|---|
| Trust group: Your family | | | | | |
| Trust group: People in your home neighborhood | | | | | |
| Trust group: People you know personally | | | | | |
| Trust group: People you meet for the first time | | | | | |
| Trust group: People of another religion | 0.833 | | | | |
| Trust group: People of another race/ethnicity | 0.938 | | | | |
| Trust group: People of another nationality | 0.938 | | | | |
| Trust group: Students at your institution | | | | | |
| Trust group: Leadership at your institution | | 0.704 | | | |
| Trust group: Academic advisors at your institution | | 0.814 | | | |
| Trust group: Faculty at your institution | | 0.814 | | | |
| Trust group: Student services staff at your institution | | 0.833 | | | |
| Trust group: Other administrative staff and offices at your institution | | 0.876 | | | |
| Confidence: Churches and other religious groups | | | 0.529 | | |
| Confidence: The military | | | 0.717 | | |
| Confidence: The press | | | | 0.869 | |
| Confidence: TV news | | | | 0.92 | |
| Confidence: Social media companies | | | | 0.775 | |
| Confidence: Labor unions | | | | | |
| Confidence: The police | | | 0.903 | | |
| Confidence: The courts | | | 0.870 | | |
| Confidence: Federal government | | | 0.826 | | |
| Confidence: Political parties | | | 0.573 | | |
| Confidence: Congress | | | 0.699 | | |
| Confidence: Government employees | | | 0.581 | | |
| Confidence: Colleges and universities | | | | | |
| Confidence: Large corporations | | | 0.539 | | |
| Confidence: Banks | | | 0.551 | | |
| Confidence: Healthcare providers | | | | | |
| Confidence: Environmental organizations | | | | | 0.818 |
| Confidence: Women's organizations | | | | | 0.862 |
| Confidence: Charitable or humanitarian organizations | | | | | 0.796 |
| Confidence: The United Nations | | | | | 0.566 |

Note: Loadings less than │.50│ are not shown. Loadings rotated with an oblimin rotation.

Table 2.

Bayesian regression results: Out-group, college, and institutional trust

| | Out-group Trust | | | | College Trust | | | | Institutional Trust | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | HDI | | | | HDI | | | | HDI | |
| | Mean | SD | Lower | Upper | Mean | SD | Lower | Upper | Mean | SD | Lower | Upper |
| Male | -0.11 | 0.03 | -0.17 | -0.06 | -0.05 | 0.03 | -0.10 | 0.01 | -0.11 | 0.03 | -0.16 | -0.06 |
| Parental Education (Bachelor's) | | | | | | | | | | | | |
|   Less than high school | -0.21 | 0.05 | -0.32 | -0.11 | -0.05 | 0.05 | -0.16 | 0.05 | -0.06 | 0.05 | -0.16 | 0.04 |
|   High school | -0.11 | 0.03 | -0.18 | -0.04 | -0.02 | 0.03 | -0.08 | 0.05 | -0.07 | 0.03 | -0.14 | 0.00 |
|   Some college | -0.09 | 0.04 | -0.17 | -0.01 | -0.02 | 0.04 | -0.10 | 0.06 | -0.10 | 0.04 | -0.18 | -0.03 |
|   Associate's degree | -0.11 | 0.04 | -0.20 | -0.03 | 0.00 | 0.04 | -0.09 | 0.08 | 0.01 | 0.04 | -0.07 | 0.09 |
|   Master's degree | 0.00 | 0.04 | -0.08 | 0.06 | 0.04 | 0.04 | -0.03 | 0.11 | -0.02 | 0.03 | -0.09 | 0.04 |
|   Doctoral or professional | 0.01 | 0.06 | -0.11 | 0.12 | 0.05 | 0.06 | -0.06 | 0.17 | -0.09 | 0.06 | -0.20 | 0.02 |
| Age (10 years) | -0.01 | 0.02 | -0.05 | 0.04 | 0.11 | 0.02 | 0.07 | 0.15 | 0.02 | 0.02 | -0.02 | 0.06 |
| Race (White) | | | | | | | | | | | | |
|   Asian | -0.12 | 0.06 | -0.24 | -0.01 | -0.07 | 0.06 | -0.19 | 0.04 | -0.10 | 0.06 | -0.22 | 0.01 |
|   Black or African American | -0.58 | 0.04 | -0.65 | -0.51 | -0.47 | 0.04 | -0.54 | -0.40 | -0.54 | 0.03 | -0.61 | -0.47 |
|   Hispanic or Latina/o | -0.20 | 0.04 | -0.28 | -0.11 | -0.16 | 0.04 | -0.24 | -0.07 | -0.37 | 0.04 | -0.45 | -0.29 |
|   Multiracial | -0.18 | 0.04 | -0.27 | -0.10 | -0.23 | 0.04 | -0.32 | -0.15 | -0.29 | 0.04 | -0.37 | -0.20 |
|   Another race or ethnicity | -0.21 | 0.09 | -0.40 | -0.03 | -0.34 | 0.09 | -0.52 | -0.15 | -0.38 | 0.09 | -0.56 | -0.20 |
| Disability (None) | | | | | | | | | | | | |
|   Yes | 0.01 | 0.03 | -0.05 | 0.08 | -0.15 | 0.03 | -0.22 | -0.09 | -0.30 | 0.03 | -0.37 | -0.24 |
|   I prefer not to respond | 0.01 | 0.06 | -0.10 | 0.12 | -0.27 | 0.06 | -0.38 | -0.16 | -0.30 | 0.06 | -0.41 | -0.20 |
| Educational Expectations (Bachelor's) | | | | | | | | | | | | |
|   Some college | -0.01 | 0.05 | -0.10 | 0.08 | 0.02 | 0.05 | -0.07 | 0.12 | -0.06 | 0.05 | -0.15 | 0.03 |
|   Master's | 0.06 | 0.03 | 0.01 | 0.12 | 0.04 | 0.03 | -0.01 | 0.10 | -0.06 | 0.03 | -0.11 | -0.01 |
|   Doctoral or prof. | 0.06 | 0.04 | -0.01 | 0.13 | -0.03 | 0.04 | -0.11 | 0.03 | -0.10 | 0.03 | -0.17 | -0.03 |
| Not full-time | -0.06 | 0.04 | -0.14 | 0.02 | -0.02 | 0.04 | -0.10 | 0.06 | 0.05 | 0.04 | -0.03 | 0.13 |

| | Out-group Trust | | | | College Trust | | | | Institutional Trust | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | HDI | | | | HDI | | | | HDI | |
| | Mean | SD | Lower | Upper | Mean | SD | Lower | Upper | Mean | SD | Lower | Upper |
| Senior | 0.01 | 0.03 | -0.04 | 0.07 | -0.16 | 0.03 | -0.22 | -0.11 | -0.17 | 0.03 | -0.22 | -0.11 |
| Major Field (Social Sciences) | | | | | | | | | | | | |
|   Arts & Humanities | 0.12 | 0.05 | 0.02 | 0.22 | 0.09 | 0.05 | -0.02 | 0.19 | -0.10 | 0.05 | -0.21 | -0.01 |
|   Biological Sciences | -0.12 | 0.05 | -0.22 | -0.03 | -0.05 | 0.05 | -0.15 | 0.05 | -0.05 | 0.05 | -0.14 | 0.05 |
|   Physical Sciences | 0.02 | 0.06 | -0.10 | 0.14 | 0.01 | 0.06 | -0.11 | 0.12 | 0.01 | 0.06 | -0.11 | 0.12 |
|   Business | -0.02 | 0.05 | -0.11 | 0.07 | 0.08 | 0.05 | -0.01 | 0.17 | 0.30 | 0.05 | 0.21 | 0.39 |
|   Communications | 0.02 | 0.07 | -0.12 | 0.16 | -0.01 | 0.07 | -0.15 | 0.13 | 0.04 | 0.07 | -0.09 | 0.18 |
|   Education | 0.09 | 0.05 | 0.00 | 0.18 | 0.14 | 0.05 | 0.05 | 0.24 | 0.26 | 0.05 | 0.17 | 0.36 |
|   Engineering | -0.05 | 0.11 | -0.26 | 0.16 | 0.07 | 0.11 | -0.15 | 0.28 | 0.28 | 0.11 | 0.07 | 0.49 |
|   Health Professions | 0.01 | 0.04 | -0.07 | 0.10 | 0.09 | 0.04 | 0.00 | 0.18 | 0.33 | 0.04 | 0.25 | 0.41 |
|   Social Service Professions | 0.06 | 0.06 | -0.05 | 0.18 | -0.01 | 0.06 | -0.12 | 0.11 | 0.17 | 0.06 | 0.06 | 0.28 |
|   All Other | -0.03 | 0.06 | -0.15 | 0.08 | 0.08 | 0.06 | -0.03 | 0.20 | 0.16 | 0.06 | 0.05 | 0.27 |
|   Undecided, undeclared | -0.04 | 0.12 | -0.26 | 0.20 | -0.03 | 0.12 | -0.26 | 0.20 | -0.11 | 0.11 | -0.33 | 0.12 |
| Transferred | -0.02 | 0.03 | -0.08 | 0.04 | 0.01 | 0.03 | -0.05 | 0.07 | -0.09 | 0.03 | -0.15 | -0.03 |
| Living arrangements (On-campus) | | | | | | | | | | | | |
|   Fraternity or sorority house | 0.30 | 0.23 | -0.14 | 0.74 | 0.23 | 0.22 | -0.21 | 0.67 | -0.14 | 0.22 | -0.56 | 0.29 |
|   Walking distance | 0.02 | 0.04 | -0.07 | 0.10 | 0.04 | 0.04 | -0.04 | 0.12 | 0.04 | 0.04 | -0.05 | 0.12 |
|   > than walking distance | -0.07 | 0.03 | -0.13 | -0.01 | -0.05 | 0.03 | -0.10 | 0.01 | 0.04 | 0.03 | -0.02 | 0.10 |
|   Online-only | -0.19 | 0.07 | -0.33 | -0.05 | 0.00 | 0.07 | -0.15 | 0.14 | 0.12 | 0.07 | -0.02 | 0.26 |
|   Homeless or in transition | -0.15 | 0.23 | -0.62 | 0.30 | 0.02 | 0.23 | -0.44 | 0.48 | 0.11 | 0.23 | -0.34 | 0.55 |
| Student Athlete | 0.01 | 0.04 | -0.07 | 0.09 | 0.14 | 0.04 | 0.06 | 0.22 | 0.30 | 0.04 | 0.22 | 0.38 |
| Veteran | -0.02 | 0.07 | -0.17 | 0.12 | 0.02 | 0.07 | -0.12 | 0.16 | -0.03 | 0.07 | -0.17 | 0.11 |
| Urbanicity (Urban) | | | | | | | | | | | | |
|   Suburban | 0.09 | 0.03 | 0.03 | 0.15 | -0.04 | 0.03 | -0.10 | 0.01 | -0.02 | 0.03 | -0.07 | 0.04 |
|   Town | 0.01 | 0.03 | -0.06 | 0.07 | 0.06 | 0.03 | -0.01 | 0.12 | 0.06 | 0.03 | -0.01 | 0.12 |
|   Rural | -0.16 | 0.07 | -0.31 | -0.03 | -0.03 | 0.07 | -0.17 | 0.11 | -0.07 | 0.07 | -0.21 | 0.06 |

| | Out-group Trust | | | | College Trust | | | | Institutional Trust | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | HDI | | | | HDI | | | | HDI | |
| | Mean | SD | Lower | Upper | Mean | SD | Lower | Upper | Mean | SD | Lower | Upper |
| Mean per capita income ($10,000s) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Constant | 0.22 | 0.07 | 0.09 | 0.35 | 0.01 | 0.07 | -0.12 | 0.14 | 0.22 | 0.06 | 0.09 | 0.35 |
| $\sigma^2$ | 0.90 | 0.02 | 0.87 | 0.94 | 0.90 | 0.02 | 0.87 | 0.93 | 0.85 | 0.01 | 0.82 | 0.88 |

*Note*: Dependent variables were *z*-scored. Markov chain Monte Carlo sample size was 10,000 with a 2,500 burn-in period using a Gibbs sampler. Gelman-Rubin convergence statistic was 1.05 or less for all models. Uninformative priors were used. HDI = highest density interval. Reference group in parentheses.

Table 3

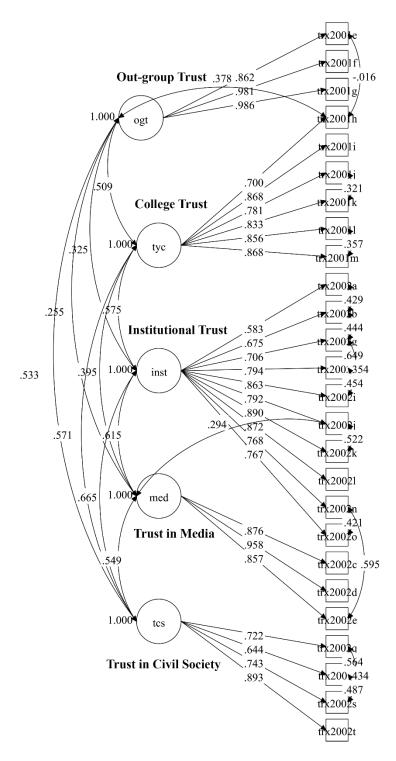Bayesian regression results: Trust in media and trust in civil society

| | Trust in Media | | | | Trust in Civil Society | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | HDI | | | | HDI | |
| | Mean | SD | Lower | Upper | Mean | SD | Lower | Upper |
| Male | -0.15 | 0.03 | -0.20 | -0.09 | -0.26 | 0.03 | -0.32 | -0.21 |
| Parental Education (Bachelor's) | | | | | | | | |
| Less than high school | -0.10 | 0.06 | -0.22 | 0.00 | -0.07 | 0.05 | -0.18 | 0.04 |
| High school | -0.06 | 0.04 | -0.12 | 0.02 | -0.03 | 0.03 | -0.10 | 0.04 |
| Some college | -0.07 | 0.04 | -0.15 | 0.01 | -0.03 | 0.04 | -0.11 | 0.05 |
| Associate's degree | 0.02 | 0.04 | -0.07 | 0.10 | -0.01 | 0.04 | -0.09 | 0.07 |
| Master's degree | -0.03 | 0.04 | -0.10 | 0.04 | -0.01 | 0.04 | -0.08 | 0.05 |
| Doctoral or professional degree | -0.01 | 0.06 | -0.12 | 0.11 | -0.02 | 0.06 | -0.13 | 0.10 |
| Age (10 years) | 0.03 | 0.02 | -0.01 | 0.07 | -0.08 | 0.02 | -0.12 | -0.03 |
| Race (White) | | | | | | | | |
| Asian | 0.28 | 0.06 | 0.15 | 0.40 | -0.10 | 0.06 | -0.22 | 0.02 |
| Black or African American | 0.12 | 0.04 | 0.04 | 0.19 | -0.34 | 0.04 | -0.41 | -0.27 |
| Hispanic or Latina/o | 0.07 | 0.04 | -0.02 | 0.16 | -0.16 | 0.04 | -0.24 | -0.07 |
| Multiracial | 0.04 | 0.04 | -0.05 | 0.13 | -0.15 | 0.04 | -0.24 | -0.07 |
| Another race or ethnicity | -0.20 | 0.10 | -0.39 | -0.01 | -0.38 | 0.09 | -0.56 | -0.19 |
| Disability (None) | | | | | | | | |
| Yes | -0.16 | 0.03 | -0.23 | -0.09 | 0.02 | 0.03 | -0.04 | 0.09 |
| I prefer not to respond | -0.18 | 0.06 | -0.29 | -0.07 | -0.06 | 0.06 | -0.18 | 0.04 |
| Educational Expectations (Bachelor's) | | | | | | | | |
| Some college | -0.11 | 0.05 | -0.20 | -0.01 | -0.04 | 0.05 | -0.13 | 0.06 |
| Master's | -0.11 | 0.03 | -0.17 | -0.05 | 0.05 | 0.03 | 0.00 | 0.11 |
| Doctoral or prof. | -0.14 | 0.04 | -0.21 | -0.07 | 0.03 | 0.04 | -0.04 | 0.10 |
| Not full-time | 0.05 | 0.04 | -0.03 | 0.13 | 0.09 | 0.04 | 0.01 | 0.17 |

| | Trust in Media | | | | Trust in Civil Society | | | |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
| | | | HDI | | | | HDI | |
| | Mean | SD | Lower | Upper | Mean | SD | Lower | Upper |
| Senior | -0.05 | 0.03 | -0.11 | 0.00 | 0.01 | 0.03 | -0.04 | 0.07 |
| Major Field (Social Sciences) | | | | | | | | |
| Arts & Humanities | 0.00 | 0.05 | -0.11 | 0.10 | -0.01 | 0.05 | -0.11 | 0.10 |
| Biological Sciences | -0.12 | 0.05 | -0.22 | -0.02 | 0.00 | 0.05 | -0.10 | 0.10 |
| Physical Sciences | -0.11 | 0.06 | -0.23 | 0.01 | 0.00 | 0.06 | -0.12 | 0.11 |
| Business | 0.08 | 0.05 | -0.01 | 0.17 | 0.02 | 0.05 | -0.08 | 0.11 |
| Communications | 0.45 | 0.07 | 0.31 | 0.59 | 0.01 | 0.07 | -0.13 | 0.16 |
| Education | 0.11 | 0.05 | 0.02 | 0.21 | 0.05 | 0.05 | -0.05 | 0.14 |
| Engineering | -0.27 | 0.11 | -0.49 | -0.05 | -0.21 | 0.11 | -0.42 | 0.01 |
| Health Professions | 0.07 | 0.05 | -0.02 | 0.15 | 0.06 | 0.04 | -0.02 | 0.15 |
| Social Service Professions | 0.06 | 0.06 | -0.05 | 0.18 | -0.10 | 0.06 | -0.21 | 0.02 |
| All Other | 0.05 | 0.06 | -0.07 | 0.16 | -0.04 | 0.06 | -0.15 | 0.07 |
| Undecided, undeclared | -0.19 | 0.12 | -0.42 | 0.05 | -0.20 | 0.12 | -0.43 | 0.03 |
| Transferred | -0.13 | 0.03 | -0.19 | -0.06 | -0.04 | 0.03 | -0.10 | 0.02 |
| Living arrangements (On campus) | | | | | | | | |
| Fraternity or sorority house | 0.46 | 0.23 | 0.02 | 0.91 | 0.11 | 0.23 | -0.33 | 0.55 |
| Walking distance | 0.07 | 0.04 | -0.02 | 0.16 | 0.01 | 0.04 | -0.08 | 0.09 |
| Further than walking distance | -0.02 | 0.03 | -0.08 | 0.04 | -0.08 | 0.03 | -0.14 | -0.02 |
| Online-only | -0.07 | 0.07 | -0.21 | 0.07 | -0.13 | 0.07 | -0.28 | 0.01 |
| Homeless or in transition | 0.07 | 0.24 | -0.40 | 0.53 | -0.63 | 0.24 | -1.09 | -0.17 |
| Student Athlete | 0.16 | 0.04 | 0.08 | 0.24 | 0.01 | 0.04 | -0.07 | 0.09 |
| Veteran | -0.13 | 0.07 | -0.28 | 0.01 | -0.31 | 0.07 | -0.46 | -0.17 |
| Urbanicity (Urban) | | | | | | | | |
| Suburban | -0.04 | 0.03 | -0.10 | 0.02 | 0.05 | 0.03 | -0.01 | 0.11 |
| Town | -0.01 | 0.03 | -0.08 | 0.06 | 0.04 | 0.03 | -0.03 | 0.10 |
| Rural | -0.08 | 0.07 | -0.22 | 0.06 | -0.16 | 0.07 | -0.31 | -0.02 |

| | Trust in Media | | | | Trust in Civil Society | | | |
| | | | HDI | | | | HDI | |
| | Mean | SD | Lower | Upper | Mean | SD | Lower | Upper |
|---|---|---|---|---|---|---|---|---|
| Mean per capita income ($10,000s) | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 |
| Constant | 0.06 | 0.07 | -0.07 | 0.20 | 0.40 | 0.07 | 0.27 | 0.53 |
| | | | | | | | | |
| $\sigma^2$ | 0.93 | 0.02 | 0.90 | 0.96 | 0.91 | 0.02 | 0.88 | 0.94 |

*Note*: Dependent variables were *z*-scored. Markov chain Monte Carlo sample size was 10,000 with a 2,500 burn-in period using a Gibbs sampler. Gelman-Rubin convergence statistic was 1.05 or less for all models. Uninformative priors were used. HDI = highest density interval. Reference group in parentheses.

Figure 1. Confirmatory Factor Analysis Results



Note: Standardized loadings. See Appendix A for item wordings.

Appendix A.
Items in the NSSE Trust Supplemental Item Set

1. How much do you trust the following groups?
   *Response options: 4=Trust completely; 3=Trust somewhat; 2=Trust very little; 1=Do not trust at all*
   a. Your family [TRX2001a]
   b. People in your home neighborhood [TRX2001b]
   c. People you know personally [TRX2001c]
   d. People you meet for the first time [TRX2001d]
   e. People of another religion [TRX2001e]
   f. People of another race/ethnicity [TRX2001f]
   g. People of another nationality [TRX2001g]
   h. Students *at your institution* [TRX2001h]
   i. Leadership (president, chancellor, board of trustees, etc.) *at your institution* [TRX2001i]
   j. Academic advisors *at your institution* [TRX2001j]
   k. Faculty *at your institution* [TRX2001k]
   l. Student services staff *at your institution* (career services, student activities, housing, etc.) [TRX2001l]
   m. Other administrative staff and offices *at your institution* (registrar, financial aid, etc.) [TRX2001m]

2. How much confidence do you have in the following groups to do the right thing:
   *Response options: 4=A great deal of confidence; 3=Some confidence; 2=Little confidence; 1=No confidence*
   a. Churches and other religious groups [TRX2002a]
   b. The military [TRX2002b]
   c. The press [TRX2002c]
   d. TV news [TRX2002d]
   e. Social media companies [TRX2002e]
   f. Labor unions [TRX2002f]
   g. The police [TRX2002g]
   h. The courts [TRX2002h]
   i. Federal government [TRX2002i]
   j. Political parties [TRX2002j]
   k. Congress [TRX2002k]
   l. Government employees [TRX2002l]
   m. Colleges and universities [TRX2002m]
   n. Large corporations [TRX2002n]
   o. Banks [TRX2002o]
   p. Healthcare providers [TRX2002p]
   q. Environmental organizations [TRX2002q]

r. Women's organizations [TRX2002r]
s. Charitable or humanitarian organizations [TRX2002s]
t. The United Nations [TRX2002t]

3. What was the ZIP code of your home address during high school? [TRX2003]
   [TEXT BOX]