UNIVERSITY OF MINNESOTA TWIN CITIES, CARLSON SCHOOL OF MANAGEMENT

Liberal U, Liberal You?

Does a student's college experience shape his political ideology?

by Taylor W. Vollmer

5/4/2016

Abstract

It has been noted of the past two elections that millennial voters tipped the scales in favor of President Obama. With the same demographic posed to influence the outcome of the 2016 election, it is critical to grasp what drives young voters' political ideologies and consequent voting behavior. This thesis considers how the college experience shapes students' political opinions at the University of Minnesota. Whereas prior research has focused on investigating the roles of different social influences on student attitudes (i.e., professors, peers, and media), this case study examines whether length and field of study prompt ideological change. Although no statistically significant evidence was found to associate either length or field of study with material changes in students' attitudes, this thesis does provide that students' social political opinions are prone to greater liberalization effects at the University of Minnesota than are their fiscal political opinions. It provides furthermore that differences in social political opinions across colleges can be more significantly explained by students' indexed responses to issues than by their self-assessed political stances.

Key words: Social and fiscal political ideologies, liberalization, socialization, college

Submitted under the faculty supervision of Professor Colleen Manchester, in partial fulfillment of the requirements for the Bachelor of Science in Business, *Summa cum Laude,* Carlson School of Management, University of Minnesota, Spring 2016.

1 INTRODUCTION

The polarization of Democrats and Republicans in American politics is widely recognized. In Congress, for example, with each election comes greater ideological disparity between the parties (Bonica, McCarty, Rosenthal, Romer, & Ellenberg, 2015). Whichever topic being considered – whether involving economic, social, domestic, or international policy – liberal and conservative politicians differ more today in their opinions than at any point in history. Providing an interesting contrast to the elected officials are the majority of Americans who maintain a relatively moderate ideology that tends to shift with the overarching social context of the day rather than become more divergent with time (Hill & Tausanovitch, 2015). The underlying tension therein places voters in a peculiar position wherein they tend to vote for radical statespersons whose platforms most closely, though not necessarily nearly, align with their personal ideologies rather than for someone more moderate but whose chances of election appear lesser.

Since the parties differ so drastically, whichever way individuals incline at the polls will ultimately produce stark consequences for individual and corporate liberties via the political actions of elected officials. Interestingly, Gallup reports that Republicans and Democrats on the whole both view *fiscal* concerns as of higher importance to the welfare of the nation than social issues (Jones, 2015), which would imply that politicians' stances on such issues should be most influential to voters. In reality, however, most votes are cast on the basis of candidates' stances on *social* issues. This is particularly true for the generally liberal millennial voters (Kotkin, 2012). Considering that these voters are poised to play a decisive role in the 2016 election (Brennan & Cook, 2015), it is important to better understand where their political ideologies emerge and develop.

For the most part, research has evaluated the emergence and development of political ideologies from two vantage points: nature (genetic predisposition) and nurture (socialization). The latter has been observed in several different life stages, the most commonly studied of which are adolescence (12-17) and collegiate (ages 18-24). While the influence of both nature and nurture have been articulated throughout literature as far back as the mid-1950s, the shelf life of such research is short because social contexts, which strongly influence popular opinions, change over time (Dey, 1997). Few studies have regarded the most recent decade, however, and although fiscal issues are evidently important to voters, very little research concerns how social pressures have impacted individuals' opinions on fiscal issues. In evaluating the effect of these social pressures, it is especially important to examine instances where individuals encounter new and different ideas.

This study intends to assess how attending college, one of the most influential social events in many young voters' lives, affects ideological tilt on social and fiscal matters. This research is the first case study involving students on a single college campus. It evaluates the political attitudes of students at the University of Minnesota Twin Cities and whether opinions differ between and are influenced by length and field of study. Survey responses from 265

currently-enrolled students are assessed using ANOVA single-factor tests, two-sample t-tests, and multivariate regressions in this study.

Whichever officials are elected in November will determine the law of the land for individuals and businesses alike for at least the next two years and conceivably the next several decades. Since candidates from the two leading parties differ so greatly in their agendas, votes cast for Democrats will have vastly different consequences than votes cast for Republicans. More than 2/3 of the respondents to this survey were too young to vote in the last presidential election and, as such, had not, prior to attending the University of Minnesota, officially affiliated with any political party. Noting, though, that education level is positively correlated with both liberalism and voter turnout (File & Crissey, 2012), the results of this study provide important insights on the role of the college experience in the development of America's socio-political landscape.

2 LITERATURE REVIEW

The study of political socialization first emerged in mainstream academic literature in the late 1950s to explore the many elements of individual experiences that drive the development and expression of values in society. Most studies evaluate historical and contemporaneous influences in or across four general life stages: preadolescence, adolescence, collegiate, and post-graduate. The earliest research concluded that ideological orientations develop at an early age, due to genetic and parental influences, and persist into adulthood. In the mid-1970s, however, one groundbreaking study found that other factors, particularly social ones, play definite roles in shaping individuals' perspectives (Sears, 1975). Sears' findings eventually burgeoned into a branch of literature that now seeks to evaluate the impact of social pressures on altering political attitudes, particularly during the collegiate life stage.

Key to understanding how social pressures induce changes in partisan beliefs is evaluating individuals' exposure to ideas. College is a particularly good frame of reference in this regard as it is a place where individuals are uniquely exposed to a preponderance of new notions. Existing studies provide that students of liberal arts institutions encounter liberalization effects beyond that which can be attributed to pre-collegiate views or to the greater social context and that such changes are most dramatic in individuals whose opinions originally differed most from the social context in which they reside. In other words, individuals who enter college with a conservative outlook are especially subject to ideological shift. However, these studies have primarily aimed to determine whether changes in opinion can be observed in college students and attributed to college attendance. They have not explored to what extent a student's field or length of study influence that change. This section proceeds by reviewing the current understanding of the roles of the three most dominant social stimuli for individuals in the collegiate life stage: the opinions of professors, peers, and the media. Observation of this research is intended to provide context for this thesis' examination of whether – and if so, to what extent – political opinions change among students at the University of Minnesota.

2.1 The Role of Professors in Ideological Development

Three national surveys, two by the Carnegie Commission on Higher Education (1969 and 1975) and another by the Carnegie Foundation for the Advancement of Teaching (1984) were primary to the acknowledgement of a university- and college-wide liberal skew among the views in the professoriate (Rothman, Lichter, & Nevitte, 2005). Interestingly, the surveys provided that liberal orientations existed across most academic departments but the extent of liberalness varied meaningfully among them. More recent studies have affirmed and expounded upon this incidence.

In their study of 1,643 faculty from 183 four-year colleges, Rothman, Lichter, and Nevitte (2005) found that faculty opinions were roughly quadruply more liberal than the general public. Expounding on the point is the research of Gross and Simmons (2007) who found that faculty in only one of the top twenty bachelor degree fields held a "highly conservative" political orientation (mechanical engineering). Meanwhile, faculty in five disciplines (economics, accounting, finance, MIS, and marketing) maintained "moderate" viewpoints, and the faculty in the remaining fourteen fields assumed "highly liberal" perspectives (communications, computer science, elementary education, English, biology, psychology, criminal justice, political science, sociology, art, nursing, business administration, history, and other). It is important to note that while these and other such studies portray the existence of the professoriate's liberal skew even into the current decade, little research has exacted how professors' opinions influence students' attitudes. Although some studies have shown that faculty opinions might impact upperclassmen, these studies report in aggregate (Astin, 1993; Lehmann, 1963). That is, they do not account for how some professors' conservative opinions might differently affect students than other professors' liberal opinions.

2.2 The Role of Peers in Ideological Development

Whereas the exact role of professors' perspectives in the ideological development of students is unclear, some research has ascertained in part the role of peers and campus social groups. The first noteworthy study in this arena was conducted in the mid-1960s. It showed that changes in critical thinking, attitudes, and values occurred mostly in students' first two years at college (Lehmann, 1963). Lehmann's study additionally granted that nonacademic experiences (e.g., friends and "bull sessions") were more formative than academic ones (e.g., courses and instructors). Later research by Astin (1993) supplemented Lehmann's findings, allowing that students became cognitively, psychologically, and behaviorally more like their peer groups over time. Astin also noted gender, race, and socioeconomic status as individually significant predictors in these outcomes.

More recently, Dey (1997) sought to evaluate how peer influences vary in changing social contexts. Based on longitudinal data from students in four different social eras, he found that, indeed, student political opinions change on the basis of the overall political orientation of the institution they attend (i.e., students at liberal schools become more liberal and vice versa). Dey further found that the observed changes in political attitudes among undergraduate students

can be partly attributed to changes in the overarching social context and, as a result, research on this topic should be subject to regular reevaluation. Even the most recent reports on political attitudes by Lyons (2011) and Hanson, Weeden, Pascarella, and Blaich (2012) do not expressly consider the fiscal, social, international, and domestic political tensions that have arisen since the last election.

2.3 The Role of the Media in Ideological Development

According to a report by Common Sense Media, a nonprofit dedicated to providing public data on the use of media by children, US teens are exposed to an average of nine hours of media each day (2016). The vast majority of this time is dedicated to social media platforms like Facebook, Twitter, and Snapchat. Yet surprisingly little academic literature has emerged to evaluate the impact of social media on the ideological development of any age group. There are, however, several key studies that evaluate the impact of media more broadly.

In their evaluation of the differing influences of two editorially distinct newspapers during a single Senate campaign, Druckman and Parkin (2005) concluded emphatically that voters' decisions are influenced by editorial slant. In a similar study of the Washington Times and Washington Post, Gerber, Karlan, and Bergan (2006) found that attention to liberal news sources yields more liberal voting behavior. Interestingly, the impact of conservative sources was said to have no noticeable effect. In addition, Gerber, Karlan, and Bergan found that although a liberalization of opinion on specific issues did occur, too, it was less pronounced than the resulting shift in voting behavior. Although these studies did not distinguish the impact on college students, the results pose important questions about media bias.

Selective exposure occurs when individuals elect to view information that aligns with, rather than that which might challenge, preexisting beliefs. This has become especially prevalent with the proliferation smartphones and social media platforms. According to Stroud's analysis of the 2004 National Annenberg Election Survey, individuals are particularly inclined to engage in selective exposure on political matters (2008). One eventual result of such selective exposure is that media outlets and media use begin to polarize. Stroud extended his research in a later study to find that such polarization of media eventually results also in the polarization of partisan opinion (Stroud, 2010).

Serious consequences of media bias and media selection can be easily imagined. With the rapid changes occurring in the reporting and consumption of news among millennials in particular, it is conceivable that the above-noted effects of media in ideological development could be amplified. Presently, however, no research details in what life stage(s) the influence of media is most prevalent.

2.4 Summary

It is clear that social context plays a critical role in the development of values and beliefs. For those individuals in the collegiate life stage, three social factors are considered most influential: professors, peers, and the media. While these influences have been repeatedly shown over the

past 60 years to affect ideologies and voting behaviors, no studies have controlled for the fact that such influences vary among and so would have different impacts across academic departments. Furthermore, these studies generally consider political orientation as a general attribute rather than breaking it down into component parts. This study, though relying on a point-in-time survey distributed halfway through the academic year and so not being situated to fully describe the degree of ideological change, is intended to provide a cross-grade and cross-college comparison of fiscal and social political attitudes among students at the University of Minnesota. That is, this thesis will discern whether length and field of study significantly influence ideological changes and whether opinions on fiscal or social issues are more susceptible to such changes. While it does not propose to tease out the particular influences of different stimuli, it takes an important step in better understanding the development and exercise of political thought.

3 STUDY METHODOLOGY

This study explores whether students' political opinions change during their tenure at the University of Minnesota and, if so, to what extent a student's respective field of study influences that change. The following section details the hypotheses of this study and the basis (justification) for those hypotheses, reviews the methods and measures implemented for data collection and evaluation, and assesses the strengths, assumptions, and limitations of this study.

3.1 Hypothesis Development

This thesis begins by considering whether exposure to higher education influences political opinion among students at a particular liberal arts university, the University of Minnesota. *Section 2.1 The Role of Professors in Ideological Development* noted that liberals and self-identified Democrats widely outnumber conservatives and self-identified Republicans at American universities. This notion is advanced by File and Crissy (2012) and Weakliem's (2002) findings that more highly educated people tend to express more liberal views. A necessary consideration, then, is if length of study itself contributes to this incidence. Thus, this thesis will first assess the following hypothesis:

> **Hypothesis 1:** *The longer a student has attended the University of Minnesota, the more liberal his political orientation will be.*

After examining how time spent at the University of Minnesota factors into political opinions, this thesis will explore whether field of study shapes opinions. One side of research suggests that students are predisposed to enter fields that align with their respective political/social ideologies (Kanai, Feilden, Firth, & Rees, 2011; Porter & Umbach, 2006). If this is true, one would expect that professors in a student's major would at least reinforce and might intensify his existing political beliefs, resulting in a leftward shift. If this is not true, one would

expect that professors in a student's major would, by opening him/her up to probably previously unheeded perspectives, prompt the student's political views to become more moderate, resulting in a leftward shift. This seems to coincide with Dey's (1997) findings that students' political opinions, if previously liberal, generally become more progressive while attending liberal institutions and that students' political opinions, if previously conservative, generally become more moderate. Gross and Simmons' (2007) research provides some direction on how changes, if they relate to field of study, would likely be distributed. According to their study, the liberal tilt of the professoriate varies noticeably by academic department. The most liberally-leaning departments include social sciences, humanities, and physical/biological sciences. More moderate departments are computer sciences, engineering, and health sciences; business and mechanical engineering faculty lean farthest to the right. Thus:

> **Hypothesis 2:** *A student's shift in political orientation will be influenced by his field of study; pupils of physical/biological sciences, humanities, and social sciences will encounter greater liberalizing changes than those of hard sciences or business.*

Dey's (1997) research also granted that the most persuasive environmental factor affecting students' attitudes and values on college campuses is normative peer pressure. One of the primary ways students involve themselves in peer groups on the university campuses is through student groups. The University of Minnesota has in excess of 700 active student organizations. A handful of these are organized around governance, policy-making, or a cause that might regularly discuss fiscal politics. By far the majority, however, are socially-oriented: they are characterized by participants' attention to matters of culture, environment, art, spirituality, or service. Another decidedly influential factor in students' opinions is media. Pew Research reports that millennials place most trust on ABC News, Al Jazeera America, BBC, CBS News, CNN, the Colbert Report, the Daily Show, The Economist, Google News, the Huffington Post, MSNBC, NBC News, the New York Times, the New Yorker, NPR, PBS, Politico, USA Today, the Wall Street Journal, and the Washington Post (Mitchell, Gottfried, & Eva Matsa, 2015), all of which have consistently liberal audiences (Mitchell, Gottfried, Kiley, & Eva Matsa, 2014). Thus:

> **Hypothesis 3:** *Students' opinions on social issues will encounter greater liberalizing changes than their opinions on fiscal issues.*

3.2 Methods and Measures of Data Collection and Evaluation

This research intends to capture student perspectives in several of the University of Minnesota's different colleges and to understand how the length of time someone attends the University of Minnesota affects his political perspective. To capture this, a longitudinal study would be most appropriate in that it would be able to identify changes in individuals' opinions over time and then ascertain what kind of role his college experience played in that transformation. As a matter of expediency, this research instead involves a point-in-time survey of students in different University of Minnesota colleges and in different grades to determine

whether and where more in-depth longitudinal observation might be warranted. The survey was distributed and data were collected throughout the first half of the second semester of the 2015-16 academic year.

The results of this research are based on 265 responses to an electronically-administered survey from students in five of the University of Minnesota's colleges: the Carlson School of Management (CSOM); the College of Biological Sciences (CBS); the College of Food, Agricultural, and Natural Resource Sciences (CFANS); the College of Liberal Arts (CLA); and the College of Science and Engineering (CSE). The demographics of the respondents are cataloged in *Appendix A: Summary Statistics*. Participants were contacted in one of three ways. About half were prompted to take the survey by advisers of the University of Minnesota's University Honors Program. Roughly one quarter of the participations took the survey as an optional component of the university's largest general education course, Psychology 1001. Where the number of responses was too few to draw any conclusions about students in any particular grade or college, additional students were contacted by academic advisors, faculty, or dorm community (residence) advisors to fill in gaps in the data.

The survey was designed to capture students' political perspectives on both fiscal and social issues as well as students' perceptions on how their own opinions had changed during their tenure at the University of Minnesota. (See the survey questions used to evaluate students' opinions at *Appendix B: Survey Questions*.) Participants were first asked to self-assess their own political opinions on a scale of "liberal" to "conservative" and were later asked a series of questions related to political issues to either substantiate or challenge their self-assessment. The questions that were most highly correlated with each other were then averaged across individuals' responses to create an index to be employed as a second measure of students' "level" of fiscal/social liberalism (see *Appendix C: Descriptive Statistics*). Statistical tests were then conducted to assess the hypotheses stated in *Section 3.1 Hypothesis Development*.

The first and the second hypothesis were evaluated in much the same way. First, one-way analysis of variance (ANOVA) tests determined whether any significant differences exist between the mean political attitudes of students of different grades and colleges. Multivariate regressions then supplemented the ANOVA tests, controlling for family background (socioeconomic status, area of upbringing [e.g., rural], and parental marital status), gender, and ethnicity, all of which are considered contributors to students' changes in opinion that are not directly related to their study at the University of Minnesota. Similar regressions were then also used to assess whether any change in political opinion had occurred during and as a result of attending college by using students' self-assessments of their change in opinion since first attending the University of Minnesota as the dependent variable. Two-sample t-tests then completed the evaluation of the second hypothesis by comparing CSOM and CSE students as a cluster (pupils of hard sciences or business curriculum) to CBS, CFANS, and CLA (pupils of physical/biological sciences, humanities, and social sciences). The third hypothesis was assessed by comparing with two-sample t-tests the difference between students' self-assessed changes in social and fiscal opinions.

3.3 Appropriateness of Methodology

One key strength of this study is that it collects primary data from different colleges within a single university. Other studies draw responses from students of multiple universities and so fail to account for the influence of strong cultural differences that exist between campuses. By looking at students of a single campus whose general studies occur amidst a single pool of students of many disciplines and whose core (major) studies then depart into a particular college, this study overcomes that cultural barrier and evaluates the differing effects of students' field of study on their political opinions. Another novelty of this study is that it breaks down its analysis into fiscal and social dimensions. Most other similar studies of political thought merely investigate whether differences exist or changes have occurred, not necessarily regarding the matters contributing most to such differences or changes. Lastly, this study is unique to assume individuals' self-reported political opinions differ from their opinions as depicted by their stances on various political issues. If different, previous conclusions on the topic could be subject to reevaluation.

While this study is bolstered by the abovementioned, it is important to consider the ways in which it might be limited. Firstly, it assumes that the survey instrument considered appropriate indicators of political orientation and that, as a result, individuals' responses adequately reflected their political views. This survey asked between three and five questions on several topics. The questions included in the survey were those that students were most likely to have an informed opinion regarding. This design ensured brevity while yet providing a firm basis to substantially support or challenge students' self-assessment of their political perspectives. Nonetheless, such a limited field of inquiry does not allow for a comprehensive analysis of individual political opinions.

Secondly, the data collected are expected to be representative of the University of Minnesota at the grade level as well as among the colleges studied. Demographically, certain populations responded at very low rates and so certain controls, like ethnicity, cannot be applied and some conclusions, like those involving CSE freshmen and sophomores, are restricted (see *Appendix A: Summary Statistics*). Similarly, no single academic major had enough representation in the survey for this research to drill down and evaluate changes in attitudes by specific departments within the University of Minnesota. This research thus assumes that the experiences of students of different departments within a single college at the University of Minnesota do not vary significantly and so are similar enough for extrapolation. Lastly, although the survey was offered to entire groups (e.g., all of a particular advisor's advisees) in each of the University of Minnesota's colleges, it must be considered that some response bias could exist wherein people with stronger political opinions were more inclined to take the survey than those with weaker or less-established opinions.

Finally, it is clear that, generally speaking, it is best when evaluating change to follow particular individuals over time. This is especially important when attempting to examine genetic predispositions. Had this study done so, students would have been polled around the beginning of high school and re-surveyed every year until several years following their college graduation

to determine where the starkest changes in opinion occur. The results of this study, rather than stating conclusively which factors contribute most to any observed changes in opinion, seeks first to determine where changes are most likely to occur. It is believed that such results will be a boon to future research.

4 RESULTS

Using the methodology just described, this section outlines the results from tests conducted to evaluate this thesis' three hypotheses.

4.1 Evaluating whether fiscal and social opinions differ by length and field of study

ANOVA tests, multivariate regressions, and two-sample t-tests were conducted to evaluate the hypotheses that students' liberalness increases the longer they attend the University of Minnesota and that students' liberalness varies by field of study. Firstly, two-sample t-tests examined whether any significant difference existed between the two measures of students' level of social and fiscal political opinions. Self-identified social opinions were found to differ significantly from indexed responses to social issues ($P = 0.024$) while no significant difference existed between the two measures of fiscal opinion ($P = 0.445$). Consequently, the research progressed with separate evaluations of both social measures and only a single evaluation of one fiscal measure. Self-identified opinion was chosen as the fiscal measure with the supposition that individuals' self-identified opinion more closely approximated their actual opinions than a three-question index. Thus, six ANOVA tests (considering two social and one fiscal measure) examined whether any significant differences exist between the mean indexed political attitudes of students across (a) different grade levels and (b) different colleges. The p-values, depicted below, indicate that fiscal opinions differ significantly across colleges but not across grade levels and that social opinions per indexed responses differ significantly across colleges but not across grade levels.

Table 1: ANOVA Test Results Identifying Ideological Differences across Grades and Colleges

ANOVA Single Factor Test	P-value
Self-identified fiscal by grade	0.374
Self-Identified fiscal by college	0.021†
Self-Identified social by grade	0.254
Self-Identified social by college	0.179
Social index by grade	0.512
Social index by college	0.005‡

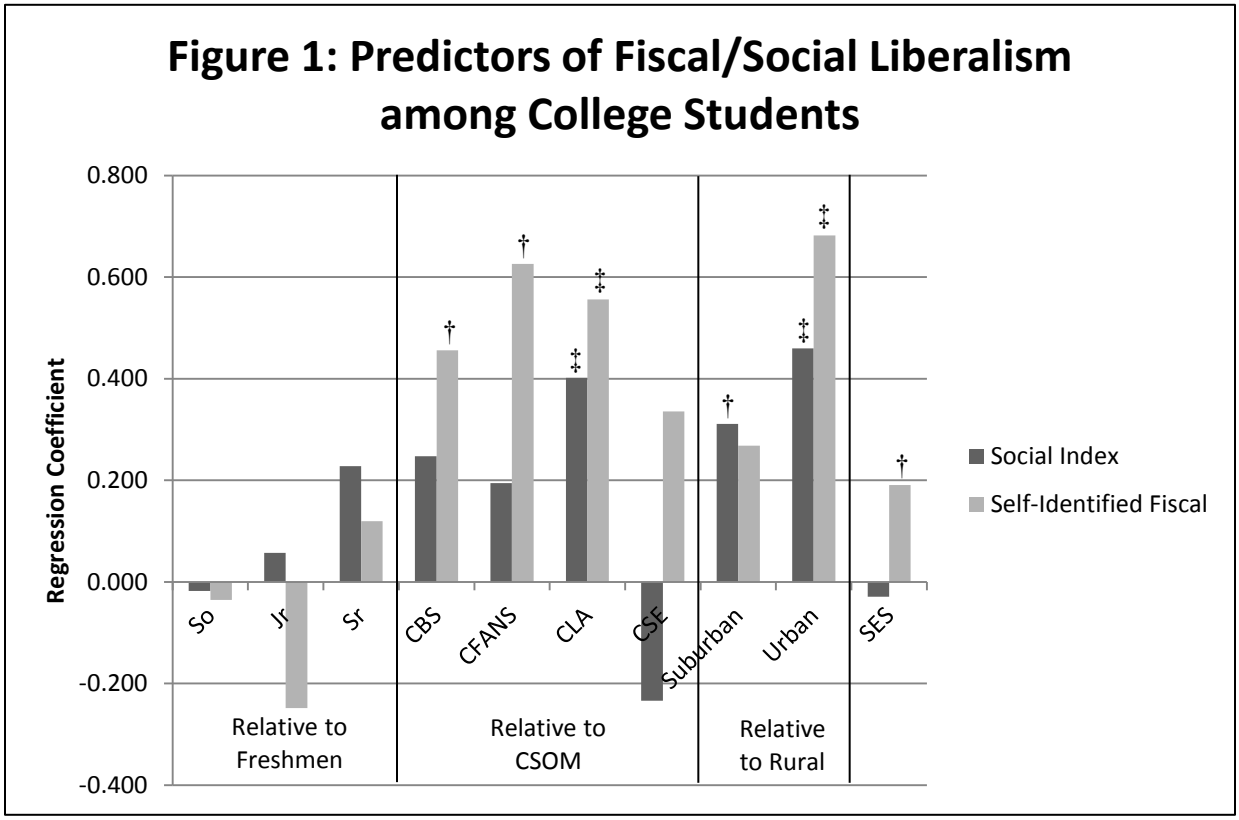
Notes:

† *Difference is statistically significant at $P < 0.05$ level*

‡ *Difference is statistically significant at $P < 0.01$ level*

4.2 Examining where differences in fiscal and social opinions exist

Since the ANOVA tests offered to explain only *whether* differences exist, multivariate regressions were employed for insight into *where* differences exist among several independent and control variables. Each of the three dependent variables (self-identified social stance, self-identified fiscal stance, and indexed social stance) were evaluated with respect to students' year in school, college of enrollment, and a combination of year and college. Tests were conducted both with and without controls. The results are shown in *Appendix D: Multivariate Regression Results* Tables 1-3. The figure below displays the coefficients from the two separate regressions run with controls, using social index and self-identified fiscal stance as dependent variables.



Notes: † *Difference is statistically significant at P < 0.05 level*

‡ *Difference is statistically significant at P < 0.01 level*

» *Liberalism is based on responses to survey questions posed on a 5-point scale. A positive (upward) regression coefficient indicates greater liberalness.*

» *The regressions produced an intercept value of 2.292 with a standard error of 0.250 for the social index and a value of 4.054 with a standard error of 0.372 for self-identified fiscal opinion.*

» *Control variables included in this test but not shown in the graph include parental marital status and gender. Neither of these factors produced statistically significant results.*

» *SES is measured on a scale of 1-5, "1" being lower class and "5" being upper class.*

One of the more conspicuous insights from Figure 1 is how widely the coefficients range between groups. Differences in opinion relative to CSOM (by grade) and relative to rural (by upbringing), for instance, are of a greater magnitude than differences in opinion relative to freshmen (by year). This might suggest that political opinions are more greatly determined by pre-college experiences than being factors of time attending the University of Minnesota. Additional testing will explore this observation further. Among the differences by grade in particular, it should be noted that fiscal opinions generally vary more greatly and more significantly than social opinions.

Another important acknowledgment regards the statistical significance of the regression results. In this there are two key observations. First, the social political opinions of freshmen and sophomores are roughly equivalent while juniors' opinions are slightly more liberal and seniors' opinions are more liberal still. This appears to lend some preliminary support to the first hypothesis that the longer a student has attended the University of Minnesota, the more liberal his political orientation will be; these results are not statistically significant, however. Second, opinions of students in CBS, CFANS, and CLA all differ significantly from the opinions of students in CSOM. The difference in opinion of CSE students relative to CSOM students, in comparison, is insignificant. These observations support the first part of the second hypothesis, which supposes that a student's shift in political orientation will be influenced by his field of study and that pupils of physical/biological sciences, humanities, and social sciences will encounter greater liberalizing changes than those of hard sciences or business curriculum. It is important to note, however, that the mere existence of differences between colleges does not necessarily assert that differing changes are imputed by differing college experiences.

As an alternative way to evaluate Hypotheses 1 and 2, additional multivariate regressions were run using as dependent variables respondents' self-perceived changes in social and fiscal political opinions since first attending the University of Minnesota while using the same control variables from the previous model. This step presumed to evaluate, beyond the previous determination that differences in opinion exist and vary across colleges and (insignificantly) across grades, if observed *changes* in fiscal or social political opinion depended in any way on students' college or length of enrollment. Changes in fiscal and social opinions across grade levels were found to be insignificant, resulting in a lack of support for Hypothesis 1. When testing changes across colleges, fiscal opinions did not vary significantly. Changes in social opinions across colleges, on the other hand, were found to be significantly different; however, the control variables accounted for this difference (see *Appendix D: Multivariate Regression Results* Table 4).

To afford full regard to the hypothesis that pupils of physical/biological sciences, humanities, and social sciences will encounter greater liberalizing changes than those of hard sciences or business curriculum, the opinions of CSOM and CSE students were to be grouped and compared against the opinions of students in the remaining University of Minnesota colleges. It was found through two-sample t-tests, however, that the social opinions of CSOM and CSE students were dissimilar and so it would not be appropriate to combine the two colleges for evaluation against the remaining colleges. As for the comparison of self-perceived fiscal

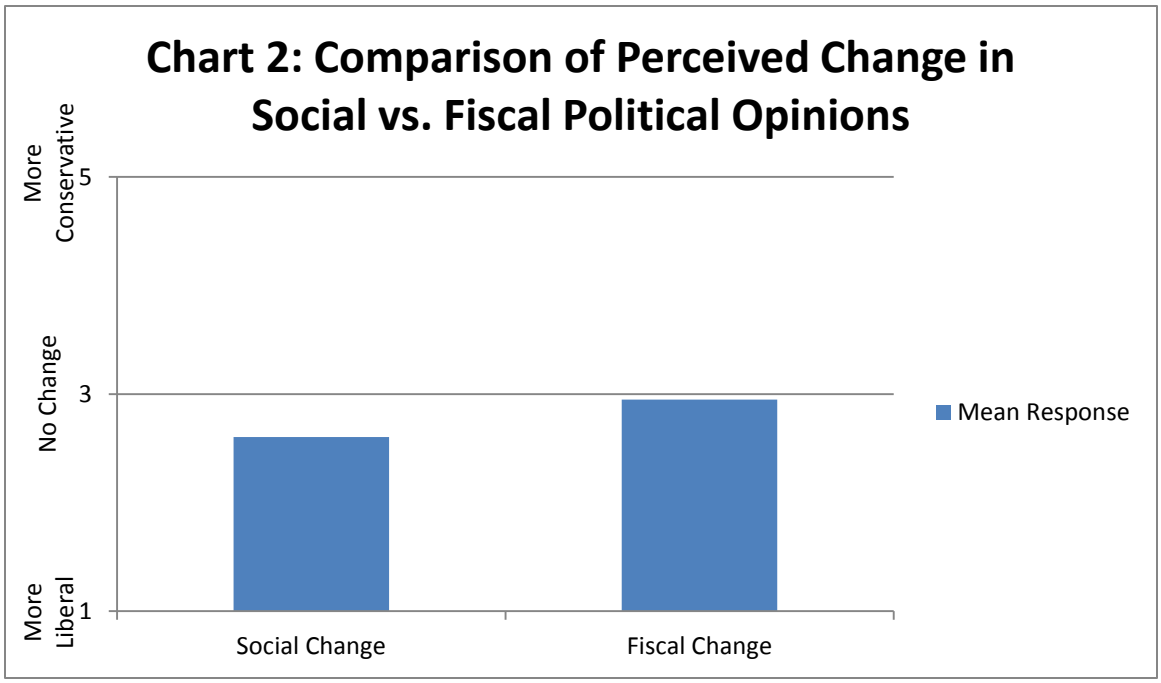
change, the results were insignificant (refer to *Appendix E: CSOM and CSE vs. CBS, CFANS, and CLA*). These results indicate a lack of support for this thesis' second hypothesis.

4.3 Evaluating whether fiscal and social opinions encounter differing liberalization effects

This thesis' third hypothesis was assessed by comparing with two-sample t-tests the difference between students' self-assessed changes in social and fiscal opinions. The tests were performed using the entire survey population. The results of these tests show that, based on students' self-perceived change in political opinion during college, students' opinions shift to a greater extent with regard to social political opinions than fiscal political opinions. Respondents indicate, moreover, that such shifts are toward the left. Thus, the hypothesis that students' opinions on social issues will encounter greater liberalizing changes than their opinions on fiscal issues while attending the University of Minnesota is supported.

Table 2: Two-Sample T-Test Results Evaluating Hypothesis 3

			Self-Perceived Social Change	*Self-Perceived Fiscal Change*
Mean			2.604	2.947
Variance	0.573	0.694		
t Stat	-4.965			
P(T<=t) two-tail	<0.001			



Note:

Difference between social and fiscal change is statistically significant at P < 0.01 level

5 DISCUSSION

In summary, the results of the previous section provide mixed support for this thesis' first and second hypotheses support for its third hypothesis. This section discusses in more detail the interpretation of the above findings and details several additional insights that emerge from extended consideration.

Regarding the first hypothesis, no test, no matter the dependent variable in scope, yielded statistically significant results with respect to students' year in school (refer to *Appendix D: Multivariate Regression Results*). Even so, the coefficients produced by the regression models give some indication that students farther along in school generally have more liberal social political attitudes. Giving mind to the fact that survey data were collected halfway through the academic year and remembering Lehmann's (1963) research indicating that the most drastic changes to individuals' opinion occur in their first four semesters at college, the hypothesis should not be wholly rejected because this study relies on data that did not capture fully the change in political perspectives likely to have actually occurred. Further analysis, especially if longitudinal in nature, could well show the differences between grades to be more significant.

The same regressions as used to evaluate the first hypothesis yielded mixed support for the second hypothesis. When run with social index and self-identified fiscal opinions as dependent variables, the regressions revealed significant differences in opinion between CSOM students and those in other colleges. Social opinions of students in CSOM differed from those in CLA, and fiscal opinions of students in CSOM differed from those in all other schools except CSE. However, while differences in opinion were found to exist between colleges, the data do not allow that field of study caused differing change effects. To this end, however, two critical points should be noted. First, this study relies on a point-in-time survey, so self-perceived change in political opinion was determined to be the most appropriate metric for evaluating changes. It is reasonable to expect, however, that such a measure might not accurately depict actual changes in opinion during an individual's tenure at the University of Minnesota and, in particular, that longitudinal observation could substitute in a more reliable (observed) change metric and overcome the selection bias inherent in this study. Second, this research was severely inhibited insofar as it collected survey responses from only one CSE freshman and two CSE sophomores (see *Appendix C: Descriptive Statistics*). An appropriate conclusion, therefore, is that while these hypotheses lack adequate support in this research, further inquiry could very well build off these findings to justify that changes in political opinion do really depend on a student's field of study as well as that pupils of hard science and business curriculum are less susceptible to liberalization as hypothesized.

Tables 1-3 of *Appendix D: Multivariate Regression Results* reveal one other important insight: indexed responses produced more significant results than self-identified stances concerning social opinions. Where misalignment between one's self-perceived political ideology and stance on issues exists, the result could very well be similarly misaligned voting behavior. It is critical to remember, furthermore, that individuals tend to cast their votes toward candidates whose opinions on social issues most closely resemble their own. Remembering also that the

majority of Americans tend to maintain moderate political opinions overall and that opinions on social issues often drive voting behavior, a possibly consequential implication of this research is that attending college, wherein social ideologies appear to be more greatly affected than fiscal ideologies, conceivably provokes liberal votes out of otherwise moderately-positioned voters.

6 CONCLUSION

Past research has indicated that social context plays a definite role in the development of values and beliefs. Amongst college students, the most influential social factors are the opinions of professors, peers, and the media. This study assessed via ANOVA tests, two-sample t-tests, and multivariate regressions whether the effects of such stimuli varied by individuals' field of study. It also sought to determine whether an individual's college tenure relates to his political opinion, i.e., whether students who have longer attended the University of Minnesota have significantly more liberal opinions than students their junior. This research relied on 265 survey responses from students in five of the University of Minnesota's colleges (the Carlson School of Management; the College of Biological Sciences; the College of Food, Agricultural, and Natural Resource Sciences; the College of Liberal Arts; and the College of Science and Engineering).

Regarding the results of this thesis, it is important to simultaneously note its core limitations. Where this study found no significant evidence that political opinions of students depend on the amount of time they have studied at the University of Minnesota, for instance, this study relied on data collected halfway through the academic year. According to Lehmann's (1963) observations that changes in critical thinking, attitudes, and values have been known to occur mostly in students' first two years at college, greater changes are likely to have occurred than were actually observed. Also, this thesis found that political opinions of students vary significantly between colleges but it could not attribute to those colleges differing change effects. Two key inhibitors that subsequent research could overcome are that: (a) this study lacked necessary responses from CSE freshmen and sophomores to draw firm conclusions and (b) this was not a longitudinal study and so relied on students' record of self-perceived, rather than observed, changes. Yet considering the results of this study, a plausible ulterior explanation to differing college experiences themselves producing the differences in opinion that exist across colleges is that students may have opted into a particular field of study based on preexisting political inclinations.

While two of this study's three hypotheses lack adequate support, several of this study's results stand to aptly inform further inquiry. For instance, this study found that differences in social political opinions across colleges were more significantly explained by students' indexed responses to issues than their self-assessed political stances. Future research can leverage this insight by analyzing how potential misalignment between actual and perceived political beliefs relates to and affects voting behaviors and whether that gap waxes or wanes during the collegiate life stage. Additionally, this study found that students' social political opinions are prone to greater liberalization effects at the University of Minnesota than are their fiscal political

opinions. Given bipartisan agreement that fiscal issues are of chief importance to the welfare of this country, it is important for future research to discern at what points in individuals' lives such opinions are subject to change; whether any particular environments or circumstances motivate changes to fiscal opinions and, when so, whether such changes differ in their influence on voting behaviors from changes in social opinions.

Research on the topic of political socialization during the collegiate life stage, like the social context upon which it relies, is in a constant state of change. This study does not account for diverging political climates, nor does it study multiple ones. Rather, it considers a single political climate at a single university and provides a reference point from which other political climates can be related. The results of this study, therefore, would be most useful if employed to inform future inquiry attempting to discern how length and field of study affect political thought.

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Appendix A: Summary Statistics

	Carlson School of Management	College of Biological Sciences	College of Food, Agricultural, and Natural Resource Sciences	College of Liberal Arts	College of Science and Engineering	Total
Freshman	16	16	10	28	1	71
Sophomore	18	16	8	23	2	67
Junior	14	7	7	18	9	55
Senior	21	8	5	25	13	72
Total	69	47	30	94	25	265

Gender
Male: 83
Female: 182

Age
18-19: 57
20-21: 142
22-23: 61
24+: 5

Ethnicity
White: 210
Hispanic or Latino: 5
Black or African American: 5
Asian/Pacific Islander: 37
Other: 8

Socioeconomic Status
Upper class: 12
Upper-middle class: 140
Middle class: 81
Lower-middle class: 28
Lower class: 4

Parents' marital status
Single, never married: 14
Married: 200
Widowed: 5
Divorced: 43
Separated: 3

Upbringing
Rural: 49
Suburban: 176
Urban: 40

Appendix B: Survey Questions

ELIGIBILITY AND CONSENT FORM

You are invited to participate in a research study that examines the political interest of students at the University of Minnesota-Twin Cities. You were selected as a possible participant because you are a currently-enrolled student at the University of Minnesota. This research will inform our understanding of the social and fiscal political perspectives of our students. This research is being conducted by Taylor Vollmer from the Accounting Department at the Carlson School of Management, University of Minnesota.

By agreeing to participate in this survey, you consent that you are *at least 18 years old and that you are currently enrolled at the University of Minnesota-Twin Cities.*

WHAT WILL YOUR PARTICIPATION INVOLVE?

You will complete an on-line background survey, which includes questions about your university experience and political attitudes. Some demographic information will be collected as well, but all of this data will be disjoined from your responses and scrambled to ensure anonymity. This survey will take you approximately 15 minutes to complete.

ARE THERE ANY RISKS? WHAT ARE THE BENEFITS?

There are no risks associated with participating in this study. By participating in this survey, you will be entered into a lottery with all other participants to win one of ten $10 Starbucks or Amazon gift cards.

CONFIDENTIALITY

The records of this study will be kept private, stored in a secure area, and only accessed by the researchers in this study. In any sort of report we may publish, we will not include any information that will make it possible to identify a subject.
Participation in this study is voluntary. Your decision whether or not to participate will not affect your current or future relations with the University of Minnesota. If you decide to participate, you are free to not answer any question or withdraw at any time without affecting those relationships. So we can learn the most from this study as possible, the researchers encourage your complete participation in this survey.

OTHER QUESTIONS?

If you have questions, please contact Taylor Vollmer at 507.220.0502 or voll0145@umn.edu. If you have any other concerns regarding this study and would like to talk to someone other than the researchers, you are encouraged to contact the Research Subjects Advocate Line, D-528 Mayo, 420 Delaware Street S.E., Minneapolis, Minnesota 55455; telephone (612) 625-1650; email irb@umn.edu.

Thank you very much in advance for your help in this study!

Sincerely, Taylor Vollmer – University of Minnesota

By clicking here and moving on to participate in the survey, you agree that you have read the above, are at least 18 years old, and are currently enrolled at the University of Minnesota.

In which of the University of Minnesota's colleges do you currently study?

- College of Biological Sciences
- College of Design
- College of Education & Human Development
- College of Food, Agricultural and Natural Resource Sciences
- College of Liberal Arts
- College of Science and Engineering
- Carlson School of Management
- Other

Regarding your application to the University of Minnesota, were you originally accepted into your preferred (first choice) college? If no, which college was your first choice?

- Yes
- No

Please indicate your current declared or intended academic major(s). If it has changed, please also indicate your original declared or intended major(s).

Current
Original

At the conclusion of the Fall 2015 semester, how many credits had you completed *at the University of Minnesota*?

- 0-30
- 31-60
- 61-90
- 91-120
- 121+

Approximately how many of the credits you've taken at the University of Minnesota have been to complete liberal education requirements?

- 0-15
- 16-30
- 31-45
- 46+

Approximately how many of the credits you've taken at the University of Minnesota have been within the college of your current major(s)?

- 0-15
- 16-30
- 31-45
- 46+

How would you characterize the following at the present time?

	Liberal	Moderately Liberal	Centrist	Moderately Conservative	Conservative
Your own political orientation as it regards **fiscal** policy	○	○	○	○	○
Your own political orientation as it regards **social** policy	○	○	○	○	○
The **fiscal** political orientation of instructors within the college of your current major(s)	○	○	○	○	○
The **social** political orientation of instructors within the college of your current major(s)	○	○	○	○	○
The **fiscal** political orientation of instructors of your liberal education courses	○	○	○	○	○
The **social** political orientation of instructors of your liberal education courses	○	○	○	○	○
The **fiscal** political orientation of the peers within the college of your current major(s)	○	○	○	○	○
The **social** political orientation of the peers within the college of your current major(s)	○	○	○	○	○
The **fiscal** political orientation of your parents	○	○	○	○	○
The **social** political orientation of your parents	○	○	○	○	○

With which types of student organizations do you consider yourself regularly involved? (Select all that apply.)

- Academic and educational
- Agricultural
- Cultural and diversity
- Environmental/sustainability
- Fine arts/music/film
- Fraternity/sorority
- Fraternity/sorority (academic/professional)
- Governing bodies and departmental boards
- Graduate/professional
- Health and wellness
- Performance groups
- Political and social action
- Publication and communications
- Religious affiliated
- Service
- Special interest and hobby
- Sports clubs and recreation

How many hours do you dedicate to the above organizations each week, on average?

- 0-4
- 5-8
- 9-12
- 13+

From which of the following sources do you obtain most of your **academic** information? (Select all that apply.)

- Academic journals
- Magazines
- Newspapers
- Parents
- Professors
- Social media
- Textbooks
- Other

From which of the following sources do you obtain most of your **non-academic** information? (Select all that apply.)

- [ ] Academic journals
- [ ] Magazines (please indicate your primary source(s), e.g. TIME)
- [ ] Newspapers (please indicate your primary source(s), e.g. USA Today)
- [ ] Parents
- [ ] Professors
- [ ] Social media
- [ ] Textbooks
- [ ] Other (please specify, e.g. nightly news)

Please indicate your level of agreement/disagreement with the following:

	Strongly agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I regularly cross-reference what my professors teach/textbooks state with personal research	○	○	○	○	○
I regularly cross-reference what I read in the news with personal research	○	○	○	○	○
I hold tightly to my opinions and am not easily swayed	○	○	○	○	○
My "eyes have been opened" by my college experiences	○	○	○	○	○
I am less spiritual/religious now than I was when I began college	○	○	○	○	○
I am familiar with national and international current events	○	○	○	○	○

Please indicate your level of agreement/disagreement with the following:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
I took courses in high school related to my current or intended college major(s)	○	○	○	○	○
I first chose my college and then my major	○	○	○	○	○
I first chose my major and then my college	○	○	○	○	○
I had a difficult time determining my college major	○	○	○	○	○
I personally identify with the culture of the University of Minnesota at large	○	○	○	○	○
I personally identify with the culture of my college	○	○	○	○	○
I actively participate in events of the University of Minnesota at large	○	○	○	○	○
I actively participate in events associated with my college	○	○	○	○	○

Please indicate your level of agreement/disagreement with the following:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
America should make changes to achieve racial equality	○	○	○	○	○
The Welfare system is used properly by those who need it most	○	○	○	○	○
Reducing the carbon footprint of humans is necessary to preserve Earth	○	○	○	○	○

Please indicate your level of agreement/disagreement with the following:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
The government should cut spending to reduce the national deficit	○	○	○	○	○
Imposing higher taxes on America's wealthy is good for the country's economy	○	○	○	○	○
A government-sponsored healthcare plan is necessary and good	○	○	○	○	○

Please indicate your level of agreement/disagreement with the following:

	Strongly Agree	Agree	Neither Agree nor Disagree	Disagree	Strongly Disagree
The family is the basic unit of society	○	○	○	○	○
I support same-sex marriage	○	○	○	○	○
I am pro-choice	○	○	○	○	○

Please indicate your stance regarding the following:

	Increased significantly	Increased slightly	Remained largely the same	Decreased slightly	Decreased significantly
My level of political interest has _____ since beginning college	○	○	○	○	○

Please indicate your stance regarding the following:

	Become much more liberal	Become slightly more liberal	Remained largely the same	Become slightly more conservative	Become much more conservative
My political stance on **social** issues has _____ since beginning college	○	○	○	○	○
My political stance on **fiscal** issues has _____ since beginning college	○	○	○	○	○

What is your gender?

- Male
- Female

In what year were you born?

Please indicate your ethnicity.

- White
- Hispanic or Latino
- Black or African American
- Native American or American Indian
- Asian/Pacific Islander
- Other

How would you describe your family's economic status?

- Upper class
- Upper-middle class
- Middle class
- Lower-middle class
- Lower class

What is the marital status of your parents?

- Single, never married
- Married or domestic partnership
- Widowed
- Divorced
- Separated

How would you characterize the area in which you grew up?

- Rural
- Urban
- Suburban

Are you a member of the University Honors Program?

- Yes
- No

Please indicate your religious affiliation

- Spiritual but not associated with a major religion
- Not particularly spiritual
- No preference
- Agnostic
- Atheist
- Buddhist
- Christian, Evangelical

Christian, Protestant

Christian, Roman Catholic

Christian, Other

Eastern Orthodox

Episcopalian

Hindu

Jewish

Mormon

Muslim

Presbyterian

Quaker

Seventh Day Adventist

Sikh

Taoist

Unitarian/Universalist

Other

>>

Appendix C: Descriptive Statistics

	Own Fiscal	*Cut Gov't Spending?*	*Higher Taxes on Wealthy?*	*Gov't Sponsored Healthcare?*	*Fiscal Index*
Own Fiscal	1.000				
Cut Gov't Spending?	-0.247	1.000			
Higher Taxes on Wealthy?	0.701	-0.151	1.000		
Gov't-Sponsored Healthcare?	0.646	-0.209	0.633	1.000	
Fiscal Index	0.626	0.251	0.827	0.797	1.000

	Own Social	*Change for Racial Equality?*	*Reduce Carbon Footprint?*	*Same-Sex Marriage?*	*Pro-Choice?*	*Social Index*
Own Social	1					
Change for Racial Equality?	0.364	1				
Reduce Carbon Footprint?	0.425	0.423	1			
Same-Sex Marriage?	0.573	0.311	0.411	1		
Pro-Choice?	0.665	0.257	0.330	0.686	1	
Social Index	0.704	0.595	0.655	0.841	0.844	1

	x > 0.600
	0.300 < x > 0.599
	0.000 < x > 0.2999

*Note these statistics include only those questions that were included in the respective indices:
"Please indicate your level of agreement/disagreement with the following:"

Fiscal Index:

a. The government should cut spending to reduce the national deficit
b. Imposing higher taxes on America's wealthy is good for the country's economy
c. A government-sponsored healthcare plan is necessary and good

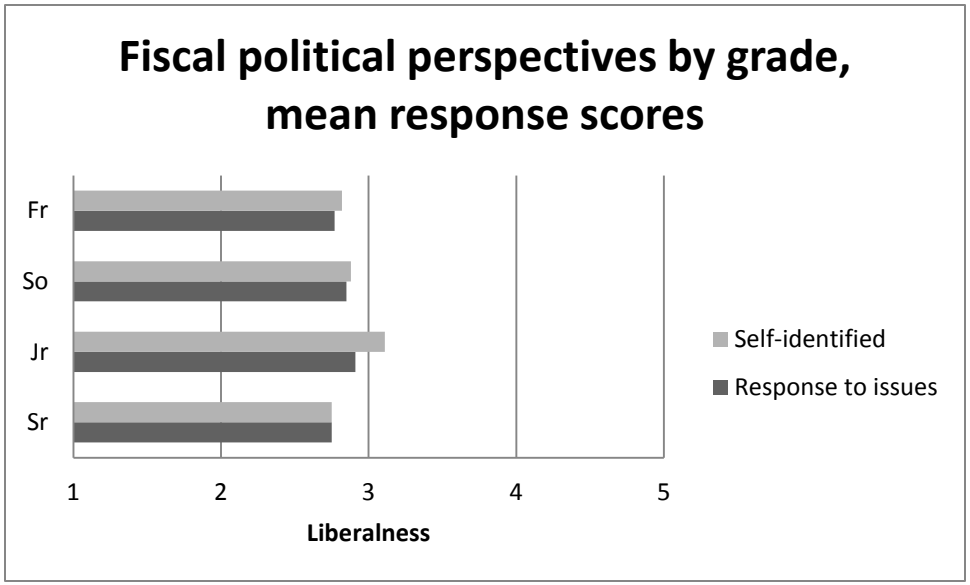
Social Index:

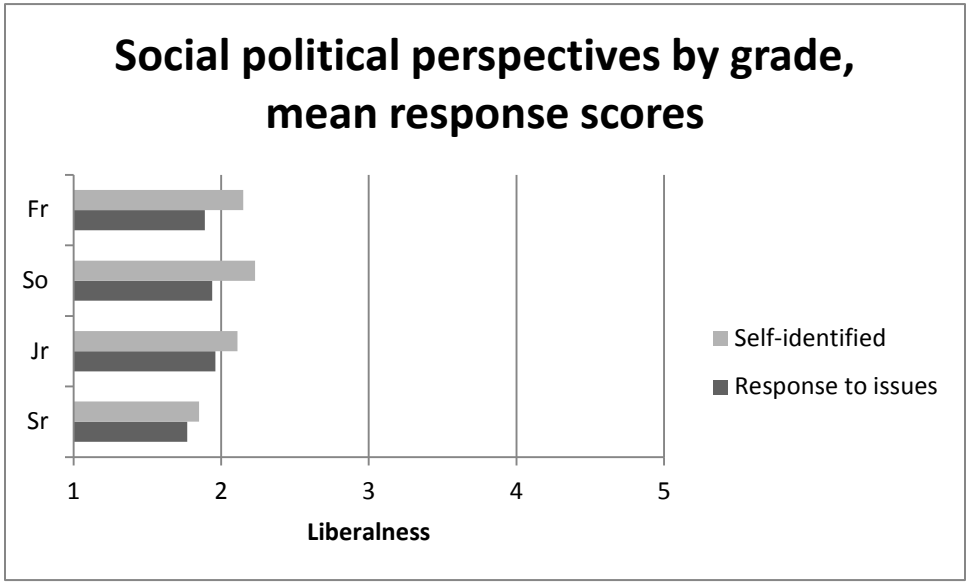
a. America should make changes to achieve racial equality
b. Reducing the carbon footprint of humans is necessary to preserve Earth
c. I support same-sex marriage
d. I am pro-choice

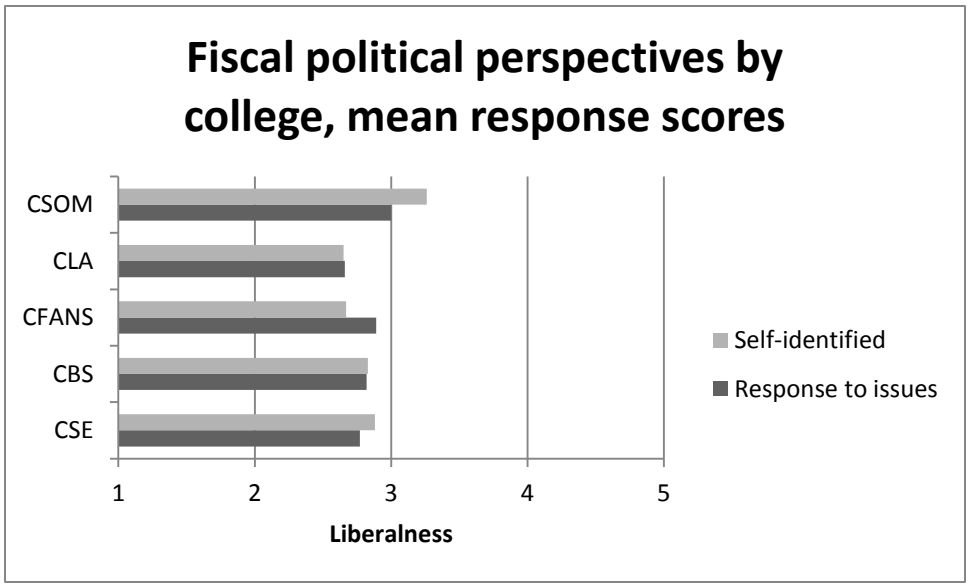
	Indexed Fiscal	Self-Assessed Fiscal	Indexed Social	Self-Assessed Social	Self-Perceived Fiscal Change	Self-Perceived Social Change
Fr Mean	**2.766**	**2.824**	**1.889**	**2.149**	**2.851**	**2.608**
Fr SD	*0.697*	*1.167*	*0.792*	*1.216*	*0.766*	*0.674*
So Mean	**2.848**	**2.884**	**1.942**	**2.232**	**2.928**	**2.696**
So SD	*0.763*	*1.161*	*0.759*	*1.181*	*0.666*	*0.786*
Jr Mean	**2.906**	**3.105**	**1.956**	**2.105**	**3.035**	**2.614**
Jr SD	*0.932*	*1.209*	*0.887*	*1.252*	*0.898*	*0.695*
Sr Mean	**2.747**	**2.747**	**1.770**	**1.853**	**3.000**	**2.520**
Sr SD	*0.790*	*1.201*	*0.780*	*1.104*	*0.924*	*0.822*
CSOM Mean	**2.995**	**3.261**	**2.007**	**2.246**	**3.174**	**2.551**
CSOM SD	*0.871*	*1.163*	*0.791*	*1.221*	*0.816*	*0.753*
CLA Mean	**2.660**	**2.649**	**1.652**	**1.819**	**2.830**	**2.457**
CLA SD	*0.718*	*1.155*	*0.674*	*1.091*	*0.941*	*0.739*
CFANS Mean	**2.889**	**2.667**	**1.900**	**2.133**	**2.833**	**2.767**
CFANS SD	*0.674*	*1.106*	*0.808*	*1.147*	*0.637*	*0.559*
CBS Mean	**2.816**	**2.830**	**1.846**	**2.149**	**2.894**	**2.681**
CBS SD	*0.807*	*1.243*	*0.743*	*1.202*	*0.722*	*0.687*
CSE Mean	**2.767**	**2.880**	**2.250**	**2.200**	**3.000**	**2.960**
CSE SD	*0.904*	*1.177*	*1.105*	*1.296*	*0.693*	*0.958*

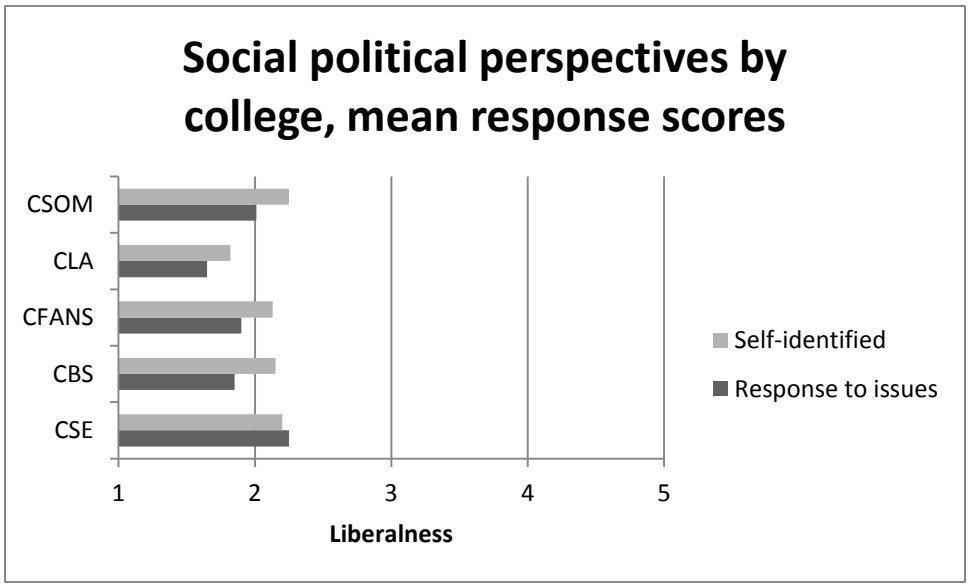
Scale	
Liberal	1
Moderately Liberal	2
Centrist	3
Moderately Conservative	4
Conservative	5

* Means for indexed and self-assessed social/fiscal measures are graphically depicted on the following page.


Fiscal political perspectives by grade, mean response scores
Fr
So
Jr
Sr
1
2
3
4
5
Liberalness
Self-identified
Response to issues


Social political perspectives by grade, mean response scores
Fr
So
Jr
Sr
1
2
3
4
5
Liberalness
Self-identified
Response to issues


Fiscal political perspectives by college, mean response scores
CSOM
CLA
CFANS
CBS
CSE
1
2
3
4
5
Liberalness
Self-identified
Response to issues


Social political perspectives by college, mean response scores
CSOM
CLA
CFANS
CBS
CSE
1
2
3
4
5
Liberalness
Self-identified
Response to issues

Appendix D: Multivariate Regression Results

Table 1: Multivariate Regression Results Using Self-Identified Social Stance as DV

	1	2	3	4	5	6	**Coefficient**
Intercept	**2.149**	**2.539**	**2.291**	**2.620**	**2.403**	**2.699**	*Standard error*
	0.139	*0.367*	*0.134*	*0.362*	*0.183*	*0.380*	P-value: 0.05 < x < 0.10
Sophomore	**0.083**	**0.062**			**0.060**	**0.042**	
	0.200	*0.199*			*0.198*	*0.198*	
Junior	**-0.043**	**-0.108**			**-0.097**	**-0.146**	
	0.210	*0.212*			*0.213*	*0.214*	
Senior	**-0.295**	**-0.314**			**-0.355**	**-0.368**	
	0.196	*0.195*			*0.200*	*0.200*	
CBS			**-0.142**	**-0.143**	**-0.200**	**-0.202**	
			0.219	*0.219*	*0.220*	*0.219*	
CFANS			**-0.158**	**-0.172**	**-0.204**	**-0.217**	
			0.255	*0.256*	*0.255*	*0.256*	
CLA			**-0.472**	**-0.449**	**-0.486**	**-0.464**	
			0.181	*0.183*	*0.181*	*0.183*	
CSE			**-0.091**	**-0.100**	**0.011**	**0.007**	
			0.273	*0.273*	*0.278*	*0.277*	
Female		**0.128**		**0.050**		**0.069**	
		0.157		*0.159*		*0.159*	
SES		**-0.024**		**-0.001**		**0.007**	
		0.093		*0.093*		*0.093*	
Urban Upbringing		**-0.631**		**-0.607**		**-0.609**	
		0.249		*0.249*		*0.248*	
Suburban Upbringing		**-0.452**		**-0.451**		**-0.437**	
		0.189		*0.188*		*0.188*	
Parents Together		**0.065**		**0.056**		**0.076**	
		0.169		*0.169*		*0.169*	

Notes:

- P-value shading of column heading indicates statistical significance of overall test
- Results of sophomores, juniors, and seniors are depicted as relative to freshmen
- Results of CBS, CFANS, CLA, and CSE are depicted as relative to CSOM
- SES is measured on a scale of 1-5, "1" being lower class and "5" being upper class
- Results of urban/suburban upbringing are depicted as relative to rural upbringing
- When control for marital status of parents, "parents together" includes those respondents whose parents were married at time of the survey. These are compared to those respondents whose parents were single and never married, widowed, divorced, or separated, i.e., "parents apart."

Table 2: Multivariate Regression Results Using Social Index as DV

	1	2	3	4	5	6
Intercept	**1.889**	**2.140**	**2.060**	**2.249**	**2.122**	**2.292**
	0.094	*0.247*	*0.089*	*0.238*	*0.121*	*0.250*
Sophomore	**0.054**	**0.037**			**0.031**	**0.018**
	0.135	*0.134*			*0.132*	*0.130*
Junior	**0.068**	**0.012**			**-0.019**	**-0.057**
	0.142	*0.142*			*0.141*	*0.141*
Senior	**-0.119**	**-0.139**			**-0.217**	**-0.228**
	0.132	*0.131*			*0.133*	*0.132*
CBS			**-0.214**	**-0.213**	**-0.247**	**-0.247**
			0.145	*0.144*	*0.146*	*0.145*
CFANS			**-0.160**	**-0.165**	**-0.190**	**-0.195**
			0.169	*0.168*	*0.169*	*0.169*
CLA			**-0.409**	**-0.393**	**-0.417**	**-0.402**
			0.120	*0.121*	*0.120*	*0.120*
CSE			**0.190**	**0.174**	**0.245**	**0.234**
			0.181	*0.180*	*0.184*	*0.183*
Female		**0.156**		**0.076**		**0.084**
		0.106		*0.104*		*0.105*
SES		**0.001**		**0.023**		**0.029**
		0.062		*0.061*		*0.061*
Urban Upbringing		**-0.471**		**-0.460**		**-0.460**
		0.167		*0.164*		*0.163*
Suburban Upbringing		**-0.326**		**-0.323**		**-0.311**
		0.127		*0.124*		*0.124*
Parents Together		**0.007**		**0.010**		**0.021**
		0.114		*0.111*		*0.111*

Coefficient
Standard error
P-value: x < 0.01
P-value: 0.01 < x < 0.05
P-value: 0.05 < x < 0.10

Notes:

- P-value shading of column heading indicates statistical significance of overall test
- Results of sophomores, juniors, and seniors are depicted as relative to freshmen
- Results of CBS, CFANS, CLA, and CSE are depicted as relative to CSOM
- SES is measured on a scale of 1-5, "1" being lower class and "5" being upper class
- Results of urban/suburban upbringing are depicted as relative to rural upbringing
- When control for marital status of parents, "parents together" includes those respondents whose parents were married at time of the survey. These are compared to those respondents whose parents were single and never married, widowed, divorced, or separated, i.e., "parents apart."

Table 3: Multivariate Regression Results Using Self-Identified Fiscal Stance as DV

	1	2	3	4	5	6	**Coefficient**
Intercept	**2.824**	**3.735**	**3.253**	**4.113**	**3.235**	**4.054**	*Standard error*
	0.139	*0.363*	*0.132*	*0.354*	*0.181*	*0.372*	P-value: x < 0.01
Sophomore	**0.060**	**0.058**			**0.033**	**0.035**	P-value: 0.01 < x < 0.05
	0.200	*0.196*			*0.197*	*0.194*	
Junior	**0.281**	**0.272**			**0.250**	**0.249**	
	0.210	*0.210*			*0.211*	*0.210*	
Senior	**-0.078**	**-0.061**			**-0.134**	**-0.119**	
	0.195	*0.193*			*0.198*	*0.196*	
CBS			**-0.423**	-0.447	**-0.431**	**-0.456**	
			0.216	0.214	0.218	*0.215*	
CFANS			**-0.586**	**-0.598**	**-0.613**	**-0.626**	
			0.252	*0.250*	*0.253*	*0.251*	
CLA			**-0.604**	**-0.550**	**-0.606**	**-0.556**	
			0.179	*0.179*	*0.179*	*0.179*	
CSE			-0.373	-0.333	-0.378	**-0.336**	
			0.269	0.267	0.275	*0.272*	
Female		**-0.085**		**-0.127**		**-0.149**	
		0.156		*0.155*		*0.156*	
SES		**-0.222**		**-0.199**		**-0.190**	
		0.092		*0.091*		*0.091*	
Urban Upbringing		**-0.686**		**-0.692**		**-0.682**	
		0.246		*0.243*		*0.243*	
Suburban Upbringing		**-0.274**		**-0.298**		**-0.268**	
		0.187		*0.184*		*0.185*	
Parents Together		**-0.057**		**-0.046**		**-0.045**	
		0.168		*0.165*		*0.165*	

Notes:

- P-value shading of column heading indicates statistical significance of overall test
- Results of sophomores, juniors, and seniors are depicted as relative to freshmen
- Results of CBS, CFANS, CLA, and CSE are depicted as relative to CSOM
- SES is measured on a scale of 1-5, "1" being lower class and "5" being upper class
- Results of urban/suburban upbringing are depicted as relative to rural upbringing
- When control for marital status of parents, "parents together" includes those respondents whose parents were married at time of the survey. These are compared to those respondents whose parents were single and never married, widowed, divorced, or separated, i.e., "parents apart."

Table 4: Multivariate Regression Results Using Social Change as DV

	1	2	3	4	**Coefficient**
Intercept	**2.570**	**2.548**	**2.605**	**2.554**	*Standard error*
	0.084	*0.228*	*0.115*	*0.240*	P-value: 0.01 < x < 0.05
Sophomore			**0.078**	**0.085**	
			0.125	*0.125*	
Junior			**-0.056**	**-0.044**	
			0.133	*0.135*	
Senior			**-0.143**	**-0.147**	
			0.125	*0.126*	
CBS	**0.111**	**0.103**	**0.082**	**0.075**	
	0.137	*0.138*	*0.138*	*0.139*	
CFANS	**0.197**	**0.201**	**0.178**	**0.182**	
	0.159	*0.161*	*0.160*	*0.162*	
CLA	**-0.112**	**-0.106**	**-0.118**	**-0.110**	
	0.113	*0.115*	*0.114*	*0.116*	
CSE	**0.390**	**0.397**	**0.443**	**0.449**	
	0.171	*0.172*	*0.174*	*0.176*	
Female		**-0.009**		**0.000**	
		0.100		*0.101*	
SES		**-0.006**		**-0.002**	
		0.059		*0.059*	
Urban Upbringing		**-0.098**		**-0.098**	
		0.157		*0.157*	
Suburban Upbringing		**0.112**		**0.121**	
		0.119		*0.119*	
Parents Together		**-0.028**		**-0.019**	
		0.107		*0.107*	

Notes:

- P-value shading of column heading indicates statistical significance of overall test
- Results of sophomores, juniors, and seniors are depicted as relative to freshmen
- Results of CBS, CFANS, CLA, and CSE are depicted as relative to CSOM
- SES is measured on a scale of 1-5, "1" being lower class and "5" being upper class
- Results of urban/suburban upbringing are depicted as relative to rural upbringing
- When control for marital status of parents, "parents together" includes those respondents whose parents were married at time of the survey. These are compared to those respondents whose parents were single and never married, widowed, divorced, or separated, i.e., "parents apart."

Appendix E: CSOM and CSE vs. CBS, CFANS, and CLA

Table 1: Two-Sample T-Test Results Comparing Self-Perceived Change in Social Opinion of CSOM to CSE

	CSOM Social Change	*CSE Social Change*	P-value: 0.01 < x < 0.05
Mean	2.551	2.960	
Variance	0.575	0.957	
t Stat	-2.135		
P(T<=t) two-tail	0.035		

Table 2: Two-Sample T-Test Results Comparing Self-Perceived Change in Fiscal Opinion of CSOM to CSE

	CSOM Fiscal Change	*CSE Fiscal Change*
Mean	3.174	3.000
Variance	0.675	0.500
t Stat	0.939	
P(T<=t) two-tail	0.350	

Table 3: Two-Sample T-Test Results Comparing Self-Perceived Change in Fiscal Opinion of CSOM and CSE Students to CBS, CFANS, and CLA Students

	CSOM & CSE Fiscal	*Other Colleges Fiscal*
Mean	2.926	2.959
Variance	0.693	0.698
t Stat	-0.313	
P(T<=t) two-tail	0.755	