

Choice of Major and Political Attitudes: A Study of University of Minnesota Students

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The purpose of this study is to examine the relationship between university students' chosen area of study (major choice) and the students' self-evaluation of their political stance on both social and economic issues. The students' political stance was evaluated in terms of liberal and conservative in the present study. Major choice was chosen to be a variable because it relates to self-selection and socialization. Students tend to choose areas of study that represent their personal values. Therefore, categorizing participants by major choice is an effective way to ensure that individual values are consistent within sample groups. In the study, data on students' major, college, and self-evaluation of political stance were obtained, and students were assigned to a coding group that related to their area of study. The findings suggest that there is no significant relationship between students' choice of major and their self-evaluation of political stance on social issues. However, the relationship between major choice and self-evaluation of political stance on economic issues is significant.

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A frequent subject of past research has been the study of individual attitudes and perceptions in order to investigate whether these personal attitudes represent the individual's true feelings, or whether they could be attributed to the influence of an external factor, such as an epistemic authority. Epistemic authority is defined by Guimond and Palmer (1996) as a source of knowledge on which an individual relies for a particular domain, such as a peer, professor, text book and so on. The use of university students as a population is a common theme amongst these studies because their environment is surrounded by possible external factors that could influence their perceptions, such as campus groups. The significance of these studies has been the research of how personal characteristics affect self-evaluation, particularly political affiliation, and whether this self-evaluation is consistent amongst populations in similar social groups.

Previous research has suggested several factors explaining this occurrence: (1) self-selection, when people choose disciplines whose views most closely match their own, (2) socialization, when people's belief systems change over time to match their disciplines (Hastie, 2007), and (3) Social Dominance Theory (SDT), the assumption that societies are hierarchical and therefore some groups within the society have more power than other groups. According to SDT, the groups with more power will want to maintain the hierarchy while the lower groups will promote equalization (Kemmelmeier, Danielson, & Basten, 2005). The current study will examine the relationship between chosen area of study (major choice) and political attitudes in University of Minnesota students. Its purpose is to investigate whether those involved in similar majors assert certain political viewpoints because of the nature of their area of study.

Hastie (2007) investigated the effect of higher education on political transition to a more liberal stance. Hastie hypothesized that those who receive a higher level of education become more liberal because they obtain a larger span of knowledge than those with limited education. The findings of Hastie's study did support the researcher's hypothesis that those with a higher education become more liberal. However, unlike the present study, Hastie did not evaluate liberalness according to economic and social issues separately. Therefore, it is unclear whether participants became more socially or economically liberal within Hastie's study because only

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liberalness, in a general sense, was evaluated. Hastie (2007) also noted that students who had chosen to study social sciences were found to be significantly more liberal than those studying business and engineering. Like Hastie (2007), we predict that those involved in social sciences and arts majors will evaluate themselves more liberally than those in business and engineering disciplines. However, unlike Hastie (2007), we will evaluate liberalness according to social and economic issues separately, in order to investigate whether the type of issue has an effect on political perception.

Kemmelmeier, Danielson, and Basten (2005) examined student scholastic achievement and sociopolitical beliefs. Students were recruited through classes categorized into one of two groups: (1) hierarchy attenuating (HA), or (2) hierarchy enhancing (HE). The grouping of each class depended on the concentration of the class and the believed sociopolitical stance associated with that concentration. The researchers defined HE beliefs as ideas and attitudes that provide an intellectual or moral justification for unequal relationships between groups. The HE group consisted of students in business classes. HA beliefs were defined by the researchers as attitudes that tend to be associated with the support of policies that reduce social inequality. The HA group consisted of students in social science classes. The researchers hypothesized that the students in HA classes would demonstrate more liberal viewpoints than those in HE classes. Results of the study supported the researchers' hypothesis. The relevance of this study to the present study is that both evaluate the political attitudes of students in social science and business courses in order to determine if a significant relationship exists between students' political attitudes and their chosen area of study.

Sidanius, van Laar, Levin, and Sinclair (2003) also categorized participants as either HA or HE, however, this was based on the participant's major rather than the course the participant was currently enrolled in. First the researchers examined the association between the HE/HA distinction in college majors and sociopolitical attitudes. The researchers then evaluated whether their findings could be attributed to certain processes, such as self-selection. Their findings suggested that students whose sociopolitical attitudes favored hierarchical enhancement were significantly more likely to self-select an HE major. The relevance of this study to the present study is that it demonstrated that participant major was a more significant variable than current participant class. This is because being enrolled in an HE or HA type class does not guarantee that the student's major falls into the category associated with that class.

Hodgkinson and Innes (2001) investigated the environmental attitudes of college students with respect to their chosen major. The researchers gathered data from students belonging to a variety of concentrations: computer, commerce, law, veterinary, psychology, humanities, sociology, biology and environment. They hypothesized that commerce and economics students would hold less positive beliefs about the environment than students who studied the social and environmental sciences. The results of this study supported the

hypothesis proposed by Hodgkinson and Innes, whereby students in commerce, law and computer studies demonstrated lower pro-environmental attitudes than those involved in sociology, psychology, biology and environmental sciences. Also, an interesting finding of this study was that all participants gave responses that were less pro-environment when the condition involved an economic/environmental trade-off. The work of Hodgkinson and Innes encouraged us to examine more than simply commerce and social sciences students. Their study also demonstrated that other issues could be addressed, rather than simply political attitudes.

Guimond and Palmer (1996) investigated socialization and self-selection among commerce and social sciences students. Similar to the research described above, commerce students were shown to attribute the blame of social issues such as poverty and unemployment to internal dispositions significantly more than social sciences students. The social sciences students were shown to attribute the blame of these issues to external dispositions. In other words, this study found that commerce students tended to blame the individual while the social science students tended to blame the government. The relevance of this study in relation to the current one is that the researchers explored specific social issues in order to evaluate the participants' attitudes towards them. This resulted in more in-depth results compared to other studies, in which the data gathered was more general and did not pertain to a specific aspect of liberalness.

The common theme between the previously discussed studies and the current study is that each has investigated the perceptions of students, often according to a reference group such as area of study or campus group. Our study is intended to build upon previous research by examining a student population to a more specific degree; we will investigate multiple categories of majors, rather than only those known to be hierarchy enhancing or hierarchy attenuating. Unlike Hodgkinson and Innes (2001), the current study will group certain concentrations of study according to the subject matter in order to simplify the data analysis. The current study will also differ from the previous studies by asking for a self-evaluation of each participant's political stance on economic and social issues, rather than evaluating their political stance overall or only with respect to social issues.

The study will be conducted through the administration of surveys to current University of Minnesota students. These surveys will be comprised of questions asking for a self-evaluation of each participant's political stance on both social and economic issues, chosen major, college, such as the College of Liberal Arts (CLA), College of Biological Sciences (CBS), Carlson School of Management (CSOM), etc, GPA and age. The present researchers hypothesize that students whose major choice is related to the arts, social, biological or environmental sciences will demonstrate a significantly more liberal political stance with respect to both social and economic issues than those students in fields related to business, technological sciences, physics and mathematics.

METHOD

Participants

The participants in this study were students currently attending the University of Minnesota ($N=96$). The researchers recruited participants using three methods of convenience sampling. In one method, a researcher went to Coffman Memorial Union, a popular student center. A researcher asked students entering and exiting the building if they would consent to participate in the study by filling out a survey. Students were also recruited from two "Introduction to Research Methods" psychology class labs at the University of Minnesota. The third sampling method involved the online distribution of surveys to students. A copy of the survey was posted online by the researchers through the use of Survey Monkey, a survey and data collection website. Researchers then sent emails about the online survey to friends and acquaintances. All participants were made aware that their participation in this study was voluntary and that they would be awarded no compensation for their participation.

Materials

The survey was created by the researchers and consisted of seven questions. These questions asked students for their age, year in school, major, college (e.g. CLA, CSOM, CBS...) and self-evaluation of their political attitudes on both social and economic issues. The complete survey and consent procedure are shown in Appendix.

Procedure

Each participant was given our consent procedure before participating. Those participants who consented were asked to complete the survey and return it upon completion. The debriefing procedure consisted of the researcher offering an explanation of the study to the participant as well as the opportunity to ask any questions about the study.

RESULTS

After examining the data and discovering the diverse range of study concentrations between and within colleges at the University of Minnesota, the researchers chose to narrow their investigation to major choice and political attitudes on social and economic issues. Both a correlation and an ANOVA were conducted to find if there was a significant relationship between students' political attitudes and their choice of major.

Before conducting the data analysis, researchers categorized participants according to the area of study their major closely resembled, forming five coding groups. The five coding groups were: Group 1, biological, and related laboratory sciences (e.g. biology, ecology, environmental science, etc.), Group 2, social sciences (e.g. psychology, sociology, history, language studies, cultural studies, etc.), Group 3, the fine arts (e.g. education, art studies, media and film studies, etc.), Group 4, business related studies (e.g. finance, accounting, marketing, economics, public relations,

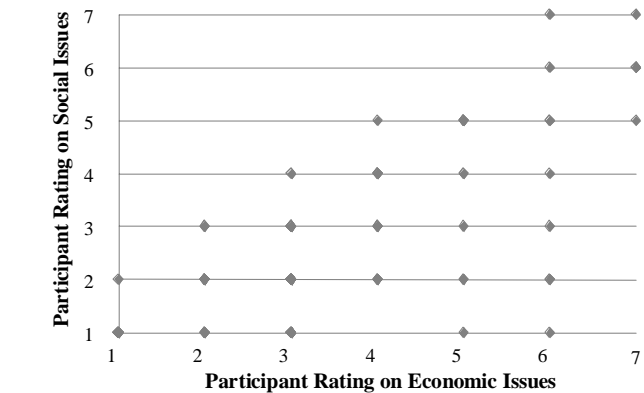


FIGURE 1. Scatter plot showing the positive correlation between participant ratings of their political stance on social issues and their ratings of their political stance on economic issues.

etc.) and Group 5, engineering and computer sciences (architectural design, biomedical and civil engineering, computer science, etc.). Out of the 96 participants in the study, three survey responses were discarded because the participants were listed as graduate students and a specification of the study was to evaluate only undergraduate students. Three more were discarded because the participants had not yet chosen a major. One was discarded due to missing data and another was discarded because the participant had declared two majors that were clearly unrelated.

Participants reported their political stance on social and economic issues using a rating scale adapted from Kimmelmeier et al. (2005). While the rating scale from the study of Kimmelmeier et al. consisted of values from 1-5, the rating scale of the current study ranged from 1 to 7, with "1" representing a liberal stance, "4" representing a moderate stance, and "7" representing a conservative stance.

Results from the data analysis indicated that the participant rating of personal political attitude on social issues significantly correlated with rating of political stance on economic issues [$r(87)=0.726$, $p<.001$]. Figure 1 illustrates the strong and positive correlation between the two variables. The data shows that there was little variation between participants' political stance rating for each type of issue, indicating the consistency of students' personal viewpoints.

We conducted two ANOVAs in order to determine if the mean ratings were equal across groups with respect to both social and economic issues. The ANOVA conducted to examine the relationship between participant rating of political stance on social issues with respect to participant code group did not suggest a significant relationship, $F(4,83)=1.407$, $p=0.239$. Thus, the biological/environmental sciences group ($M=2.0769$, $SD=1.037$, $N=13$), the social sciences group ($M=2.548$, $SD=1.524$, $N=31$), the arts group ($M=2.429$, $SD=0.976$, $N=7$), the business-related studies group ($M=3.037$, $SD=2.009$, $N=27$) and IT/engineering group ($M=3.400$, $SD=1.350$, $N=10$) did not differ significantly on their ratings of their political attitudes on social issues. This lack of differentiation between groups is illustrated in Figure 2.

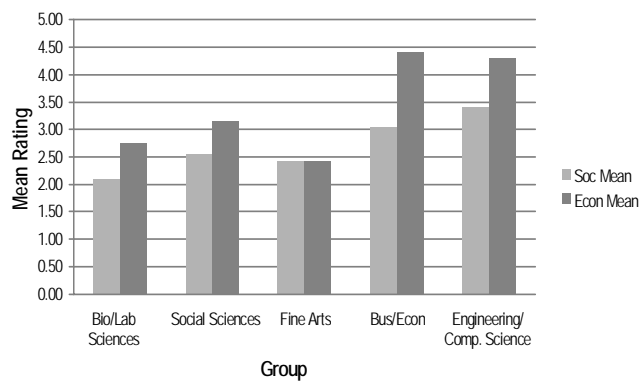


FIGURE 2. Bar chart displaying the group mean ratings for political stance on economic issues and on social issues.

The ANOVA conducted to examine the relationship between participant rating of political stance on economic issues with respect to participant code group did suggest a significant relationship existed between the two variables, $F(4,83)=4.993$, $p=.001$. In order to further investigate this finding, the researchers conducted a Tukey HSD post-hoc comparison to determine where the significant relationship occurred. This comparison indicated that the business related studies group ($M=4.4074$, $SD=1.759$, $N=27$) was significantly less liberal economically than the biological/environmental sciences group ($M=2.769$, $SD=1.301$, $N=13$), the social sciences group ($M=3.161$, $SD=1.529$, $N=31$), and the arts group ($M=2.4286$, $SD=1.134$, $N=7$). The business studies group was not significantly less economically liberal than the IT/engineering group ($M=4.300$, $SD=1.337$, $N=10$). The IT/engineering group had a mean rating similar to the business students, but not significantly different from the means of the other three groups. These results are illustrated in Figure 2.

DISCUSSION

The findings suggest that there is not a significant difference in participant rating of personal political stance on social issues between the five code groups. This implies that area of study does not have an effect on an individual's perception of their social liberalness. These results are different from those found in Hastie (2007), who found that social sciences students were significantly more liberal than business students. However, it is hard to compare the results of the two studies because, unlike the present study, Hastie did not differentiate being economically liberal from being socially liberal. The results of the present study are also inconsistent with the findings of Guimond and Palmer (1996), who found that commerce students were significantly more conservative than social science students in their attitudes towards social issues such as poverty and unemployment. The reason for this is most likely that we did not address specific social issues as Guimond and Palmer did, and this affected our data because participants might have changed their opinion had they been presented with a specific situation. Future research should

evaluate this result on a deeper level in order to find an explanation for the inconsistencies between the present and past research.

One possible solution to this problem of inconsistencies between studies would be to conduct a meta-analysis. This would allow the researchers to make a comparison of the data of past studies and the present study, because a meta-analysis has the ability to control for between-study variations, as long as the research hypotheses of the separate studies are similar. This would enable researchers to determine effect sizes as well as discover if there are any moderator variables present that could affect the data and cause these inconsistencies.

Unlike the relationship between area of study and political stance with respect to social issues, a significant effect of area of study code group on self-rating of political stance regarding economic issues was found. Based on the post-hoc comparison, business and economics students were found to be significantly less economically liberal than the students in the biological/related lab sciences, social sciences and fine arts students. A possible explanation for this could be that, because business students often encounter more economic problems in their curriculum than those studying other concentrations, their increased knowledge of the effects of economic issues could make them act more conservatively when considering these issues. Another explanation could be explained by the self-selection theory; when students enter the university they have their political views and select their major by finding the one whose views most closely matches their own.

One interesting finding of this study was that, for each code group, the mean rating for political stance with respect to economic issues for each group was less liberal than their mean rating of political stance with respect to social issues, with the exception of the fine arts group, whose mean ratings did not differ. This means that, with the exception of the fine arts group, all code groups on average reported that they were less liberal economically than socially. This result is consistent with the findings of Hodgkinson and Innes (2001) in which all participants gave responses that were less pro-environmental when the condition involved an economic/environmental trade-off. This implies that students in most areas of study become less liberal when an economic policy is in question. A possible explanation for this could be that people feel more directly affected by economic issues than they do by social issues, leading them to be more conservative in their perception because it is more likely to affect them. For example, having a neighbor who loses their job does not directly affect you, because your neighbor not having a job does not change your own circumstance. Yet, if a neighbor's house is foreclosed on, this directly affects the person because it in turn decreases the value of their house and a person will more likely take greater caution in dealing with this issue than the previous one.

A significant limitation to this study was that an operational definition of both economic and social issues was not provided to participants in the survey. This is a limitation because the interpretation of these two concepts can vary

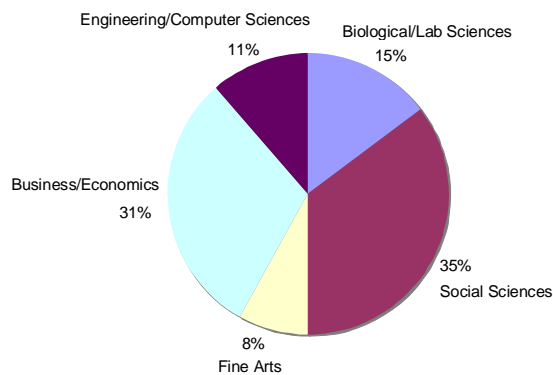


FIGURE 3. Pie chart depicting each code group's size as a percentage of the total sample.

greatly between participants, resulting in inaccurate data. The data will be more accurate if a concrete definition is provided because this will leave the term less open to interpretation. This could also explain why the results of the current study do not agree with the findings of Guimond and Palmer (1996). Their study asked specific questions that related to social issues while the current study simply asked participants to give an evaluation of their position on social issues. In future research, one way to increase the likelihood that participant interpretation of a concept is more consistent would be to provide the participant with a definition of the concept within the survey. This could lead to a greater chance that participants will rate themselves based on the same principles instead of their own personal interpretation, and allow for greater accuracy.

A final recommendation relates to one of the significant shortcomings of this study. Within this study, the number of participants included in each coding group varied considerably. Some groups were well represented, such as the social sciences group, which made up 35% of our total sample, while other groups were much smaller and possibly underrepresented, such as the fine arts group, which made up only 8% of our total sample. Group sizes as a percentage of the total sample are illustrated in Figure 3. To obtain more accurate results, future researchers should acquire either a larger sample size than that of this study, or they should utilize a sampling technique that will ensure that the numbers of each code group are relatively similar.

Continued research on this topic is strongly advised by the present researchers. The importance of the present study and the other past studies is that the population examined represents the future workforce and national leaders. Researching this group and investigating their perceptions may give key insights into future policy and development trends.

APPENDIX

SURVEY:

Age: _____

Year in school: _____

Major: _____

College: _____

GPA (approximate if not known): _____

How would you describe yourself politically?

On social issues:

1 2 3 4 5 6 7
Liberal Conservative

On economic issues:

1 2 3 4 5 6 7
Liberal Conservative

CONSENT PROCEDURE:

You are being asked to complete a questionnaire as a part of a class project in a research methods course in the Department of Psychology at the University of Minnesota. If you choose to participate, no identifying information will be gathered from you, so it will be impossible to associate you with your responses. If you choose to answer the questions, you may stop answering at any time. You may withdraw your responses at any time, including after you have completed the survey. You may ask me questions before or after you complete the questionnaire. I also can tell you how to contact the course instructor if you have questions for him.

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