Running head: MODULE 6 – CRITICAL THINKING – OPTION 1

Module 6 – Critical Thinking – Option 1

John Imbur

MIS 581-1 – Capstone – Business Intelligence and Data Analytics

Colorado State University – Global Campus

Dr. Osama Morad

November 28th, 2020

MODULE 6 – CRITICAL THINKING – OPTION 1

Table of Contents

Abstract . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 3

Research Hypothesis . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 3

Introduction . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 4

Objectives . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 5

Overview of Study . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 5

Literature Review . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 5

Research Design . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 7

1. Methodology . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 7
2. Methods . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8
3. Limitations . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8
4. Ethical Considerations . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 8

Findings . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 9

Conclusions . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 10

Recommendations . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 10

References . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . . 16

MODULE 6 – CRITICAL THINKING – OPTION 1

Module 6 – Critical Thinking – Option 1

**Abstract**

For the Capstone project, the research question will be looking at social survey data gathered from the General Social Survey (GSS) for social sentiment analysis for the Unitarian Universalist Association (UUA) as it applies to attitudes related to racial equity and social justice. This project looks at whether demographic information of an individual, specifically political and/or religious sentiments, has any statistical relevance with respect to one’s attitude towards a national focus on addressing issues regarding racial equity. Based on the results, prescriptive suggestions will be provided to the UUA as far as likely allies among other denominations as well as populations that might be suitable for outreach and support.

**Research Hypothesis**

The GSS has a number of different questions that touch on racial equity, and a tally will be created with a score from 1 to 7 based on the scale of answers available for specific questions. The sum of the non-null values divided by the number of non-null responses will be a composite racial equity score each respondent will receive. Each respondent provided a political self-assessment, which will also scored 1 to 7. With respect to religion, each respondent provided a religious self-assessment of church type that ranges from no answer, liberal, moderate, or fundamentalist. Each respondent’s strength of their religious affiliations will be ranked ranging from 1 to 7. Both the racial equity index and religiosity strength rankings will have one subtracted from it and normalized from 0 to 1. Lastly, the values will be aggregated based on political score as well as church type, calculating the mean of the normalized racial equity index as well as the religious strength, followed by linear regression performed against the political self-identified index.

MODULE 6 – CRITICAL THINKING – OPTION 1

The first null hypothesis is that the P value is greater than .05 for the linear regression of the political ranking and the mean of the racial equity index over each of the religious categories. The alternative hypothesis is that the political ranking and the mean of the racial equity index over each of the religious categories will have a P value less than or equal of .05, meaning the first null hypothesis can be rejected.

The second null hypothesis is that the P value is greater than .05 for the linear regression of the political ranking and the mean of the strength of religiosity over each of the religious categories. The alternative hypothesis is that the political ranking and the mean of the strength of religiosity over each of the religious categories will have a P value less than or equal of .05, meaning the second null hypothesis can be rejected.

**Introduction**

The UUA is a quasi-Protestant denomination that is more aligned with humanism then Christianity that skews liberal on the political scale and is made up of individual congregations from around the country. Each year the UUA has an annual General Assembly (GA) in June where they collectively vote and agree upon an area of emphasis for activism and social justice work.

With the killing of George Floyd on Memorial Day this year at the end of May 2020, America saw significant social upheaval and unrest as millions took to the streets demanding change and accountability in policing reform and the judicial system as it relates to structural racism. When the denomination met virtually for their annual GA in June 2020, the focus area of racial equity was chosen along with the support of Black Lives Matter (BLM). The research question is whether the GSS data could be used to help inform this year’s area of focus and possibly for other areas of focus in future years.

**Objectives**

The objective is to identify other denominations with which to possibly ally with on racial equity and other social justice causes. On the other side of the coin, there may be others in religious denominations not typically considered as an ally that share common purpose and interest on issues like racial equity. These people and organizations may be amenable to collaborative outreach and education seeking opportunities to change hearts and minds within their denominational organizations as well as in society at large. This will be done by looking at both political persuasion as well as religious affiliations.

**Overview of Study**

For this research project, previous research that has made use of the GSS has been identified as a source of guidance on how other researchers have made use of the social survey data. With the entrenchment of different political affiliations, particularly over the last couple of decades, there appears to have been a hardening of political views, in some cases perhaps with religious institutions, particularly along culture war issues. That said, the hope is to find common ground and purpose with different religious denominations, even those that may not appear to be natural allies. An attempt was made to find previous research that touched on political affiliation, religiosity, and usage of the GSS in general.

**Literature Review**

With the quality set of data in the GSS and a question that looks for relationships in attitudes based on religious affiliation, a sampling of existing research that has utilized the GSS was sought to assess how other researchers have set up their research methodology. The literature review was done in two parts, first a more general set of papers that look more at the efficacy of using the GSS in general, followed by a closer look at specific research focused on tracking attitudinal trends.

MODULE 6 – CRITICAL THINKING – OPTION 1

The first paper was “Reliability of the core items in the General Social Survey: Estimates from the three-wave panels, 2006–2014”, which looked at the reliability of the GSS. The researchers looked at the consistency of questions over a series of surveys, specifically core questions, to see how reliable those questions are over time. (Hout & Hastings, 2016) They did this, factoring in the reality that some attitudinal changes are to be expected, and their research provides a reliability ranking of different questions based on their methodology. This was instrumental in deciding which GSS questions to use for this research for the UUA denomination.

A paper titled “Supporting evidence: Why social scientists should sometimes consider data other than the General Social Survey” looked at the benefit of using additional data sources beyond just the GSS, particularly when looking at religion. While the authors make the case that other social survey sources can be beneficial, they also acknowledge that the GSS is the gold standard for social survey data in America. (Hackett, Smith, Sciupac, & Gecewicz, 2018) The GSS alone will suffice for the Capstone project, but in the real world it would be good to expand the data sources to verify the pros and cons of using additional social surveys. This is particularly true since there are only 2500 or so responses with each iteration of the bi-annual GSS survey, so there really is not enough to drill down into specific denominations such as the UUA.

The next paper reviewed was a look at attitudinal change over the GSS’ first four decades. Titled “A generation of attitude trends among US householders as measured in the NORC General Social Survey 1972–2010”, the author looks at the change over time with respect to different attitudes relative to different societal concerns. (Davis, 2013) While the focus for this paper is just on the most recent GSS from 2018, a similar type of review could be done back to previous years’ surveys based on the questions that were used.

MODULE 6 – CRITICAL THINKING – OPTION 1

The paper titled “A longitudinal analysis of gendered association patterns: Homophily and social distance in the General Social Survey” presents the research in homophily, the tendency for individuals to associate with others self-identified as peers. (Brashears, 2015) This tendency to self-select others that are more homogenous may prove useful within a church environment which would rank high on the homophilic scale. This will also impact the political grouping that so many find themselves in based on their partisan affiliations and social networks.

The researchers that wrote “Partisan strength, political trust and generalized trust in the United States: An analysis of the General Social Survey, 1972–2014” looked at the strength of partisan feeling with political and overall trust. (Hooghe & Oser, 2017) While this precedes the time that is being studied, this is still useful as relationships are explored that relate to the social justice issues being worked on by the UUA, especially as they relate to partisan position.

Lastly, the paper titled “U.S. citizens' current attitudes toward immigrants and immigration: A study from the General Social Survey” was pulled as it looks at the issue of immigration, which is an issue that has been the focus of the UUA in previous years with respect to human rights for asylum seekers and American immigration policy. (Pryce, 2018) Again, this paper will help with the specific review of the attitudes studied in the paper as well as the general methodology in the use of the GSS for this type of research.

**Research Design**

**Methodology**

As previously described, the methodology will be to create a racial equity index as well as strength of religiosity based as a composite across multiple questions. In each of these indexes, values will be assessed from a variety of attributes, with the mean of the non-null values for each category for the first two rankings.

MODULE 6 – CRITICAL THINKING – OPTION 1

Both political persuasion and religious belief will each be from a specific question that respectively relies on the respondent’s self-assessment. While not ideal and dependent on the accuracy and honesty of each respondent, this was deemed reasonable and necessary.

There are two hypotheses, with the first the correlation of the racial equity index as the independent variable with the political range as the dependent variable for each of the categorical religious groups. The second is the strength of religiosity as the independent variable, again with the political range as the dependent variable, grouped by the different religious categories. If there is any correlation, further analysis can be made across other demographics like age, gender, race, education, and socio-economic status.

**Methods**

The correlation will be using linear regression to assess whether any statistically relevant relationship exist between the respective rankings and the political index, grouped by religious category. A P value of under .05 will be the determinant that the null hypothesis will be rejected.

**Limitations**

Because not all questions are asked of all participants, the methodology of using the mean of the non-null answers for a ranking for the different areas of interest is suggested as a proxy. Ideally all respondents of the survey would have identical questions, but that is not always the case. This is true not just from one year to the next but even within a specific year’s survey. With this in mind, and because the interest is less historical focused on more recent attitudes, only questions with consistent use in the last four surveys dating back to 2012 were considered.

**Ethical considerations**

Due to the way that the GSS is collected, there are not deemed to be any ethical concerns. The data is gathered and anonymized per strict best practice guidelines for social research.

MODULE 6 – CRITICAL THINKING – OPTION 1

**Findings**

The first step was to analyze the distribution of the GSS responses broken up over both political and religious persuasions. As can be seen in Figure 1, there is a normalized bell curve of respondents with the lionshare in the political middle across liberal churches, moderate churches, and fundamentalist churches and denominations. It was decided to focus on these broad categories instead of specific denominations since there are only 2500 responses in a given year and the sample sizes would be too small if broken down into specific denominations. What was revealed is that fundamentalist churches are in the minority with moderate and liberal churches comprising the majority of churches. Figures 2 through 6 show the distribution of the racial equity index across all of the different religious categories.

Taking the aggregate mean across each religious and political category for both the racial equity index as well as the religious strength index showed there was in fact a linear relationship between each index and the seven political groupings ranging from extreme conservative to extreme liberal. In fact, this was validated not just overall as seen in Figures 7 and 8, but with the results on each of the specific religious categories as seen in figures 9 through 12. For the racial equity index for the first hypothesis, the Pearson coefficient was under .001, so the null hypothesis was rejected. For the religiosity strength index for the second hypothesis, the Pearson coefficient was .0285, also under .05, so that null hypothesis was rejected as well. Each of the subcategories of religious types also rejected the null hypothesis with the one exception being the religiosity strength and political persuasion for those who did not identify a church, but all the categories with a selection had a P value under .05. Interestingly, the relationship with religiosity strength and political persuasion was a negative slope with those self-identified as extremely conservative being the most self-identified religious on down to the most liberal being the least.

MODULE 6 – CRITICAL THINKING – OPTION 1

**Conclusion**

This methodology seems promising and should help with future investigations of different forms of social justice concerns. Not only were the results statistically significant, but the trends seem to support additional conclusions that may prove useful. The first is that there are a lot more individuals that self-identify as religiously moderate and liberal compared to fundamentalist. The second is that political alignment appears to map with concerns over social justice, at least with the specific case of racial equity. The third is that there tends to be more political conservatism with fundamentalists than those in liberal and moderate denominations. The fourth is that there is a negative correlation to strength in religiosity and political leaning, with extremely conservative identifying as most religious and a diminution in the strength of religiosity as individuals trend more liberal.

What does this all mean? There is a lot of opportunity for finding allies in other liberal and moderate denominations, there are a lot more of us, there is a potential benefit in encouraging religiosity to increase enthusiasm, and there are potential allies that identify as fundamentalist liberals that might be effective change agents within their houses of worship.

**Recommendations**

Further research can be pursued with a similar methodology over other areas of interest like environmental protection, abortion, gun control, and voter protection and access. As was noted earlier, other public social surveys might be useful, particularly as related to religiosity and religious affiliation. (Hackett, Smith, Sciupac, & Gecewicz, 2018) Also, the work done could be replicated over the last four surveys back to 2012 based on the questions used. This would allow the analysis of trends over time that might be useful for the UUA to consider for deeper understanding of results and as we prepare for the newest results from the 2020 GSS.

MODULE 6 – CRITICAL THINKING – OPTION 1

|  |  |
| --- | --- |
|  |  |

*Figure 1.* Total responses for the seven political bins (Conservative -> Liberal) and the three religious categories (Liberal, Moderate, Fundamentalist), with unk. or n/a zero in both scales.

|  |  |
| --- | --- |
|  |  |

*Figure 2.* Total distribution of the racial equity index [blm\_index] overall.

MODULE 6 – CRITICAL THINKING – OPTION 1

|  |  |
| --- | --- |
|  |  |

*Figure 3.* Total distribution of the racial equity index [blm\_index] for unspecified religious pref.

|  |  |
| --- | --- |
|  |  |

*Figure 4.* Total distribution of the racial equity index [blm\_index] for liberal denominations.

MODULE 6 – CRITICAL THINKING – OPTION 1

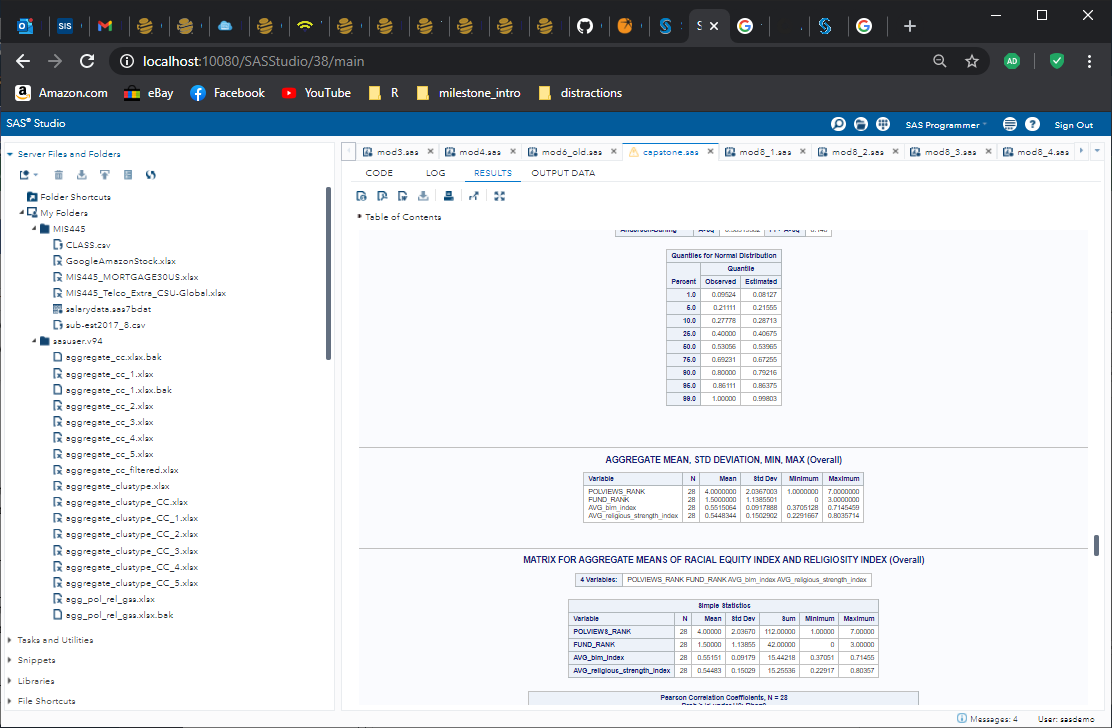
|  |  |
| --- | --- |
|  |  |

*Figure 5.* Total distribution of the racial equity index [blm\_index] for moderate denominations.

|  |  |
| --- | --- |
|  |  |

*Figure 6.* Total distribution of the racial equity index [blm\_index] for fundamentalist denominations.

MODULE 6 – CRITICAL THINKING – OPTION 1



*Figure 7.* Mean, standard deviation, min, and max for aggregate grouping of religious categories and political leanings [Overall].

|  |  |
| --- | --- |
|  |  |

*Figure 8.* Linear regression matrix for aggregate means of racial equity and religiosity indices [Overall].

|  |  |
| --- | --- |
|  |  |

*Figure 9.* Linear regression matrix for aggregate means of racial equity and religiosity indices [No specified religion].

MODULE 6 – CRITICAL THINKING – OPTION 1

|  |  |
| --- | --- |
|  |  |

*Figure 10.* Linear regression matrix for aggregate means of racial equity and religiosity indices [Religious Liberal].

|  |  |
| --- | --- |
|  |  |

*Figure 11.* Linear regression matrix for aggregate means of racial equity and religiosity indices [Religious Moderate].

|  |  |
| --- | --- |
|  |  |

*Figure 12.* Linear regression matrix for aggregate means of racial equity and religiosity indices [Religious Fundamentalist].

MODULE 6 – CRITICAL THINKING – OPTION 1

References

Brashears, M. (2015). A longitudinal analysis of gendered association patterns: Homophily and social distance in the General Social Survey. *Journal of Social Structure*, 16(1). doi: 10.21307/joss-2019-013

Davis, J. (2013). A generation of attitude trends among US householders as measured in the NORC General Social Survey 1972–2010. *Social Science Research*, 42(3), 571-583. Doi: 10.1016/j.ssresearch.2012.11.002

Davis, K. (2012). *Ethics of big data*. Sebastopol, CA: O'Reilly Media, Inc.

EMC Education Services. (2015). *Data science and big data analytics*. Indianapolis, IN: John Wiley & Sons, Inc.

Hackett, C., Smith, G., Sciupac, E., & Gecewicz, C. (2018). Supporting evidence: Why social scientists should sometimes consider data other than the General Social Survey. *Journal for the Scientific Study of Religion*, 57(4), 854-857. doi: 10.1111/jssr.12570

Hooghe, M. & Oser, J. (2017). Partisan strength, political trust and generalized trust in the United States: An analysis of the General Social Survey, 1972–2014. *Social Science Research*, 68,132-146. Doi: 10.1016/j.ssresearch.2017.08.005

Hout, M. & Hastings, O. (2016). Reliability of the core items in the General Social Survey: Estimates from the three-wave panels, 2006–2014. *Sociological Science*, 3(43), 971-1002. doi: 10.15195/v3.a43

MODULE 6 – CRITICAL THINKING – OPTION 1

Machi, L., & MacEvoy, B. T. (2016). *The literature review – Six steps to success (3rd ed.)*. Thousand Oak, CA: Corwin – Sage Publishing.

Mayer Hoffman McCann. (2019). Consolidated Financial Statements and Supplemental Schedules. Retrieved from: https://www.uua.org/files/pdf/u/uua\_-\_consolidated\_financial\_statements\_fy19\_0.pdf

NORC. (2020). About the GSS. Retrieved from: http://gss.norc.org/About-The-GSS

O’Leary, Z. (2017). *The essential guide to doing your research project (3rd ed.)*. Thousand Oaks, CA: Sage Publishing.

Pryce, D. (2018). U.S. citizens' current attitudes toward immigrants and immigration: A study from the General Social Survey. *Social Science Quarterly*. 99(4), 1467-1483. doi: 10.1111/ssqu.12514

Smith, Tom W., Davern, Michael, Freese, Jeremy, and Morgan, Stephen, General Social Surveys, 1972-2018 [machine-readable data file] /Principal Investigator, Smith, Tom W.; Co-Principal Investigators, Michael Davern, Jeremy Freese, and Stephen Morgan; Sponsored by National Science Foundation. --NORC ed.-- Chicago: NORC, 2018: NORC at the University of Chicago [producer and distributor]. Data accessed from the GSS Data Explorer website at [gssdataexplorer.norc.org](http://gssdataexplorer.norc.org/).

UUA. (2020). About the Unitarian Universalist Association. Retrieved from: <https://www.uua.org/about>