Introduction

Modern politics and the internet have allowed for a greater audience of conspiratorial thinking. While this kind of thinking has always been prevalent, such as during the Red Scare, the internet has increased who has access to such beliefs, thus giving misinformation spreaders and believers a broader platform. Facts are overridden by conclusions based on logical fallacies, such that vaccines cause autism or Bill Gates wants to microchip people. Is there a specific demographic or characteristic linked with conspiratorial thinking?

This question is important because it aims to identify the population that perpetuates and adheres to conspiratorial thinking. This study is not attempting to "cure" conspiratorial thinking, but to identify its followers. Once this demographic or characteristic is identified, others can better understand conspiratorial thinking, and study how to curve its infectious spread. Some scholars have studied indicators in conspiracy theories such as beliefs in certain complexes or self-reflective narratives, but these findings do not examine the root of believer identity through information that is more easily obtainable.

This study will address this question by exploring literature surrounding the topic, where there are questions between associations with conspiratorial thinking and demographic identity or belief systems. This study theorizes that characteristics in thought processes, rather than concrete demographics, are greater determinants in conspiratorial thinking. Then, we will review a 2019 pilot dataset conducted by the American National Election Studies that includes questions on conspiratorial thinking and demographics. This dataset was chosen because it is reputable, representational of the American population, and it includes data on conspiratorial beliefs and social media use.

Literature Review

Oliver and Wood's Belief Systems

In the study "Conspiracy Theories and Paranoia Style(s) of Mass Opinion", Oliver and Wood studied the pervasiveness of conspiratorial beliefs in the general public. Previous studies have undergone interpretive analysis of conspiracy theories themselves rather than focusing on empirical research about mass support. Rather than focusing on the "what", Oliver and Wood focused on the "who". However, Oliver and Wood do not answer the question of who the active propagators of conspiracy theories are, and instead found three important characteristics of conspiracism: Conspiracism is widespread and a "stable aspect of public opinion," conspiracy theories are differentiated "somewhat" between people who are uniformly suspicious of power and those that are ideologically oriented, and that conspiratorial thinking is evident across the ideological spectrum."[1] Based on this, they attempted to define what specific belief system is associated with conspiratorial thinking. They defined these five belief groups as predispositions indicative to conspiratorial beliefs:

Supernatural: "Willingness to make attributions to unseen phenomena (the Devil and angels)"[2]

Manichean: A worldview that is "adopted when a person believes that political events are the consequence of a contest between good people and malevolent [evil] people."[3] This was gauged through the question: "Politics is ultimately a struggle between good and evil."[4]

End Times: A level of agreement to the statement, "We are currently living in End Times as foretold by Biblical Prophecy."[5]

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[1] Oliver and Wood, "Conspiracy Theories and the Paranoid Style(s) of Mass Opinion," 958-959.
[2] Oliver and Wood, "Conspiracy Theories," 959.
[3] Ibid, 953.
[4] Ibid, 959.
[5] Ibid, 959.

Secret Cabal: Agreement to the question, "Much of what happens in the world today is decided by a small and secretive group of individuals."[6]

Paranormal: The belief in paranormal phenomena such as ghosts an extrasensory perception (ESP)[7]

From these five variables, they found that the attraction to Manichean narratives, or the belief in unseen forces, is a strong predictor in supporting conspiracy theories.[8] They also found that conspiratorial beliefs are not an expression of political ignorance when testing levels of political interest and knowledge among the belief systems. The data they used was sourced from four nationally representative surveys from 2006, 2010, and 2011 from the Cooperative Congressional Election Studies. This is the most obvious limitation from the study: Because some of the data is almost fourteen years old, are their findings prevalent in 2020?

Landrum and Olshansky's Questions on Deception About Science

The findings of Oliver and Wood are propagated by the study by Landrum and Olshansky, "The Role of Conspiracy Mentality in Denial of Science and Susceptibility to Viral Deception About Science." The study examines political parties and how they respond to conspiracy theories in the scientific community such as climate change and the Zika virus. They found that conspiracy mentality and science literacy are important in believing deceptive claims about science, but evidence for "the importance of conspiracy mentality in the rejection of science is much more mixed."[9] Once again, we see how specific demographics are not associated with conspiratorial thinking, but "conspiracy mentality," which Oliver and Wood defined in its

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[6] Oliver and Wood, "Conspiracy Theories," 959.
[7] Ibid, 959.
[8] Ibid, 952.
[9] Landrum and Olshansky, "The Role of Conspiracy Mentality in Denial of Science and Susceptibility to Viral Deception About Science," 193.

six belief system subcategories. There are two limitations with their study: The convenience sample they used was not nationally representative or probabilistic and the survey the fielded did not ask many questions (Landrum and Olshansky 206).

Based on these two studies, we can expect to see the following trends:

- Conspiratorial thinking is widespread and dependent on mentality and beliefs.
- Conspiratorial thinking is not specific to any political party.
- Conspiratorial thinking is not a product of political ignorance, which was measured by Oliver and Wood by levels of political interest and knowledge.

Variable Codebook (Data & Methods)

This study will use the ANES 2019 pilot dataset that used a sample size of 3,165 respondents. There are three dependent variables: conspire1, conspire2, and conspire3. These are questions that gauge agreement to specific conspiracy theories on a 1 to 5 scale, with 1 coded as "Not at all" and 5 as "Extremely Well." For the study, the levels of agreement to the conspiracy theory variables will be used to see if there are any associations with specific demographics.

DEPENDENT VARIABLES

Conspire1 (Control): "Most business and politics in this country are secretly controlled by the same entity."[10]

Conspire2 (Secret): "It is usually difficult to keep a secret for long about what happens in government."[11]

[10] ANES 2019 Pilot Study Codebook," 26.
[11] ANES 2019 Pilot Study Codebook," 26.

Conspire3 (Lies): "Much of what people hear in schools and the media are lies designed to keep people from learning the real truth about those in power."[12]

INDEPENDENT VARIABLES

Gender: Gender profile of male or female.

Race: Recoded to white or nonwhite from an original scale of 8 different races.

Education: A 1-6 sliding scale, with 1 as "No high school education" and 6 as "Post-grad education."

Importance of Religion: A 4 point scale that answers the question: How important is religion to you?" with 1 as"Very important" and 4 as "Not at all important."

Trust in Experts: A 5 point scale that answers the question: "When it comes to public policy decisions, whom do you tend to trust more, ordinary people or experts?" with 1 as "Trust ordinary people much more" and 5 as "Trust experts much more". One case was removed because the respondent did not answer the question.

Party Affiliation: 7-point party identification, with 1 as "Strong Democrat" and 7 as "Strong Republican."

Political Interest: A 4-point scale that gauges political interest, with 1 as showing interest "Most of the time" and 4 as "Hardly at all." Recoded to remove the 6 respondents that did not answer the question, and the 128 that answered "Don't know".

Facebook Use: A 7-point scale that responds to the question "How often do you use Facebook?" with 1 as "Many times every day" and 7 as "Less than once a month." Recoded to remove the 626 respondents that did not answer the question.

[12] "ANES 2019 Pilot Study Codebook," 27.

Theory & Hypothesis

Based on the prior studies' findings, this study anticipates to see similar results. The hypotheses are as follow:

- **H1: There is no association between conspiratorial thinking and political affiliation.**

This hypothesis is based on the findings of Oliver and Wood, where they found that conspiratorial thinking was not associated with a specific political party. This hypothesis aims to replicate that aspect of the study.

- **H2: There is no association between conspiratorial thinking and race, gender, education, trust, and facebook use.**

This hypothesis is based on the findings of Oliver and Wood, where they found that conspiratorial thinking was found across a wide spectrum of demographics.

- **H3: There is no association between conspiratorial thinking and political interest.**

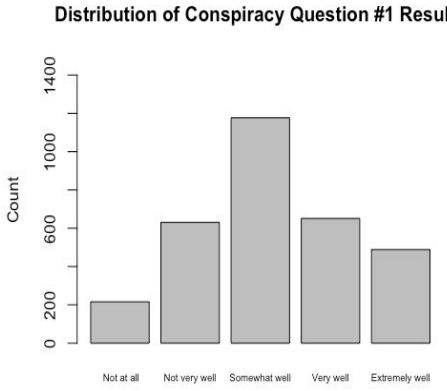
This hypothesis is based on the findings of Oliver and Wood, where they found that conspiratorial thinking is not associated with political knowledge. While political interest is separate from political knowledge, political interest requires political knowledge.

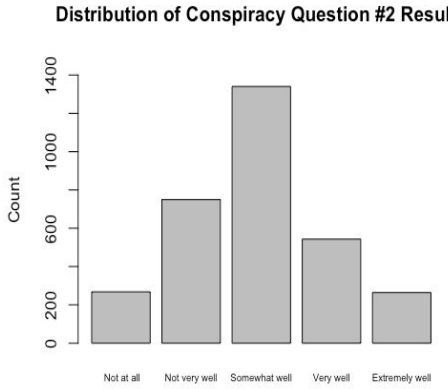
- **H4: There is a negative relationship between conspiratorial thinking and religious importance.**

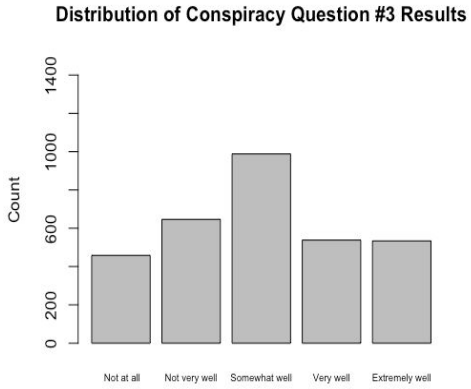
This hypothesis is based on the findings of Oliver and Wood, where they found that the Manichean belief system (Is politics based around good and evil people?) is associated with conspiratorial thinking. Religious importance is a similar indicator of a belief system that may predispose people to conspiratorial thinking, especially since it may rely on faith of the unseen or

unknown. We want to see if religious importance can be translated into susceptibility to conspiratorial thinking.

Conspiracy Questions Distribution

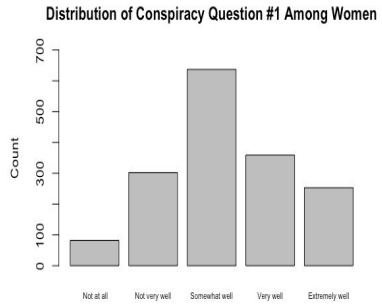


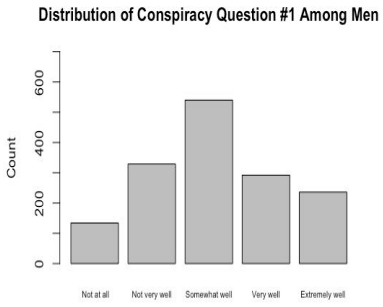


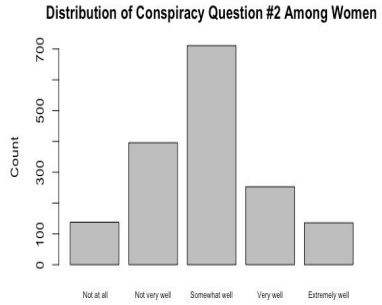


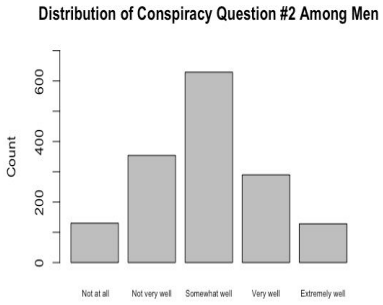
Based on the distribution of the questions, we can see that there is a normal distribution centering around the mean answer of 3, a neutral response of “Somewhat Agree”. Now, we see if these results are different across the demographic of gender.

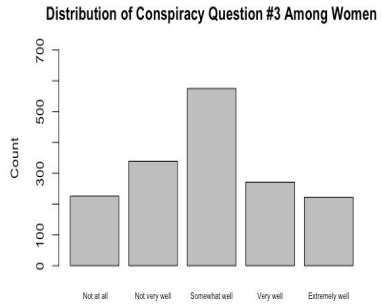
Conspiracy Questions Distribution (Women & Men)

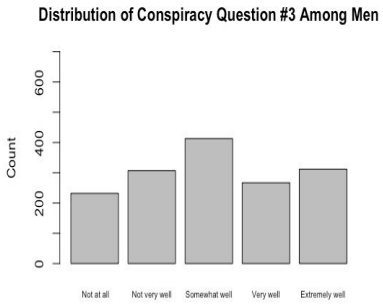












These distributions are very similar to one another, with the only exception being question #3. There is a greater distribution of women centering the mean answer of 3 for question #3 in comparison to the men, where the unilateral curve is not as prevalent. Now, we must examine to see if there is statistical significance between male and female respondents through a t-test. Based on the results of the t-test with a .0007 p-value, there is a true difference in the mean scores not equal to 0, in that mean score for men (3.109) is statistically significant in its difference from the mean score for women (3.24). The confidence interval of -0.2 to -0.05 suggests that on average, men score lower on the conspiratorial belief questions, meaning that they agree less with conspiratory beliefs than women. However, while the margin of differences is statistically significant, it is still not a large difference between genders.

T-TESTS FOR MULTIPLE DEMOGRAPHICS

Variable	Mean Score
Gender* **	
Male	3.11
Female	3.24
Party* **	
Democrat	3.27
Republican	3.05
Race* **	
White	3.14
Nonwhite	3.25

All three demographic categories of gender, party, and race are statistically significant, in that for each demographic, there is a statistically significant difference between groups. However, it is important to consider that all of these center around the mean score of three, which equivocates to the ambivalent answer of "somewhat well [agree]."

Mean Distribution for Score Controlling for Party

	Question 1		Question 2		Question 3	
Variables	Mean (Reps)	Mean (Dems)	Mean (Reps)	Mean (Dems)	Mean (Reps)	Mean (Dems)
Male	2.9	3.23	3.014	2.98	3.709	2.35
Female	3.18	3.29	3.06	2.88	3.58	2.54
White	3.04	3.288	3.06	2.99	3.62	2.235
Nonwhite	3.06	3.24	2.918	2.826	3.75	2.816
Education	3.3	3.93	2.56	2.2	3.96	2.23
Importance of Religion	3.09	2.97	3.408	2.757	3.712	2.34
Trust	2.94	2.8	2.45	2.42	3.916	3.718
Political Interest	2.63	3.99	3.99	2.81	3.44	1.73
Facebook Use	2.73	3.635	3.507	2.59	3.619	2.034

For most variables, when controlling for party there are some greater changes for mean values. Most notable changes are found in political interest, education, and facebook use. The next test will include performing chi square tests of independence on all of the variables to see which ones are associated with conspiratorial thinking.

Chi Squared Tests of Independence for Demographics

	Question 1	**Question 2**	**Question 3**
Variables	Chi-Squared Value	Chi-Squared Value	Chi-Squared Value
Gender	25.893***	7.02	40.178***
Race	8.4135**	9.6**	16.926***
Education	53.81***	51.924***	84.362***
Importance of Religion	32***	35.14***	170.45***
Trust	170.7***	98.719***	738.89***
Political Party	13.931***	3.464	202.41***
Political Interest	95.805***	52.094***	216.29***
Facebook Use	27.35	35.715**	42.419**
Party Affiliation (7 Point)	42**	42.192**	739.45***

Note: *p < 0.1, **p < 0.05 , ***p < 0.01

Based on the chi squared tests of independence, the results show that most of the demographic variables have a statistically significant association with the questions on conspiratorial thinking. The only demographics that were inconsistent with having a statistically significant association was facebook use, political party, and gender. Gender and political party have low chi squared values as well, meaning that there is little evidence that the association is statistically significant based on the chi squared test. These relationships are not an issue across the wider results among demographics because the statistically insignificant relationships appear to be random, and these demographics (Facebook Use, Political Party, Party Affiliation) still

have statistically significant association with the other questions. For the next model, I will not be including “Political Party” with “Party Affiliation” due to their redundancy.

Multiple Regression Predictors on Conspiratorial Thinking

Variables	**Question 1(Control)**	**Question 2 (Secret)**	**Question 3 (Lies)**
Female	0.13** (0.163)	-0.062 (0.15)	-0.03 (0.045)
Nonwhite	0.062 (0.052)	.0.063 (0.042)	0.19*** (0.05)
Education	-0.042** (0.015)	-0.024* (0.014)	-0.037* (0.015)
Importance of Religion	0.006 (0.02)	-0.068*** (0.0189)	-0.044* (0.02)
Trust in Experts	-0.191*** (0.021)	0.004 (0.195)	-0.33*** (0.021)
Political Interest	-0.008 (0.018)	-0.026 (0.017)	-0.029 (0.018)
Facebook Use	-0.027* (0.013)	-0.0169 (0.012)	-0.014 (0.012)
Party Affiliation (7 Point)	-.052*** (0.011)	-0.0201* (0.01)	0.019*** (0.011)
Constant	3.92*** (0.163)	3.515***(0.152)	3.404*** (0.162)
Adjusted R Squared	0.0461	0.006	0.281

Note: *p < 0.1, **p < 0.05 , ***p < 0.01

Multiple Regression Model Discussion

There are a few trends in the model. To begin, we see that trust in experts and party affiliation have statistically significant relationships in two out of three of the regression models. "Trust in Experts" is a good indicator of conspiratorial thinking because it has a large numeric effect on the model. It appears that those with a lower trust in experts to make public policy decisions have a greater belief in conspiratorial thinking, specifically the belief that schools and the media are lying about those in power and that businesses and politics are controlled by the same entity. This makes sense – a person with waning trust in professionals would subscribe to ideas based around a lack of control and misinformation, which are relevant to paranoid thinking.

For the "Party Affiliation" variable, we see that in the two models it is statistically significant, party affiliation has a different relationship with conspiratorial thinking. Here, for the question on control, people that lean Democrat are more likely to believe that businesses and politics are controlled by the same entity, yet people that lean Republican are more likely to believe that schools and the media lie about power.

The findings for race and gender are also unique. Both variables are significant in one model. For race, nonwhites are more likely to believe that schools and media are lying. This makes sense because nonwhites face oppression from schools for curriculums designed by white scholars and authors, and from higher levels of authority such as police forces. For gender, the data suggests that women are more likely to believe that a single entity controls multiple systems. Perhaps this could be from decades of unequal pay and representation in the government.

We see that the first model accounts for only 4.6% of the variation in conspiratorial thinking, meaning this model does not do a satisfactory job in predicting conspiratorial thinking. The second model only accounts for 0.6% of the variation in conspiratorial thinking. The third model has a much higher adjusted r squared value, where the model accounts for 28.6% of the variation in conspiratorial thinking. Therefore, out of all the models, conspiratorial thinking based around school and media lies is the most significant. Next, we will discuss which hypotheses were correct and incorrect.

Discussion & Results

From this study, there are a few important trends. To begin, there are discrepancies between the chi squared tests of association and multiple regression models, in that some variables have associations with conspiratorial thinking outside of the regression models.

Based on the chi squared tests of independence, the demographic variables of race, gender, trust, and facebook use have an association with at least one type of conspiracy theory. Therefore we do not confirm H2. However, within the multiple regression models, we see that demographics such as race, gender, and education are important in determining conspiratorial thinking, but not as essential as political party, trust in experts, and religious importance.

Surprisingly, facebook use had no significance in any of the regression models, but were significant at the .05 threshold for the chi squared models. It is strange to see how the most popular social media platform for spreading misinformation had little effect on the regression models. However, this study only used a single variable that measured facebook use rather than response to political activity or misinformation on facebook.

Regarding H1, party affiliation is associated with conspiratorial thinking for conspiracies about control and lies in the chi squared test. The same results are found in the multiple regression model. Therefore we disconfirm H1, as there is a confirmed association between conspiratorial thinking and party affiliation. However, party affiliation had an interactive relationship with conspiratorial thinking within the multiple regression model.

Other demographics such as political interest had conflicting results of significance within the chi squared test and regression model. Political interest had no significance in the regression model, but high chi squared values. Therefore we do not confirm H3.

For H4, we examined the religious importance. It had a negative relationship with conspiratorial thinking. This means that those who claim religion is more important in their lives are more likely to believe in conspiracy theories. However, this was only apparent in Model 2's (Secret)conspiracy theory on secrets. This result was expected because religion relies on faith of the unknown and unseen. Therefore we confirm this hypothesis.

The only variables that had consistent significance in both models were trust in experts and party affiliation in the models on control and lies. However, because of party affiliation's interactive relationship with conspiratorial thinking, it is safe to say that when predicting levels of conspiratorial thinking, one can look towards trust in experts. Nonetheless, the effects of trust in experts on conspiratorial thinking are not large, especially at -0.33 decrease in trust on a 1-5 scale per each 1 unit increase in agreement with a conspiracy theory on a 1-5 scale.

Conclusion

This study attempted to identify what demographics can predict conspiratorial thinking. To do this, we used data from the ANES 2019 pilot study as a nationally representative sample.

The study's research question was crucial because we wanted to see if we can see if certain people are more likely to believe conspiracy theories. While we could not find consistent demographics that can predict conspiratorial thinking, we found the strongest predictor in conspiratorial belief was a respondent's trust in experts. Less trust in experts is associated with a greater belief in conspiracy theories.

In the future, a study similar to this should gather its own dataset. This ANES 2019 dataset was used because of time and resources. However, we did not have to do much to recode our variables, and there was a convenience of having premade "conspiracy" variables. The difficulty with studying how to predict conspiratorial thinking is that conspiracy theories are loosely defined and have different subcategories. Is there a way to efficiently categorize conspiracy theories? It would be beneficial to study a specific conspiracy theory, such as the "Bill Gates microchip" theory surrounding the coronavirus, in order to have more causal evidence surrounding demographics.

References

Landrum, Asheley R., and Alex Olshansky. 2019. "The Role of Conspiracy Mentality in Denial of Science and Susceptibility to Viral Deception About Science." PsyArXiv. June 9. doi:10.31234/osf.io/9deqk.

Oliver, J.E. and Wood, T.J. (2014), Conspiracy Theories and the Paranoid Style(s) of Mass Opinion. American Journal of Political Science, 58: 952-966. doi:10.1111/ajps.12084