

Katy Hughes

## COVID-19 through the Lens of Political Leaning and Media Consumption

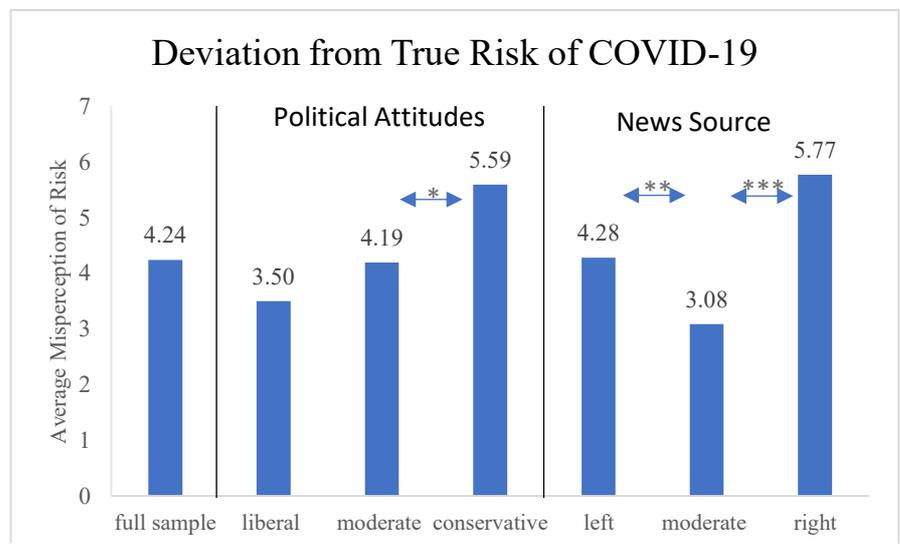
### Summary

Partisan bias colors beliefs about facts every day. But, when it comes to health we hope to receive unbiased information. In this paper I attempt to understand whether political attitudes and media consumption has influenced one's perception of COVID-19. I look at the misperception of COVID-19 risk, prosocial behavior, and one's attempt to keep themselves as well as others safe and healthy through the lens of political attitudes and media consumption. My results suggest that risk awareness and perception are affected by political-related interpretations of risk.

Figure 1 illustrates the average deviation from true risk of COVID-19 in consideration with political attitudes and news source consumption. The average misperception of the mortality rate is 0.42 percentage points, which is large given that the actual rate is approximately 2 percent.

When I break down the entire sample into political attitude groups, self-identifying conservatives misperceive their risk 32 percent more compared to the full sample; whereas, self-identifying liberals misperceive their risk 17 percent less compared to the full sample. Additionally, conservative political

attitude is statistically significant at the 10 percent level. Conservative political attitudes and liberal political attitudes are significantly different from one another. Therefore, there is a pronounced difference between liberal and conservative populations. Moreover, people who consult right news sources misperceive risk 36 percent more compared to the full sample. While people who consult left news sources only misperceive risk .92 percent more



**Figure 1: Average Deviation from True Risk of COVID-19**

Notes: illustrates the average of how wrong people get their risk wrong. This graph shows how political attitude and news source influences perception of risk. \*, \*\*, \*\*\* indicates significance at the 90%, 95%, and 99% level, respectively.

compared to the full sample. Right leaning news sources are statistically significant at the 1 percent level, while left leaning news sources are statistically significant at the 5 percent level. However, right leaning news sources and left leaning news sources are not significantly different from one another. Variation exists between conservatives and liberals, but my analysis exploits the fact that there is not a one-to-one relationship between political ideology and media consumption.

My results show that the deviation from true risk of COVID-19 varies significantly between conservatives, moderates, and liberals, suggesting that political partisanship is playing a role in shaping risk perceptions in a pandemic.

## **Background**

While many claim to not be viewing this health pandemic through a political lens, partisan bias still influences and colors certain beliefs regarding facts. In this paper, I attempt to show that political affiliations and news sources have implications for risk perceptions, prosocial behavior, and health-related decisions in the COVID-19 pandemic. The safety and health of our nation relies on everyone following the Center for Disease Control and Prevention guidelines, which includes proper social distancing. This has become even more important since the rapid increase in death toll and number of infections. Preventing the spread of this virus relies on limited human interaction and cooperation to health official guidelines, so if certain groups perceive risk of infection to be lower than others this can negatively affect the community and may inhibit the effort being taken to flatten the curve. Therefore, understanding how risk perceptions might differ across certain groups is critical to public health outcomes.

Risk perceptions are especially important in understanding certain behaviors and decision-making. One factor that influences individuals' perception of the world is political belief. Over the past few decades, the polarization of the American electorate has dramatically increased. Understanding the effect of partisan polarization has been of critical interest to policymakers and academics. The ideas that an increase in political polarization influences individuals' behaviors has been supported by many scholars. Iyengar and Westwood's (2014) research explores the scope and consequences of polarization of partisans, showing that party cues exert powerful effects on non-political judgements and behaviors. Gerber and Huber (2009) also find that partisanship is an active force causing changes in important political outcomes and group allegiance influences how one interacts in

the political world. Further, while most research has been conducted exploring the effect political polarization might have on the assessment of economic conditions and policies, there has been little research performed relating politics to health crises. Therefore, this paper will bridge the gap to better understand how party affiliations might influence COVID-19 response.

In addition to research conducted on political polarization, academics have explored the effect various news sources can have on one's behavior. Typically, one would assume that politics would not influence health-related behavior. However, politics has colored our current health crisis, so we cannot assume that everyone is receiving the same, accurate data regarding COVID-19. Individuals' perceptions of the virus' threat may be influenced by the news source they gravitate towards or by the people they interact with who might share similar or different political leanings. Therefore, news sources play a critical role in individuals' perceptions and decisions. Mullainathan and Shleifer (2005) even conclude that individuals are inclined to consume information from news sources that align with their political beliefs. As more individuals with different political preferences consume information that has been colored through a political lens, perceptions of risk of COVID-19 will become more disparate. People's decisions and behavior will be affected as a result.

While we know that politics and news sources play a major role in people's decisions and actions, this paper will further explore the effect political affiliation and news sources can have on individuals' misperception of risk and prosociality during the COVID-19 pandemic.

## **Study Design**

### **Data collection**

The study was conducted in early late March and early April 2020, shortly after states started to enact shelter-in-place and social distancing orders. We recruit approximately 1,650 participants located in 49 U.S. states via Amazon's Mechanical Turk. The data set combines surveys from two different studies. Therefore, some questions were only asked for a subset of the sample.

The average age of the population is 37, slightly below the national average of 38.2. 40% are female and 70% of our sample identifies as "White", compared to the national average of 60%. 55% of participants completed a four-year college degree, far above the national average of 35%.

## **The Study**

This research survey was created to better understand people's beliefs and how they respond to the COVID-19 health pandemic in the United States. My project focuses on political attitudes and media consumption and the effect it can have on how wrong people's perceived risk of infection is, their prosocial behavior, and their effort to keep themselves and others healthy. Therefore, my three dependent variables are, first, an age specific measure of how much people overestimate ( $>0$ ) or underestimate ( $<0$ ) their own mortality risk. In other words, it shows how much people are wrong about their own risk (in either direction). My second outcome measures how much respondents would donate to the CDC Foundation's Emergency Response Fund, with an upper limit of 50 cents. Lastly, I use a categorical variable showcasing the respondent's likelihood of wearing a mask if he/she develops a cough in the next week (1 for extremely unlikely, 2 for somewhat unlikely, 3 for neither likely nor unlikely, 4 for somewhat likely, and 5 for extremely unlikely).

Further, my independent variables are liberal, conservative, right and left media sources, female, age, and 4-year college. Liberal is a dummy variable, 1 for "somewhat liberal" and "very liberal" respondents. Conservative is also a dummy variable, 1 for "somewhat conservative" and "very conservative" respondents. Then I generated a left, a moderate, and a right leaning news source variable. The left news source variable included CNN, MSNBC, and PBS. The moderate news source variable included Bloomberg and ABC News. The right news source included Fox News. I grouped these sources by political leaning based of AllSides news media bias ratings<sup>1</sup>. These are the variables I used in all three of my OLS regressions in order to test the effect political attitude and media consumption has on one's perception of COVID-19.

## **Main Results**

I estimate three different specifications. I vary the dependent variable in each specification. The first "outcome" variable that I seek to explain is the absolute value perception of own risk, which is the subtraction of one's actual risk from perceived risk, providing an age specific measure of how much people overestimate or underestimate their own mortality risk. My second outcome measures respondents' deviation from true risk in both directions. The mean value of deviation from true risk is 4.24, which means that the mortality rate increases by 0.424 percentage points. The value of deviation from true risk

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<sup>1</sup> "Media Bias Ratings." AllSides, 2020. <https://www.allsides.com/media-bias/media-bias-ratings>.

ranges from a minimum of 0 to a maximum of 29.8. The two main “explanatory” variables of interest are political attitudes and news source consumption.

*i) Risk Misconception*

The goal of this first regression analysis is to learn something about whether, and to what extent, people’s deviation from true risk of COVID-19 is greater for certain political attitudes and news source consumption. Table 1 illustrates these results<sup>2</sup>. Column 1 compares liberals and conservatives to moderates and column 3 compares left and right news sources to moderate news sources. Then in columns 2 and 4, I hold constant the effects of age, gender, and education. Column 5 holds all variables constant. My results show that liberals underestimate their risk compared to moderates, reflecting that their mortality rate decreases by .07 percentage points. On the other hand, conservatives overestimate their risk compared to moderates, indicating their mortality rate increases by .16 percentage points, which is statistically significant at the 10 percent level. After I control for age, gender, and education, deviation from true risk remains stable, indicating that age, gender, and education are not driving the correlation. I also tested if the liberal and conservative coefficients were statistically different. The p-value is less than .01, revealing that conservative and liberal populations are significantly different from one another. Further, controlling for political attitude, age, and gender, being college educated increases one’s deviation from true risk, increasing the mortality rate by .1 percentage points, which is statistically significant at the 5 percent level.

Moreover, people who watch right-leaning news misinterpret their level of risk, increasing their mortality rate by .27 percentage points compared to those who watch moderate news. This is significant at the 1 percent level. Even after controlling for gender, age, and education, deviation from true risk remains similar. People who watch left-leaning news misinterpret their level of risk, increasing their mortality rate by .12 percentage points. Deviation of true risk remains stable, after controlling for gender, age, and education. This is significant at the 5 percent level. Then in column 5 controlling for political attitude, gender, age, and education, people who watch right news misinterpret their true risk by .19 percentage points, while people who watch left news misinterpret their true risk by .12 percentage points compared to people who watch moderate news. Both of these results are significant at the 5 percent level. However, it is important to note that the right news source

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<sup>2</sup> See appendix for table 1

and left news source coefficients are not significantly different from one another. However, the populations who watch right news sources and left news sources are certainly different.

The findings from this first regression are very interesting. There is a correlation between political leaning and media consumption, but that being said there is still diversity in what kind of people watch certain news channels. There is not a one-to-one relationship - conservatives do not only consume information from FOX News (a right news source) and liberals do not only consume information from MSNBC or CNN (a left news source). But, of the respondents who identified as “very conservative,” 43% receive news from FOX News, while only 9% of “very liberals” consult FOX News and instead the majority watch CNN<sup>3</sup>. There is diversity in political attitude and news source consultation, but for the most part people gravitate towards consuming information from sources that align their political beliefs. I still consider the diversity that is present in the sample and I look at both political attitudes and news source consumption in conjunction. Right-leaning people are more wrong about their own risk, but this is not due solely to the consumption of right news sources. There may be other underlying beliefs inherent in conservatives that influence their perception of risk. Consulting right news sources compared to moderate news sources influence a person’s misinterpretation of their own true risk more significantly than left news sources compared to moderate news sources. While more research needs to be conducted to understand in what direction a person’s deviation of true risk goes - are people underestimating their risk or overestimating their risk to contracting COVID-19 - it is still very interesting that conservatives and liberals differ significantly from one another, creating the deviation in true risk of COVID-19 between the groups as illustrated in figure 1.

*ii) Prosocial Behavior*

In my second regression, the goal is to learn whether, and to what extent people’s prosociality is impacted by political attitudes and news sources. By first thinking about people’s perception of risk, I then think about how this might translate into acts of donations. The coefficients on political leanings and media consumption tend to be positive, however they are small in magnitude and are not statistically significant, as displayed by Table 2. Further, the results indicate that women give 2.7 cents more controlling for political affiliation, news source, age, and education. These results align with a recent study that found

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<sup>3</sup> See figure 2 in appendix for breakdown

women give more than men (Wolfson 2018). Finally, with every increase in age people will donate .14 cents more, controlling for political affiliation, news source, age, and education.

### *iii) Wearing Mask*

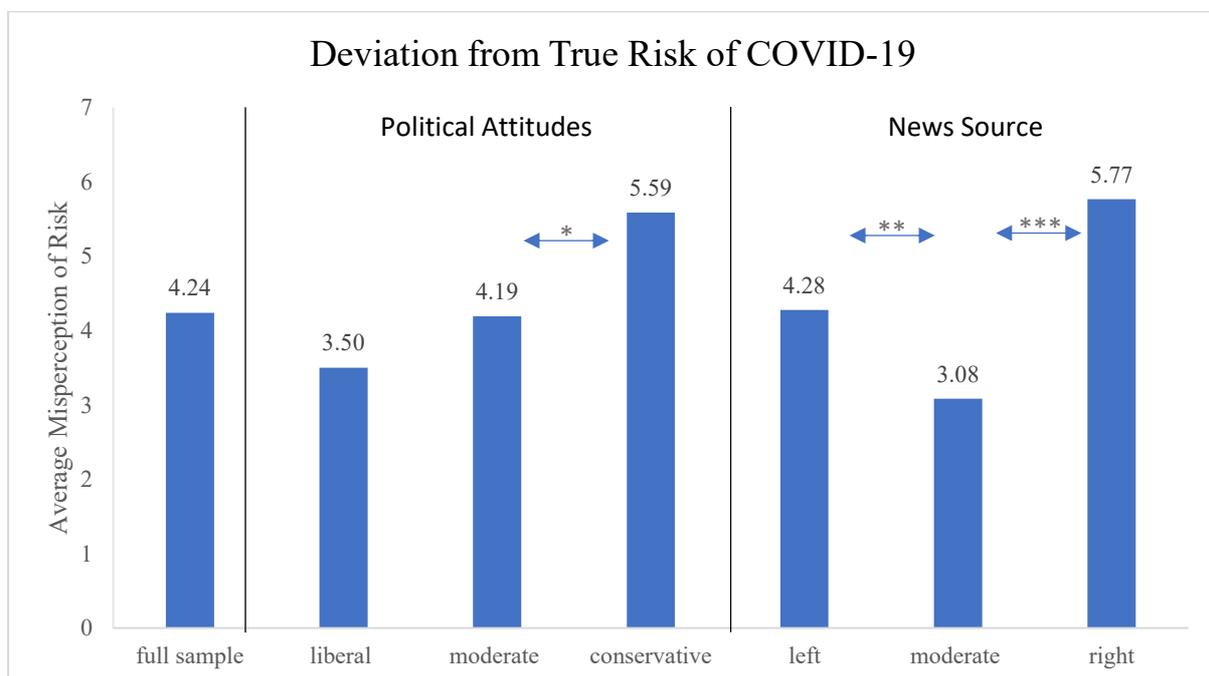
My last regression explores people's behavior and decision-making through the likelihood of wearing a mask if one were to develop a cough. While most of the results were insignificant, my results show that media consumption is correlated with people's perception of COVID-19. People who watch left news are .15 standard deviations more likely to wear a mask after controlling for political affiliations, age, gender, and education. However, this estimate is small in magnitude and marginally significant (at the 10 percent level). The lack of significance indicates that there is little evidence that political attitude affects one's likelihood to wear a mask, which contradicts recent media coverage. For example, in "Wear a Mask is for smug liberals. Refusing to is for reckless Republicans," Lizza and Lippman (Politico, 2020) write, "The mask has become the ultimate symbol of this new cultural and political divide. For progressives, masks have become a sign that you take the pandemic seriously and are willing to make a personal sacrifice to save lives. On the right, where the mask is often seen as the symbol of a purported overreaction to the coronavirus, mask promotion is a target of ridicule, a sign that in a deeply polarized America almost anything can be politicized and turned into a token of tribal affiliation." My results indicate the likelihood of wearing a mask is not a political action as news outlets report.

## **Conclusion**

In closing, political attitudes result in meaningful differences in beliefs. In this paper, I provide evidence of the extensive impact partisanship has by examining politically-driven variation in risk perceptions during the current COVID-19 pandemic. I then attempt to understand how people's behaviors are shaped by their political attitude and news consumption through donations and likelihood of wearing a mask. My results demonstrate that people who watch right-leaning news sources misinterpret their level of risk more compared to people who watch moderate-leaning news sources. But, right-leaning news is not significantly different from left-leaning news, so the deviation in true risk between liberals, conservatives, and moderates comes from the significant difference between these groups, indicating that risk perception may be shaped through the lens of political attitude. One might expect that those watching right-leaning news sources share more conservative

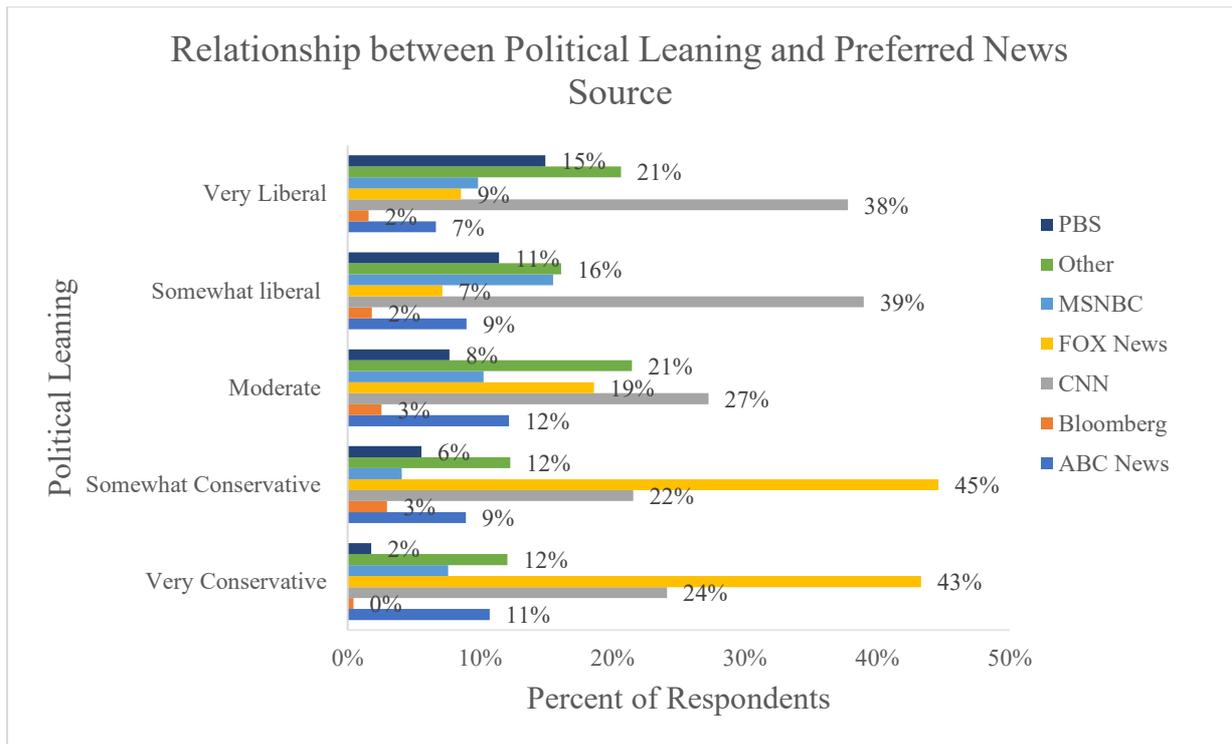
political attitudes and therefore might be taking the virus less seriously like many news outlets have reported, however my results indicate that there is not enough evidence to conclude that conservatives or people who watch right news are less likely to wear a mask or take the virus less seriously. I hope that my initial findings provide insight into the role political attitudes and media consumption can have on the perception of COVID-19, Although many questions remain unanswered, my initial findings hopefully open the door for potential research.

## Appendix



**Figure 1: Average Deviation from True Risk of COVID-19**

Notes: illustrates the average of how wrong people get their risk wrong. This graph shows how political attitude and news source influences perception of risk. \*, \*\*, \*\*\* indicates significance at the 90%, 95%, and 99% level, respectively.



**Figure 2: Political Attitude and Preferred News Source**

Note: This figure illustrates the diversity in the sample.

**Table 1**

Determinants of Absolute Value Perception of Own Risk

	(1) PolitView	(2)	(3) NewsSource	(4)	(5) Combined
Liberal	-0.690 (0.657)	-0.735 (0.658)			-0.801 (0.658)
Conservative	1.564* (0.845)	1.526* (0.849)			1.097 (0.907)
Right News Source			2.692*** (0.785)	2.638*** (0.791)	1.935** (0.906)
Left News Source			1.204** (0.531)	1.172** (0.534)	1.210** (0.549)
Female		0.234 (0.535)		0.196 (0.529)	0.332 (0.537)
Age		-0.003 (0.023)		-0.000 (0.023)	-0.004 (0.024)
4 Yr College		1.027** (0.506)		0.864* (0.499)	0.940* (0.502)
Observations	901	901	927	927	901
R-square	0.015	0.020	0.015	0.018	0.028
Sample Mean	4.239	4.239	4.239	4.239	4.239
P-v: Liberal vs. Conserv	0.001	0.001			0.017
P-v: Left vs Righ News			0.050	0.056	0.419

Notes: All regressions are estimated using OLS. P-values report tests of equal coefficients. The outcome is misperception of risk, which is an age specific measure of how much people overestimate (>0) or underestimate (<0) their own mortality risk.

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

**Table 2**

## Determinants of Donations

	(1) PolitView	(2)	(3) NewsSource	(4)	(5) Combined
Liberal	0.731 (1.174)	0.496 (1.165)			0.367 (1.187)
Conservative	0.879 (1.241)	0.541 (1.244)			0.769 (1.264)
Right News Source			-0.388 (1.226)	-0.264 (1.229)	-0.800 (1.295)
Left News Source			0.060 (1.048)	0.224 (1.046)	0.215 (1.063)
Female		2.730*** (0.936)		2.591*** (0.934)	2.703*** (0.940)
Age		0.142*** (0.038)		0.146*** (0.038)	0.142*** (0.038)
4 Yr College		0.901 (0.893)		0.815 (0.887)	0.907 (0.896)
Observations	1582	1572	1608	1598	1572
R-square	0.000	0.017	0.000	0.017	0.018
Sample Mean	16.364	16.364	16.364	16.364	16.364
P-v: Liberal vs. Conserv	0.882	0.964			0.715
P-v: Left vs Righ News			0.681	0.655	0.400

Notes: All regressions are estimated using OLS. P-values report tests of equal coefficients. The outcome is a measure of donations in cents out of a total of 40 cents.

\*  $p < 0.10$ , \*\*  $p < 0.05$ , \*\*\*  $p < 0.01$

**Table 3**

Determinants of Likelihood of Wearing a Mask

	(1) PolitView	(2)	(3) NewsSource	(4)	(5) Combined
Liberal	0.026 (0.117)	0.018 (0.116)			-0.029 (0.117)
Conservative	0.055 (0.129)	0.064 (0.129)			0.092 (0.133)
Right News Source			0.026 (0.126)	0.039 (0.126)	-0.031 (0.134)
Left News Source			0.183* (0.103)	0.183* (0.103)	0.184* (0.106)
Female		0.143 (0.092)		0.135 (0.091)	0.144 (0.092)
Age		-0.004 (0.004)		-0.004 (0.004)	-0.003 (0.004)
4 Yr College		0.064 (0.089)		0.061 (0.088)	0.062 (0.090)
Observations	902	902	928	928	902
R-square	0.000	0.004	0.004	0.008	0.009
Sample Mean	3.717	3.717	3.717	3.717	3.717
Std Dev	1.334	1.334	1.334	1.334	1.334
P-v: Liberal vs. Conserv	0.779	0.661			0.278
P-v: Left vs Right News			0.164	0.203	0.078

Notes: All regressions are estimated using OLS. P-values report tests of equal coefficients. The outcome is likelihood of wearing a mask if he/she develops a cough in the next week (1 for extremely unlikely, 2 for somewhat unlikely, 3 for neither likely nor unlikely, 4 for somewhat likely, and 5 for extremely unlikely).

\* p<0.10, \*\* p<0.05, \*\*\* p<0.01

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