



The University Of Chicago

**An examination of partisan
disinformation
sharing behavior on social media**

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February 2022

A paper submitted in partial fulfillment of the requirement for the Master of Arts degree in the
Master of Arts program in the Committee on International Relations

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Abstract

The study attempts to develop an ordinal logistic regression model to identify the predictors of partisan disinformation sharing behavior using the survey data collected from 500 U.S. adults. Since the 2016 U.S. presidential election, disinformation has become a quotidian leitmotiv in American politics. Previous research has concentrated on examining individual attitudes towards disinformation susceptibility, but relatively few studies have investigated how disinformation is transmitted from a behavioral perspective. Instead of asking “why people believe it,” this study focuses on “how people share it.” The following question is addressed in this study: How partisanship, political literacy, educational attainment, information credibility, social media engagement, and one’s demographic characteristics contribute to partisan disinformation sharing behavior?

To answer the research question, I designed an online survey experiment, in which 500 respondents were recruited using Amazon’s Mechanical Turk crowd sourcing platform. The survey was fields in April 2020. In the survey experiment, research participants were randomly assigned to four groups and were asked to report how they would share a set of fabricated social media postings. To rule out confounding factors, respondents were presented with fabricated social media messages unrelated to real-world events and political actors.

I find that partisans, including Democrats and Republicans, are more likely to share politically congenial disinformation. In other words, Democrats are more likely to share political disinformation favorable towards Democrats and unfavorable towards Republicans; Republicans are more likely to share political disinformation favorable towards Republicans and unfavorable towards Democrats. I also find that political knowledge is negatively associated with disinformation sharing behavior: The more politically literate an individual is, the less likely the individual shares disinformation on social media. In addition, males are more likely to share partisan disinformation as opposed to females. Age and social media engagement effectively predict one’s disinformation sharing behavior, and they are generally positively associated with disinformation sharing behavior. Surprisingly, information credibility is not a robust predictor of partisan disinformation sharing behavior.

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Acknowledgements

First and foremost, I have to thank my research advisor, Dr. Mark Hansen. This paper and the research behind it would not have been possible without your exceptional support and patience. Your knowledge and expertise were invaluable in formulating the research questions and method. Thank you again, Dr. Hansen, you are the best advisor I have ever had. It has been my utmost privilege to be advised by you.

I am also grateful for the insightful comments offered by Dr. Michael Reese. His feedback pushed me to sharpen my thinking and brought my work to a higher level.

1 Introduction

The rapid evolution of media technology has profoundly reconstituted our interactional experiences and transformed the global political landscape. In recent years, social media platforms have emerged as essential intermediaries for politicians to exert political and societal influence. Not only has media technology facilitates sharing of information, thoughts, and ideas, but it has also fermented political insularity, incivility, and polarization.

One of the major political consequences of technological advances is the spread of disinformation. Since the 2016 U.S. presidential election, American democracy has been constantly buffeted under the weight of political disinformation. The prevalence and effects of bogus information on social media have raised concerns about how political falsehoods deteriorate ideological segregation and political polarization in the American society. Studies of proliferation of multifarious forms of false information, such as fake news, misconceptions, conspiracy theories, rumors, have been gaining ground in political science and communication research. Despite the extensive literature on the effects of disinformation on political attitudes, it seems that relatively insufficient attention has been devoted to the mechanisms of behavioral patterns exhibited by individuals encountering political disinformation.

This study is an attempt to examine individual disinformation sharing behavior on social media. The overarching research questions of this thesis addresses whether individuals share disinformation in alignment with their party affiliation, and if their levels of political knowledge, social media engagement, and other factors predict their sharing behaviors. I start from the review of pertinent literature emanating primarily from political science, social psychology, communication, and information research.

In reviewing the literature, I seek to relate my research to theoretical frameworks and arguments tackling the following research problems: How disinformation is conceptualized and operationalized; What motivates individuals to believe disinformation.

1.1 Conceptualization and operationalization of disinformation

Disinformation has long been a leitmotif in human history. However, only since recent years has technology enabled the exponential development of dataflow and fueled the spread of bogus news and computational propaganda. In the United States, social media has been tooled to

distribute fear-mongering conspiracies as well as to deploy disinformation campaigns blended with truth, lies and sincere beliefs.

The advent of information technology has revolutionized the way individuals produce, receive and consume information. According to a Pew report (Shearer and Gottfried 2017), social networking sites, such as Facebook, Twitter, and YouTube, have become the main sources of news and information consumption for American adults. With the explosion of information and data, recent research has begun to explore the patterns and consequences of fake news and disinformation sharing in social media.

To gauge the influences of disinformation on democracy and elections, I first present how disinformation is conceptualized in the literature, which is defined by information and political scientists as falsified and distorted information intended to deceive or mislead (Stahl 2006; Karlova and Fisher 2013; A. M. Guess and Lyons 2020; Karlova and Lee 2011; Losee 1997; Zhou and Zhang 2007). Accordingly, disinformation, fake news, conspiracy theories, rumors, propaganda, among other types of bogus information, are subsumed under this definition. Building upon this line of foundational work, I define disinformation in my thesis as a form of information fabricated with a deceptive or misleading intent.

Political scientists have been exploring the influences of disinformation in the conduct of politics from various theoretical perspectives, with a particular focus on public opinion research. The ubiquity of social media platforms amplifies misconceptions, false claims and fabricated information, which has been threatening the very foundations of democracy. Kuklinski et al. (2000) argue that misinformation is a barrier to an informed citizenry as it has the potential “to skew aggregate opinion (p. 22).” Disinformation consumption promotes false beliefs, political polarization, and deterioration of public trust of the democratic system (Ognyanova et al. 2020). In addition, prior studies find that disinformation decreases trust in media organizations (Hulcoop et al. 2017). Individuals who visit websites or social media platforms fraught with falsified or unverified content are more likely to have biased political judgments and perceptions of facts (Berinsky 2017; A. M. Guess and Lyons 2020). To recapitulate, not only disinformation undermines an informed citizenry, but it also erodes our confidence in electoral democracy.

In addition, a burgeoning literature is devoted to discussing disinformation as a cyber security threat. Foreign intelligent agencies and malicious actors equipped with advanced technology may deploy disinformation campaigns to disseminate political rumors about ballot fraud and election

manipulation, causing voters to question the integrity of democratic voting systems and even the election's legitimacy. In fact, political scientists have observed and documented waves of cyber-attacks targeting democracies (Lim et al. 2019; Stukal et al. 2017). On another note, the affordances of technology and disinformation campaigns have also become the tool for authoritarian states to suppress political dissidents and further buttress political support for authoritarian regime (Huang 2017; Livingston and Risse 2019).

Another line of research pertaining to (dis)information acceptance is Selective Exposure Theory. Defined as “any systematic bias in audience composition (Freedman and Sears 1965),” Selective Exposure Theory describe the phenomenon in which individuals are “(self)exposed to disproportionately more supportive than nonsupportive information (Freedman and Sears 1965).” Over the past few decades, as the array of media choices available has exploded, social scientists have started to focus their attention on how selective media exposure shapes one's political attitude and behavior. It is noted that individuals who are exposed to an information environment replete with biased content tend to opt for media choices that conform to or reinforce their pre-existing political views while purposefully avoiding media content incongruent with their beliefs (Arceneaux 2012; Garrett 2009; Iyengar et al. 2008; Knobloch-Westerwick and Meng 2009; Messing and Westwood 2014; Jomini Stroud 2007; Stroud 2008, 2010; Valentino, Gregorowicz, and Groenendyk 2009; Weeks 2015). Though partisan media and information sources do not necessarily result in political polarization (Prior 2013), these studies suggest that selective exposure to particular types of information may shape one's political attitude and behavior. However, the existing literature appears to dominantly focus on the effects of disinformation, but pays relatively scant attention to behavioral patterns of disinformation sharing in a social media environment. Therefore, in this thesis, I address this research gap with a survey experiment designed to explore partisan disinformation sharing behavior on social media platforms.

Theories in social psychology also shed lights on understanding the mechanisms of disinformation dissemination. Social psychologists examine political disinformation at a relatively micro level as they tend to focus on disinformation's effects on individual cognitive infrastructure. Recent research shows that emotional reactions, such as fear, anger, disgust, and sadness have the potential to trigger individuals' favorable responses to bogus messages and claims as sentimental attachment and affections may deprive their cognitive capabilities to discern authentic information from dubious one (S. Porter et al. 2010; Rosenzweig et al. 2020; Van Damme and Smets 2014;

Weeks 2015). Other psychological factors that may drive individuals to fall prey to fake information are, but not limited to, perceptions of accuracy (Pennycook and Rand 2019b; Pennycook et al. 2020), quality of information sources (Dias, Pennycook, and Rand 2020; Pennycook and Rand 2019a), prior exposure (Pennycook, Cannon, and Rand 2018), and political beliefs (Swire et al. 2017; Pennycook and Rand 2019b; Thorson 2016).

Additionally, economists have provided a fresh theoretical perspective in which they treat the media system as a “supply and demand” market. On one hand, proliferation of disinformation can be seen as a result of malfunction of the information supply chain, where fake news and deceitful information have been constantly produced by malicious actors, cyber criminals, and biased media organizations to pollute the information ecosystem. On the other hand, a lack of media literacy and the increasing political divide drive the demand side of the disinformation market, in which individuals seek partisan and biased information to endorse their political beliefs (Allcott, Gentzkow, and Yu 2019). Allcott and Gentzkow (2017) put forward a model illustrating the market logic of disinformation dissemination from both the supply and demand sides. In terms of provisions of disinformation, content generators provide disinformation with a profit motive to drive more traffic to their websites; ergo they may deliberately fabricate ideologically biased disinformation to accommodate partisans. On the demand side, individuals desire such fabricated information and willingly expose themselves to it and consider it as a heuristic cue to strengthen their group and partisan identities. Simply put, individuals may be motivated to share disinformation for different reasons. It is, therefore, vital to investigate what factors shape disinformation sharing behavior.

1.2 Partisanship and party identification

Partisan identity dictates political behaviors and attitudes (Gerber, Huber, and Washington 2010). Previous research suggests that party affiliation or partisanship plays a crucial role in one’s political assessments. Citizens use partisan cues to evaluate the accuracy and reliability of the information sources from political figures, organizations, and media, and to process political information in order to understand the social and political structure of society. The partisanship literature traces its roots to the Michigan political scientists Belknap and Campbell (1951)’s work on the sociological mechanism of political attitudes. Following in their footsteps, Campbell et al. (1980) put forward the “Michigan model” in one of the classic theoretical studies of political

behavior - *The American Voter* to illustrate how the public forms political preferences. As one of the key clusters of an individual's political inclinations, a person's party identification or affiliation is believed to be acquired during social interaction and be transmitted from parent to child. This view of partisanship identifies party identification as the most stable affective attachment as well as the most powerful predictor of a person's political attitudes and behaviors (Hopkins 2009; Keith et al. 1992; W. E. Miller, Shanks, and Shapiro 1996). Given its stability, political identification serves as a potent cue in guiding the attitudes and behavior of the average person (Goren 2005; Dowding and Kimber 1983). Following this logic, I propose the hypothesis that individuals are motivated to share disinformation congenial to their party identification and political preferences.

H1: Partisans, including individuals who identify as Democrats and Republicans, are more likely to share partisan disinformation congenial to their political beliefs. In other words, Democrats are more likely to share disinformation favorable towards Democrats and unfavorable towards Republicans, and vice versa.

1.3 Political knowledge

In addition to party identification, one's level of political literacy and sophistication presumably contributes to disinformation sharing behavior. A central concept in the studies of public opinion and political behavior, political knowledge has been employed as an effective approach to measuring political sophistication. One of the fundamental assumptions in political science research is that it is crucial for an informed public to be equipped with a certain amount of political knowledge in order to engage in political participation. Defined as "the range of factual information about politics that is stored in long-term memory (Carpini and Keeter 1996, 10)" political knowledge is usually measured with a battery of questions with respect to familiarity of current events and public policy (Carpini and Keeter 1993). Simply put, political knowledge is the key to information literacy in the era of information disorder.

Political knowledge affects civic participation both quantitatively and qualitatively. Citizens are expected to possess a certain amount of political knowledge to make informed and rational decisions about political issues and candidates. A wide array of scholarship has shown that individuals with higher levels of political knowledge are more likely to be politically active (Leeson 2008; Galston 2001; Tolbert, McNeal, and Smith 2003; Carpini and Keeter 1993). In other words, they are more likely to cast their votes, to engage in political campaigns, and to make political

donations (Carpini and Keeter 1996). Lacking political knowledge, however, poses challenges for individuals to make sensible political decisions as they are unable to “integrate new information into an existing framework (built upon their political literacy) (Galston 2001, 223)” to assist them assessing the current status quo of politics. If decisions were made for the sake of expediency rather than sensibility, it rarely would turn out to be the best decisions. To recapitulate, political knowledge translates to the abilities of reaching consistent and well-thought-out judgments in democratic governance.

In the low – information model put forward by Popkin and Dimock (1999), low levels of information encumber public discussion, and thus lead to lower levels of acceptance of democratic values. As a result, individuals with lower levels of political information or literacy are less likely to devote to electoral politics. Even though another vein of scholarship suggests that individuals with lower levels of political knowledge may still be able to make reasonable judgments following cognitive shortcuts, heuristic devices, or psychological cues (McDermott 1998; Rahn 1993), it has been empirically established that political knowledge is an important factor in maintaining political belief and ideology consistency (Johann 2012). All told, citizens who are generally more informed about politics tend to engage more extensively and actively in democratic participation.

Indeed, in political communication research, several decades of empirical inquiry into citizens’ political knowledge or political literacy suggests that high levels of political knowledge serve as an indicator of adherence to democratic principles and active political participation, and acceptance and understanding of democratic values. Similarly, Lanoue (1992)’s account on informed citizenry offers a wealth of evidence that political knowledge fosters citizens’ acceptance of democratic values and judgments and enlightened self-interest; facilitate them to participate in civic and political life; help them express their high-quality opinions to shape the process of policy making.

However, this rich literature of political knowledge does not address the question of whether individuals with higher levels of political knowledge are less susceptible to false claims and political disinformation. Based on the discussion above, it is logical to assume that individuals with a higher level of political knowledge in a democratic society are less likely to share political disinformation. To further investigate this question, I propose the following hypothesis,

H2: Individuals with higher levels of political knowledge are less likely to share political disinformation on social media. Put differently, one’s level of political knowledge is negatively correlated to his or her disinformation sharing behavior.

In addition to one’s political identification and political literacy, this study also considers other potential predicted factors, including one’s social media engagement, educational level, sex, age, and the information’s credibility, that may contribute to disinformation sharing behavior.

1.4 Social media engagement

Social media platforms, such as Facebook, Twitter, have become the fertile ground on which disinformation sown the seeds (Pennycook and Rand 2019a). Accessibility and affordability are the primary reasons why social media platforms may be especially conducive to disinformation. According to a 2019 Pew report (Shearer and Grieco 2019), social media has become a primary information source for news consumption as more than half of the U.S. adults often or sometimes rely on social media for news consumption. According to Allcott and Gentzkow (2017), the accessibility of the social media supply chain has enhanced the spread of disinformation because the costs to produce and spread information on social is marginal. More importantly, the cost of spreading disinformation on social media platforms is much lower than that on traditional media platforms. As Allcott and Gentzkow (2017) note, “the fixed costs of entering the market and producing content are vanishingly small. This increases the relative profitability of the small-scale, short-term strategies often adopted by fake news producers, and reduces the relative importance of building a long-term reputation for quality (p. 221).”

Building upon the theoretical framework I sketched above, I propose the following hypothesis, **H3: The more engaged an individual is in social media, the more likely the individual shares political disinformation.**

1.5 Education

An individual’s level of education affects his or her ability to recognize disinformation (Khan and Idris 2019). A recent study conducted by the University of Kansas surveyed how vulnerable populations shared COVID-19 pandemic related disinformation and found that one’s level of education is associated to abilities to identify such disinformation. Individuals with higher levels of education were more likely to recognize disinformation. However, there have been few research studies conducted on how one’s educational level shapes political disinformation behavior. Given that highly educated individuals are usually perceived to be more cautious about sharing unverified information, I hypothesize that education level is negatively correlated to one’s

disinformation sharing behavior.

H4: Individual with higher levels of education are less likely to share political disinformation on social media than those with lower levels of education.

1.6 Gender

The literature on gender in electoral politics suggests that men and women differ in political interests and participation. Prior research shows that men are usually more involved in political conversations and activities, and women tend to show less interest in social and political affairs and are less likely to hold political leadership positions (Conway 2001; Teele, Kalla, and Rosenbluth 2018). Studies further show that women lag behind in political activities and in shaping the democratic process (Kittilson and Schwindt-Bayer 2012; Paxton, Hughes, and Barnes 2020). In addition, women score lower than men on political literacy and knowledge (Fraile 2014; Jerit and Barabas 2017; Lizotte and Sidman 2009; McGlone, Aronson, and Kobrynowicz 2006; M. K. Miller 2019). A recent study provides more empirical evidence to such conclusions, in which they found that men are indeed more likely to express interest in social and political issues. However, their research also points out that survey questions designed to measure political interests are usually “male-oriented.” In other words, the questions used in political surveys to prompt respondents to report their political preferences tend to reflect political interests of men rather than those of women (Ferrin et al. 2020). This finding offers an insightful implication: It might be too early to jump to the conclusion that men are simply more politically literate than women. There exists a possibility that men and women are simply have different political interests. Therefore, it requires further investigation to examine how sex contributes to predicting disinformation sharing behavior. To recapitulate, gender may be a factor influencing people’s understanding of and interest in politics. This study uses a non-issue-based survey to address the question of whether men are more likely than women to share disinformation. Given the extensive literature on gender politics, I hypothesize that men are more likely to spread disinformation on social media, hence, to re-frame, **H5: Male individuals are more likely than female individuals to share political disinformation on social media.**

1.7 Age

It has been widely assumed that age itself is a predictor of disinformation sharing behaviors: The elderly appear to be more likely to spread political false information. Surprisingly, there has been relatively insufficient empirical evidence lending support to this claim. One of the very few studies with respect to age in disinformation and fake news susceptibility was conducted by A. Guess, Nagler, and Tucker (2019). Situated in the context of Facebook, they investigated how individuals visited fake news domains and found that individuals aged 65 and older tended to share more fake news they read about on the fake news websites to their Facebook pages as they lacked skills and tools to determine the veracity of online news. Fake news articles from fake news domains, however, is not tantamount to political disinformation as disinformation is not necessarily generated by fake news websites. Thus, it remains unanswered whether older people are more likely to share political disinformation than younger age groups, although I would assume that age is positively associated with partisan disinformation sharing behavior. These considerations lead to the following hypothesis,

H6: Older people are more likely to share political disinformation on social media.

1.8 Information credibility

Finally, numerous previous studies have investigated the psychological mechanisms of disinformation processing and shown that source credibility profoundly (re)structures individuals' assessment of information veracity (Axsom, Yates, and Chaiken 1987; Baum and Groeling 2009; Berinsky 2017; Swire et al. 2017; Vraga and Bode 2017). As these studies suggest, seeking heuristic cues to help evaluate veracity of information from political figures or other trusted sources is a rational use of individuals' finite time and limited cognitive resources. In this regard, relying on politically polarizing information sources may result in their misconceptions of complex political topics such as policy or current affairs. The following hypothesis is therefore proposed to test if the credibility of information sources shapes an individual's behavior of sharing disinformation.

H7: Individuals are more likely to share political disinformation on social media if the disinformation references credible sources.

2 Methods

2.1 Research method and data collection

Given that it is technically and ethically challenging to obtain people’s sharing behavioral data on social media, I designed an online survey experiment to simulate the virtual environment in which participants were given fabricated social media postings to read and were asked to report their behavioral responses afterwards. The survey was web-based and developed using the Qualtrics survey software provided by the University of Chicago, Illinois, USA. Survey participants were recruited using Amazon Mechanical Turk crowdsourcing platform (MTurk). The survey was fielded by the researcher in April, 2020¹.

2.1.1 Amazon Mechanical Turk (MTurk)

Amazon’s MTurk is one of the most popular survey methods for participant recruitment and data collection in experimental research due to the following advantages:

1. Conducting research using MTurk is relatively affordable compared to traditional experimental approaches, especially laboratory experiments (Berinsky, Huber, and Lenz 2012; Horton, Rand, and Zeckhauser 2011; Stritch, Pedersen, and Taggart 2017).
2. The quality of data obtained from MTurk subject pools has been confirmed to be robust. Multiple empirical studies show that research results drawing on MTurk data are consistent with laboratory-based research results (Buhrmester, Kwang, and Gosling 2016; Paolacci, Chandler, and Ipeirotis 2010).
3. Compared to traditional experimental approaches, MTurk does not require face to face interaction. Without physical contact, the virtual experimental environment ensures that the presence of researchers does not contaminate research results. This method of recruitment is particularly useful when the research itself can be conducted online or under some circumstances (such as the COVID–19 pandemic), or has to be conducted online to avoid physical interaction (Cunningham, Godinho, and Kushnir 2017).

4. MTurk subjects are more demographically diverse than internet samples and college student samples. As Berinsky, Huber, and Lenz (2012) put it, “MTurk subjects are often more

¹The project had obtained full ethics approval for data collection from the Institutional Review Boards at the University of Chicago before it was fielded.

representative of the general population and substantially less expensive to recruit. (p. 366).” In addition, Hauser and Schwarz (2016)’s study shows that MTurk participants have a significantly higher rate of passing attention checks in surveys than online subject pool participants. All told, MTurk is a feasible means to obtain reliable and valid survey data in experimental research.

2.1.2 Sample size

To optimally estimate the proportion of likely American adults who would share political disinformation on social media, I set the sample size level at 500, which constructs a 95% confidence interval with a margin of error of $\pm 4.4\%$.

After the appropriate sample size was determined, I posted an advertisement on MTurk to recruit 500 participants for my experimental study. Intended participants were restricted to those who met the following eligibility criteria: American residents; 18 or older. Due to my financial constraints, respondents were each paid 0.2 U.S. dollars each for their completed work.

The survey was distributed on Qualtrics. All of the 500 respondents ($n = 500$) have completed the survey and passed the attention checks, with one respondent withdrawing from the survey pool after completion. Therefore, the ultimate total sample size is 499, which still renders a representative sample with an approximate Margin of Error $\pm 4.4\%$.

2.1.3 Sample weighting adjustment

Ideally, a selected survey sample is a miniature of the population from which it draws. However, due to factors such as time and budget constraints and selection biases, mismatch between the characteristics of the survey respondents and those of the target population may occur. In order to mitigate the effects of response biases and sampling imbalances, I employed the raking weighting method to adjust my survey sample.

Also known as random iterative method (RIM) weighting or iterative proportional fitting, raking is a statistical technique widely used to address post-stratification problems for public opinion surveys (Kalton 1983). With raking, researchers manage to select a set of variables, usually demographic or socioeconomic variables as a source for the control totals. In this study, raked weights based on the 2019 United States Census data were estimated for the sample with respect to age group and party identification. Specifically, the adjustment to control totals was achieved by creating a cross-classification of the categorical control variables (age group \times party identification

Table 1: U.S. Adult Population by Age

Age group	U.S. census data 2019	Survey results
18 to 24	12%	13%
25 to 64	67%	83%
Ages 65 and over	21%	3%

categories) and then matching the total of the weights in each cell to the control total.

In this study, I weighted the survey sample based on two variables, namely “age group” and “political identification.” As mentioned earlier, researchers usually apply weights on demographic characteristics; however, studies conducted by Pew Research Center suggest that weighting based on other variables, such as political affiliation, can reduce sampling bias in some cases (Mercer, Lau, and Kennedy 2018). Given that political identification is a crucial variable of interest in my study, I include party identification as a key variable for the raking process.

Although “sex” or “gender” is a popular choice in sampling weighting, the sex ratio of the respondents for this study accurately reflects the sex ratio of the United States. According to the demographic, economic and population data from the U.S. Census Bureau (2019) (Bureau 2019), 50.8% of the U.S. population identified as Female. In my sample, female respondents comprised 51.7% of respondents. Given that that the sex ratios are rather similar, weighting the survey data based on the sex variable is not necessary.

In terms of age distribution, Table 1 shows the results obtained from the U.S. Census Bureau² compared to those of the survey data. As the table shows, the age ratios of the sample survey results are generally skewed towards the younger age groups as merely three per cent of the survey respondents aged 65 and over, suggesting that the younger population was over sampled.

In addition to “age groups,” party affiliation or identification of the respondents appeared to be another variable that is disproportionate to the U.S. population. As Table 2 shows, the sample is biased towards Democrats and Independents. The estimates of the U.S. population by party identification were obtained from the Pew Research Center³. Therefore, in order to reduce

²Please direct to the following link to access the data <https://www.census.gov/quickfacts/fact/table/US/PST045219>

³Please direct to the following link to access the data <https://www.pewresearch.org/politics/2018/03/20/1-trends-in-party-affiliation-among-demographic-groups/>

Table 2: U.S. Adult Population by Party Identification

Party identification	U.S. census data 2019	Survey results
Democrat	33%	47%
Independent	41%	25%
Republican	26%	28%

inaccuracy and non response errors, I adjusted the survey data based on the variables “age group” and “party identification” so that the marginal totals match control totals. With raking, the ratios of age and party identification for the weighted survey sample have been adjusted to match the desired population distribution.

2.2 Survey structure

An experimental survey was designed to investigate how an individual’s party identification and level of political knowledge shape disinformation sharing behavior. Other independent variables, including sex (gender), age, educational level, social media engagement, information credibility are also included in the survey experiment to see what predicts individuals’ disinformation sharing behavior. To ensure the viability of the survey, I conducted a pilot study before I formally launched the survey with 36 undergraduate and graduate students from the University of Chicago and the University of California, Los Angeles, where students were presented with the 16 social media postings (See Table 3 and 4) and were asked to report how they would share the postings. The pilot testing results show that 100% of test participants fully understood each question and were able to provide clear answers to the questions. Given that the feasibility of the survey was guaranteed, I proceeded with the survey on a large scale by recruiting 500 human subjects and randomly assigning them to four conditions. The survey consists of 3 parts: Part 1 includes 16 questions designated to investigate how respondents shared political disinformation; Part 2 is a battery of questions adapted from a Pew public knowledge survey; Part 3 are demographic questions. Additionally, attention check questions were inserted in the survey and appeared randomly.

2.2.1 Part 1

To examine how respondents reacted to and acted upon partisan cues, respondents were randomly assigned to four groups, in which each respondent was asked to rate the following types of fabricated posts. For the first group, respondents received a fabricated social media post without referencing a credible source, such as “A recent study claims that *Republicans* are more likely to show traits associated with mental disorder than *Democrats*.” Respondents in the second group received the same information but the order in which the question was asked was rotated. Therefore, respondents in this group received the information as “A recent study claims that *Democrats* are more likely to show traits associated with mental disorder than *Republicans*.” Likewise, the third group of respondents were presented with a similar post from the first group but the information was in reference to a credible source: “**Scientists from Harvard University** found that *Republicans* are more likely to show traits associated with mental disorder than *Democrats*.” The credible source in this post refers to “Harvard University” as a reputable academic institution. Finally, respondents in the fourth group received the information as follows, “**Scientists from Harvard University** found that *Democrats* are more likely to show traits associated with mental disorder than *Republicans*.” Please see Table 3 and 4 for the battery of questions used in the survey to measure political disinformation sharing behavior.

One of the purposes of the experimental study was to examine how the authority or credibility of information sources influences individuals’ tendency to share political disinformation, which is why two groups received social media posts in reference to credible information sources while the other two did not. It is widely assumed that individuals tend to seek information from credible sources. To test if this presumption holds true, I include a few elite research institutions, including Harvard, Yale, Princeton Universities; and some top academic journals as the information sources to examine how participants shared disinformation. There are two reasons to treat them as trusted information sources. 1) Research institutions and academic journals are considered highly authoritative, especially Harvard, Yale, and Princeton are all well-known institutions in the United States; 2) Due to its nonprofit nature, research institutions tend to be perceived as non-partisan sources in comparison to other information sources, such as media outlets and government agencies.

Respondents were then asked to report how likely they would share the fabricated social media postings on a scale from 1 to 5, with 1 being extremely unlikely to share, and 5 being extremely likely to share. Two attention check questions were inserted into the survey to ensure that

respondents paid attention and fully engaged in completing the survey. All the respondents successfully passed the attention checks. It should be noted that the social media posts were fabricated disinformation rather than existing disinformation; the rationale for that is to rule out the possibility that some respondents may have had possessed prior knowledge of existing disinformation, which could potentially violate the reliability and validity of the experimental results.

Table 3: Survey Questions (Part 1)

Questions	1	2	3	4	5
A recent study claims that Republicans/Democrats are more likely to show traits associated with mental disorder than Democrats/Republicans.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
New study shows that Republicans/Democrats have a lower average IQ than Democrats/Republicans.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
A study published last week found Republicans/Democrats are far more tolerant of other viewpoints than Democrats/Republicans.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Recent research on charitable participation and giving shows that Republicans/Democrats are more charitable than Democrats/Republicans.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Republicans/Democrats are more receptive to criticism than Democrats/Republicans, a new study says.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
New research suggests that Republicans/Democrats are more open-minded than Republicans/Democrats.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely

New study shows that Republicans/Democrats are more likely than Republicans/Democrats to be prone to science denial.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
A new study suggests that Republicans/Democrats are more susceptible to believing in lies than Republicans/Democrats.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely

Table 4: Survey Questions (Part 2)

Questions	1	2	3	4	5
Scientists from Harvard University found that Republicans/Democrats are more likely to show traits associated with mental disorder than Democrats/Republicans.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
A new study recently published in Political Psychology shows that Republicans/Democrats have a lower average IQ than Democrats/Republicans.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
A Princeton study published last week found Republicans/Democrats are far more tolerant of other viewpoints than Republicans.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
A recent Harvard study of charitable participation and giving shows that Republicans/Democrats are more charitable than Democrats/Republicans.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Republicans/Democrats are more receptive to criticism than Democrats/Republicans, a new study published in American Politics says.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
Republicans/Democrats are more open-minded than Republicans/Democrats, according to a new study published in the Journal of Political Behavior.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely

In a new study, Yale researchers found that Republicans/Democrats are more likely than Republicans/Democrats to be prone to science denial.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely
A new Harvard study suggests that Republicans/Democrats are more susceptible to believing in lies than Republicans/Democrats.	Extremely unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Extremely likely

2.2.2 Part 2

In terms of political knowledge level, ten multiple-choice questions adapted from Pew Research Center (2019) were used in this study to measure the respondents’ level of political knowledge. The battery of the survey questions have been widely used in previous social science research to gauge one’s political knowledge level (Johnson, Zhang, and Bichard 2011; Ran, Yamamoto, and Xu 2016). Please see Table 5 for the adapted version of the survey questions.

Table 5: Political Knowledge Questions

Questions	1	2	3	4
1. Who is the current Secretary of State?	Mitt Romney	John Kerry	Rex Tillerson	Mike Pompeo
2. Who is the current President of France?	Emmanuel Macron	Justin Trudeau	Malcolm Turnbull	Boris Johnson
3. Is Neil Gorsuch...	a Supreme Court justice	a Senator	the Solicitor General	the head of the EPA
4. Who was appointed as special counsel overseeing an investigation into allegations of Russian interference in the 2016 U.S. presidential election?	James Comey	Sean Spicer	Sally Yates	Robert Mueller
5. The tap water in Flint, Michigan is unsafe because it contains too much...	Lead	Arsenic	Asbestos	Mold
6. Many conservative Republicans in the House of Representatives are members of which of the following groups?	The Tuesday Group	The Lincoln Group	The Freedom Caucus	The Blue Dogs

7. Which of the following countries has officially started the process of leaving the European Union?	Greece	Germany	Hungary	The United Kingdom
8. According to the CDC, humans are infected with the Zika virus primarily by...	Mosquitoes	Rodents	Spoiled food	Contaminated water
9. Do you happen to know the name of the current Speaker of the U.S. House of Representatives? Is it	Paul Ryan	Nancy Pelosi	Jason Chaffetz	Mitch McConnell
10. What is the percentage of the Jewish population of the United States?	1.4%	14%	2.7%	27%

2.2.3 Part 3

Demographic questions, including age, sex, education, political identity, and social media engagement were gathered in Part 3 of the survey. In this study, social media engagement is quantified as the amount of time individuals spend on ten common social media platforms, including Facebook, Twitter, Snapchat, Instagram, YouTube, Reddit, Tumblr, Pinterest, TikTok, and WhatsApp.

2.2.4 Dependent variable

In this survey experiment, the research participants are asked to report how likely they would be sharing the fabricated postings shown to them on a scale of 1 – 5, ranging from “extremely unlikely” to “extremely likely (to repost).” Since the response variable “repost” is ordinal in nature, an ordinal logistic regression (henceforth, OLS) - proportional odds model (POM) is developed to find predictors of the dependent variable.

2.2.5 Independent Variables

The predictors used as statistical controls to measure respondents’ disinformation sharing behavior are as follows,

Party identification (Party ID): The survey asks the respondents to self-identify and self-classify themselves in one of the 3 categories: Democrat, Republican, and Independent. In the model section, I further dummy code “Democrat” and “Republican” while treating “Independent”

as the omitted category.

Sex (Gender): Sex is measured with three categorical variable, namely male, female, and other. However, given that only one respondent in the survey identifies as “other,” I removed the only case in which the response for gender identification is recorded as “other,” which also allows me to make comparisons on disinformation sharing behavior between female and male individuals (H5).

Age: Age is measured on a ratio numeric scale by asking respondents to self-report their age.

Education: Education is measured by a 7-point scale item ranging from “less than high school” to “doctorate degree,” and is further converted into an interval scale between 0 and 1. The coding process is specified as follows: 0 = “Less than high school,” 1 = “High school graduate,” 2= “Some college,” 3 =“2 year degree,” 4 = “4 year degree,” 5 = “Professional degree” or “Doctorate” in an ordinal order. Then these items are recoded to a 0 to 1 interval⁴.

Political knowledge: The variable is measured by 10 questions. On a scale of 0 to 10, respondents who provide correct answers to all the 10 questions receive a score of 10, indicating that they have the highest levels of political knowledge. By contrast, respondents who fail to answer any of the questions receive a score of 0, suggesting that they possess the lowest levels of political knowledge. Similar to education, this variable is recoded to an interval variable between 0 and 1.

Social media engagement: This numerical variable is measured on 5-point ordinal scale, based on which experimental subjects are asked to report the amount of time they spend on social media. In ascending order, the options include: Less often, Every few weeks, A few times a week, About once a day, Several times a day. Again, this variable is also recoded to an interval between 0 and 1 for data analyses.

Information credibility: This variable consists of two categories, namely “non – credible” and “credible” sources. “Non credible” refers to information without a credible source, which is coded as “0.” In this case, human subjects are presented with social media postings without referencing any information sources. On the contrary, credible information refers to information with a credible source, which is coded as “1.” In this study, credible information sources are operationalized as prestigious academic institutions and well-established academic journals.

⁴The variable is recoded to a 0 to 1 interval using the formula: $[\text{Variable} - \text{lowest (Variable)}]/[\text{highest value (Variable)} - \text{lowest value (Variable)}]$.

3 Results

3.1 Model

To test the set of the hypotheses, and examine what factors drive people to share political disinformation, I performed an OLS in which the dependent variable “repost” (share political disinformation) was classified according to its order of magnitude (“Extremely unlikely,” “Somewhat unlikely,” “Neither likely nor unlikely,” “Somewhat likely,” “Extremely likely”), and the log odds of the ordered outcome were modeled as a linear combination of the predictor variables, which include age, sex, party affiliation, education level, social media engagement, level of political knowledge, and the credibility of information source. The ordinal logistic model - proportional odds model is specified as follows:

$$\begin{aligned} \text{logit}(Y_i) = & \beta_0 + \beta_1 S_i + \beta_2 A_i + \beta_3 E_i + \beta_4 C_i + \beta_5 P_i + \beta_6 I_i + \beta_7 D_i + \beta_8 R_i + \beta_9 F_i \\ & + \beta_{10}(D_i \times F_i) + \beta_{11}(R_i \times F_i) + \beta_{12}(I_i \times P_i) + \beta_{13}(I_i \times A_i) + \mu_i \end{aligned}$$

Where the dependent variable indicates ordered log odds (or ordered logits) of partisan disinformation sharing behavior.

S_i = Sex; A_i = Age; E_i = Education; C_i = Social Media Engagement; P_i = Political Knowledge; I_i = Credibility; D_i = Democrat⁵; R_i = Republican⁶; F_i = Favorability (Towards Democrats). These independent variables are included in the equation to measure the main effects.

$D_i \times F_i$ is the interaction term that measures the difference in the effect of identifying as a Democrat for favorability of the (dis)information towards Democrats versus favorability towards Republicans; $R_i \times F_i$ is the interaction term that measures the difference in the effect of identifying as a Republican for favorability of the (dis)information towards Republicans versus favorability towards Democrats. $I_i \times P_i$ is the interaction term that measures the effect of information credibility for individuals with different levels of political knowledge. $I_i \times A_i$ is the interaction term that measures the effect of information credibility for age.

⁵ D_i is a dummy variable that equals to 1 if the respondent identifies as “Democrat,” and 0 otherwise.

⁶ R_i is a dummy variable that equals to 1 if the respondent identifies as “Republican,” and 0 otherwise.

3.2 Intepretation

Table 6: Odds ratios and 95 percent confidence intervals from logistic regression analyses predicting the likelihood of disinformation sharing behavior by selected characteristics for the model with interaction terms

	Information sharing Regression model
Male	0.349*** (0.210, 0.488)
Age	0.007*** (0.002, 0.012)
Education	-0.678*** (-1.062, -0.294)
Social media use	2.926*** (2.607, 3.244)
Political knowledge	-1.854*** (-2.228, -1.480)
Credibility	-0.265 (-0.830, 0.301)
Favorability (Favorable towards Democrats)	0.002 (-0.218, 0.222)
Democrat	0.130 (-0.108, 0.367)
Republican	0.953*** (0.711, 1.195)
Democrat: Favorability	0.552*** (0.231, 0.874)
Republican: Favorability	-0.590*** (-0.926, -0.255)
Political knowledge: Credibility	0.464* (-0.068, 0.997)
Education: Credibility	0.043 (-0.502, 0.587)
N	3,361

*p < .1; **p < .05; ***p < .01

Note: The table reports coefficients, p values, and confidence intervals

My study investigates what factors contribute to partisan (dis)information sharing behavior on social media. Table 6 shows the odds ratios generated by the ordinal regression model I performed, which displays the values of coefficients and intercepts, and confidence internals of the model.

The categorical variable sex is interpreted as: a male individual, as opposed to a female individual, is associated with a higher likelihood of sharing partisan disinformation. The variable is statistically significant at the 1% level ($p < .01$).

The continuous variable age is interpreted as: with one unit increase in age, the log of odds of an individual sharing partisan disinformation increases by 0.007, holding everything else constant. The age variable is also statistically significant at the 1% level ($p < .01$). This shows that age is a positive predictor of disinformation sharing behavior. Older individuals are more likely to share partisan disinformation on social media.

As mentioned earlier, the education variable is recoded and treated as a continuous variable that falls within the interval of 0 to 1 in the regression model. As shown in Table 6, an increase in educational attainment by one unit increases the expected value of disinformation sharing in log

odds by -0.678 at the 1% level ($p < .01$), holding constant all other variables. This result indicates that educational attainment is negatively associated with disinformation sharing behavior: An individual with a higher level of education is less likely to share disinformation than those with a lower level of education.

Social media use is also positively associated with disinformation sharing behavior. Holding other variables constant, an increase in social media use by one unit increases the expected value of disinformation sharing in log odds by 2.926 at the 1% level ($p < .01$). This suggests that the more engaged an individual is in social media, the more likely the individual shares disinformation. However, given that this study does not examine what motivates disinformation sharing behavior, it demands further investigation that whether social media users purposefully or unintentionally disseminate such dubious information. It is possible that social media users accidentally share disinformation as they are engaged and spend more time in social media.

My study measures the effect of changes in political knowledge on partisan (dis)information sharing behavior in the context of social media. As Table 6 shows, the continuous variable political knowledge is negatively associated with disinformation sharing behavior. With one unit increase in an individual's political knowledge, the log of odds of the individual sharing partisan disinformation decreases by 1.854 at the 1% level ($p < .01$), holding everything else constant. The result shows that the more politically literate an individual is, the less likely the individual shares deceptive or misleading information on social media.

Table 6 shows that information credibility is not a robust predictor of disinformation sharing behavior. Although the values of coefficients associated with information credibility indicate that the credibility of information appears to slightly reduce the likelihood of sharing disinformation, but this relationship is not significant. It should be noted, however, that it is challenging to distinguish truth from falsehoods online, even for experts. In other words, individuals may lack skills or expertise to properly assess the veracity of information online, and therefore, it is a possible explanation that whether the information comes from a credible source is not a consideration when they decide on sharing it or not.

In this study, favorability as a variable is measured by social media posts congenial to party identification. All the social media information presented to the research participants is designed in a fashion where it is favorable towards Democrats and unfavorable towards Republicans at the same time, and vice versa. Interestingly, favorability itself does not serve as a reliable predictor of

disinformation sharing behavior as the variable is not statistically significant.

Partisanship is hypothesized to be an important factor in (dis)information sharing in this study. “Democrat” is a dummy variable, in which “1” refers to individuals who identify as Democrats, and “0” otherwise. As shown in the table, democrats are more likely to share partisan disinformation when compared with individuals who do not identify as Democrats (including Republicans and Independents). However, this variable is not statistically significant. Likewise, “Republican” is another dummy variable that is recoded as “1” for Republican and “0” otherwise (including Democrats and Independents). In this case, a Republican, as opposed to a Democrat or an Independent, is associated with a higher likelihood of sharing partisan disinformation at the 1% level ($p < .01$), holding all other variables constant. This may imply that Republicans share more political disinformation online, which is consistent with the public’s perception of Republicans and conservatives.

In this model, I include four interaction terms to examine the joint effects of some independent variables. The first pair of interaction terms is Democrat \times Favorability, which measures the interaction effect of partisanship on partisan sharing uncongenial to Republicans (or congenial to Democrats). The interaction term is statistically significant at the 1% significance level (as p-value is $< .01$). The interaction is interpreted as: Democrats are more likely to share partisan disinformation when it is favorable towards Democrats and unfavorable towards Republicans. The positive association between partisanship and sharing intention is dependent on whether the information is politically congenial to partisan preferences. The log odds of Democrats sharing partisan information increase by 0.552 when the information is unfavorable to Republicans and favorable to Democrats.

In addition, I generated an interaction plot (See Figure 1⁷) to demonstrate the interaction effects of these two model coefficients. For Democrats (denoted as the blue error bars), the predicted probabilities of Democrats being “somewhat likely” or “extremely likely” to share disinformation congenial to Democrats are higher, as opposed to Republicans (denoted as the red error bars).

⁷0 = information unfavorable to Democrats and favorable to Republicans, 1 = information favorable to Democrats and unfavorable to Republicans.

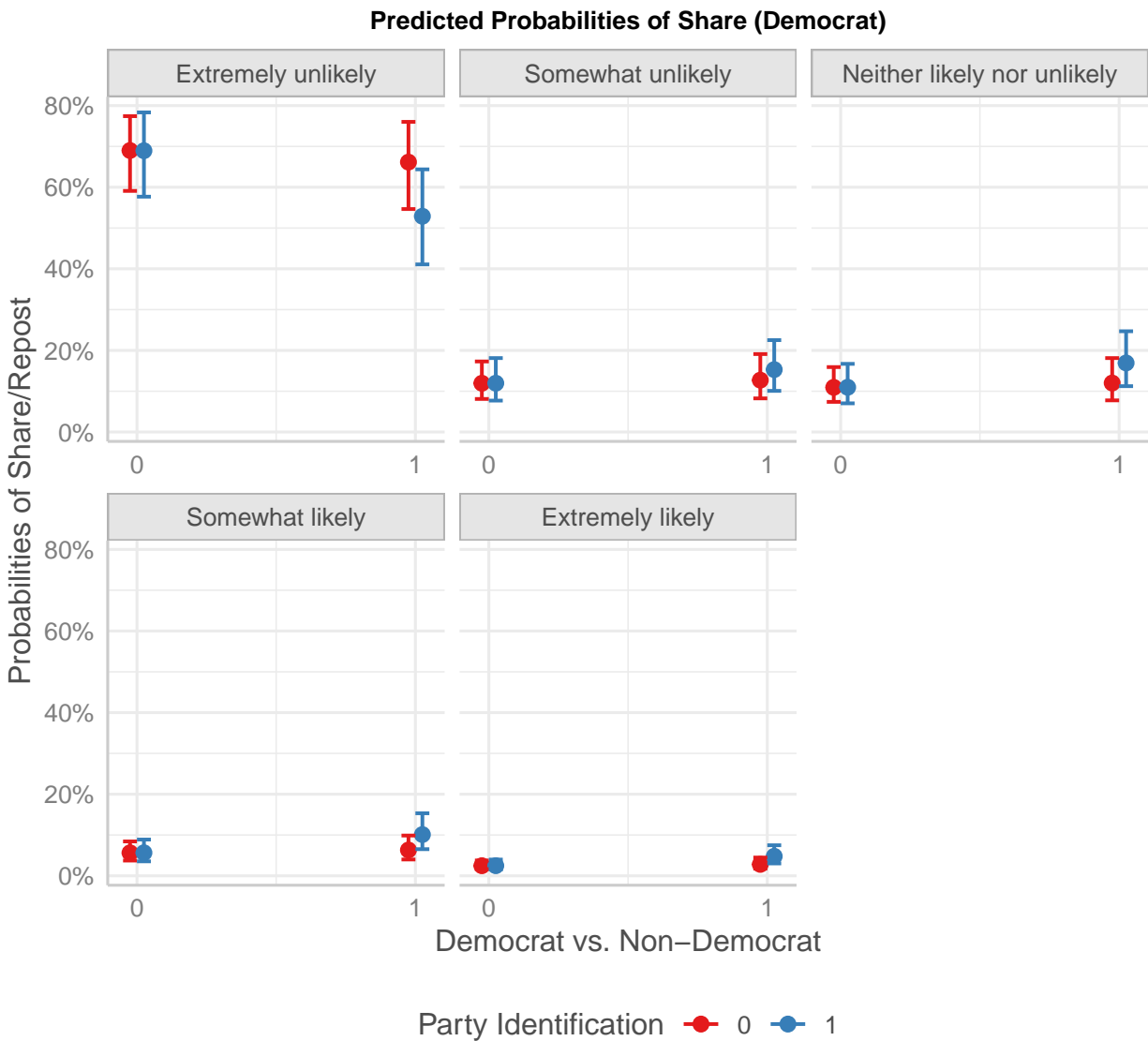


Figure 1: Predicted Probabilities of Share (Democrat vs. Non-Democrat)

With interaction between Republican and favorability, the interaction term is statistically significant at the 1% significance level (as p-value is $<.01$). The log odds of Republicans sharing partisan information decrease by 0.590 when the information is unfavorable to Republicans and favorable to Democrats. In other words, the log odds of Republicans sharing partisan information increase by 0.590 when the information is favorable to Republicans and unfavorable to Democrats. The results shown in Figure 2⁸ further confirm this finding, where Republicans (denoted as the blue error bars⁹) tend to be less “somewhat likely” or “extremely likely” to share partisan disinformation uncongenial to their party preferences.

⁸Identical to Figure 1, 0 = information unfavorable to Democrats and favorable to Republicans, 1 = information favorable to Democrats and unfavorable to Republicans.

⁹Please note that Republicans are denoted as the blue error bars as Republican is coded as “1.”

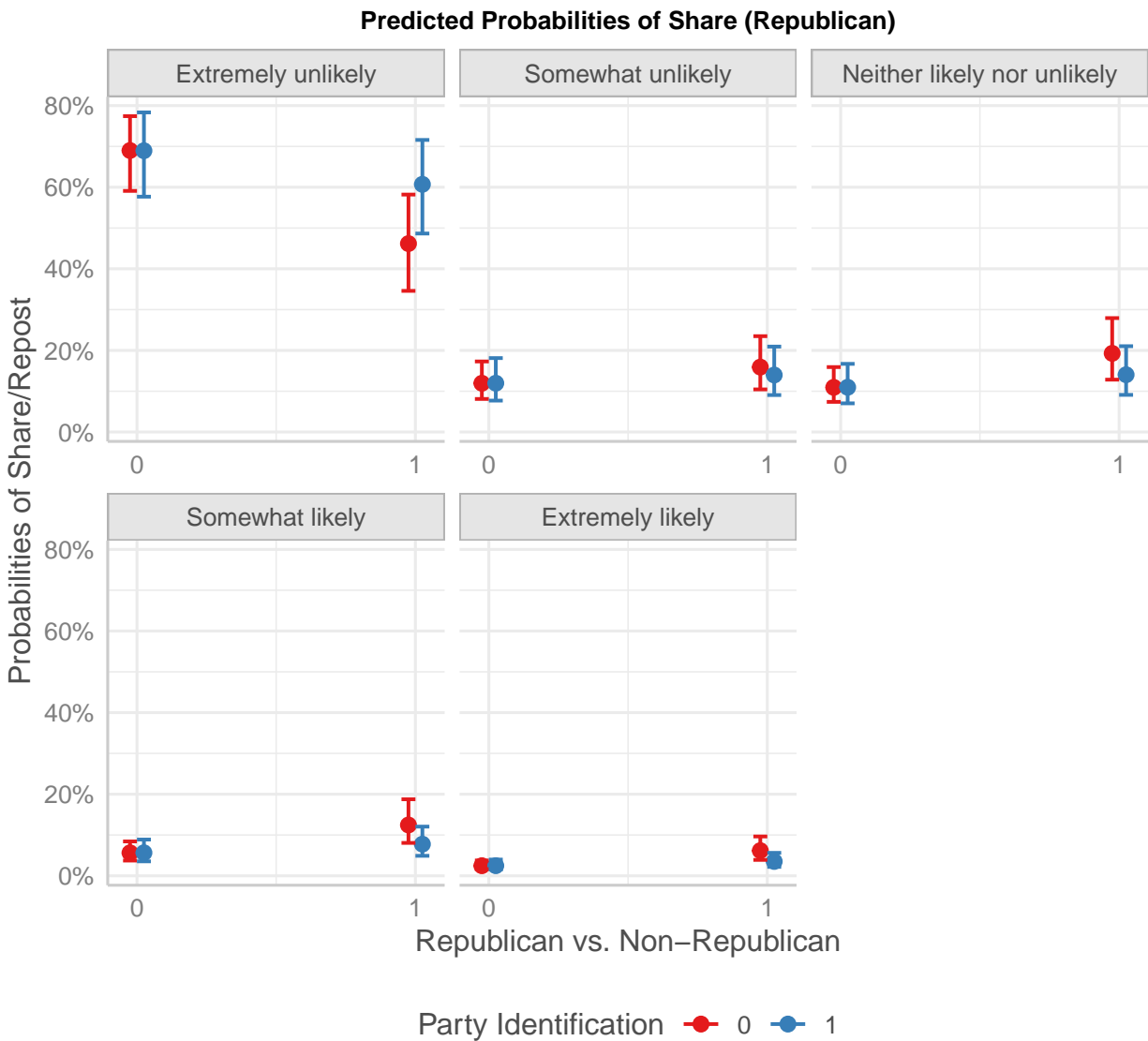


Figure 2: Predicted Probabilities of Share (Republican vs. Non-Republican)

Additionally, the joint effect of political knowledge and credibility on disinformation sharing is also statistically significant at the 10% significance level (as $p < .01$), which is also shown in Figure 3. It suggests that an politically literate individual is more likely to share the information referencing to a credible source. A possible explanation is that individuals with more political knowledge are potentially more familiar with credible information and news sources as political literature individuals might be better educated. However, the interaction term of education and credibility seems to suggest otherwise. As shown in Table 6, the log odds of more educated individuals sharing partisan disinformation when they identify the information source as credible only increase by 0.043 with one unit increase in the interaction effect, which is not statistically significant.

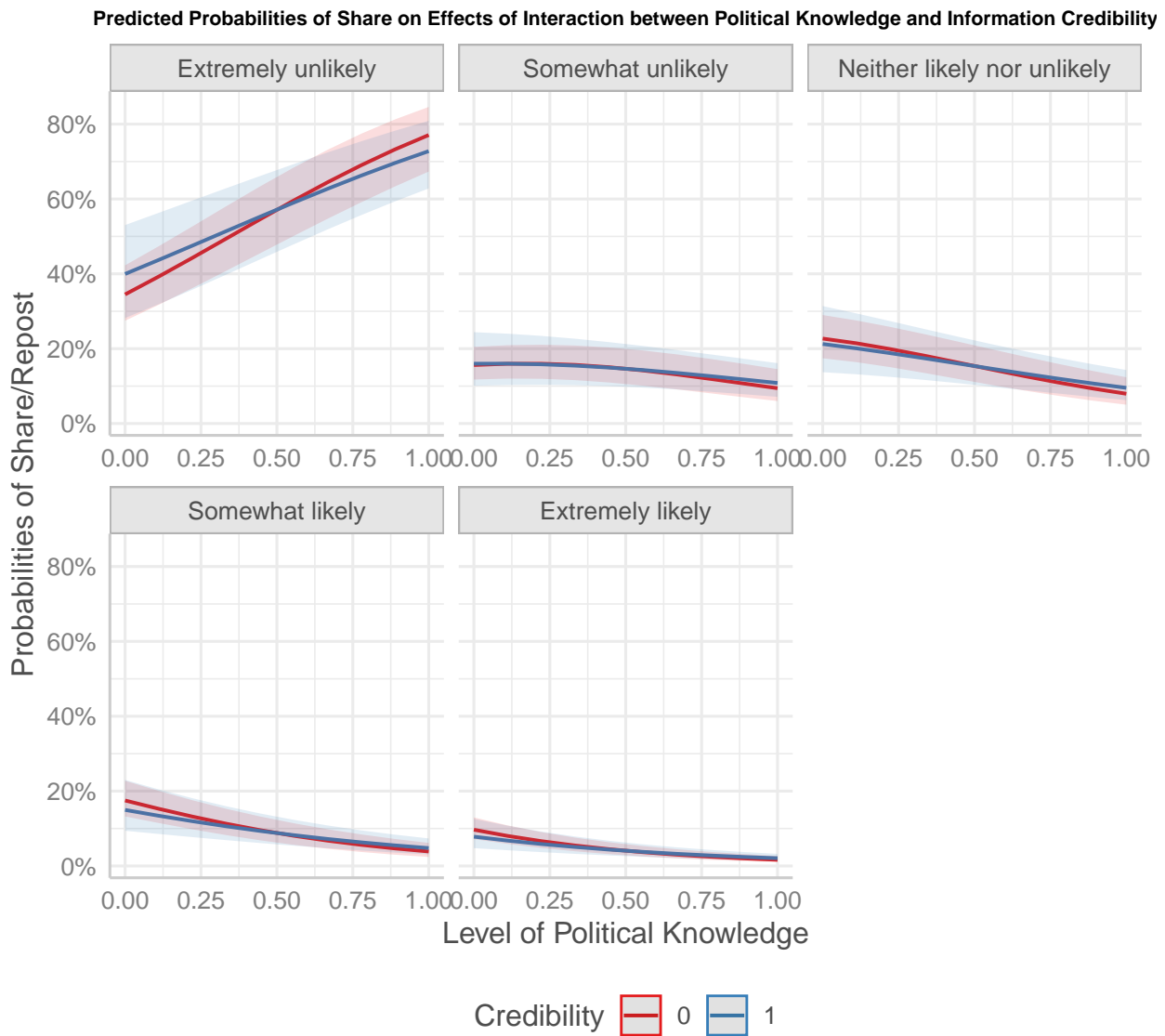


Figure 3: Predicted Probabilities of Share (Political Knowledge Interacts with Information Credibility)

Finally, the joint effect of education and credibility on disinformation sharing is not statistically significant according to Table 6 and Figure 4. Individuals who have higher levels of education show relatively low willingness to share partisan disinformation even when the disinformation is labelled as credible. This finding suggests that the credibility of information sources does not shape disinformation behavior regardless of educational attainment.

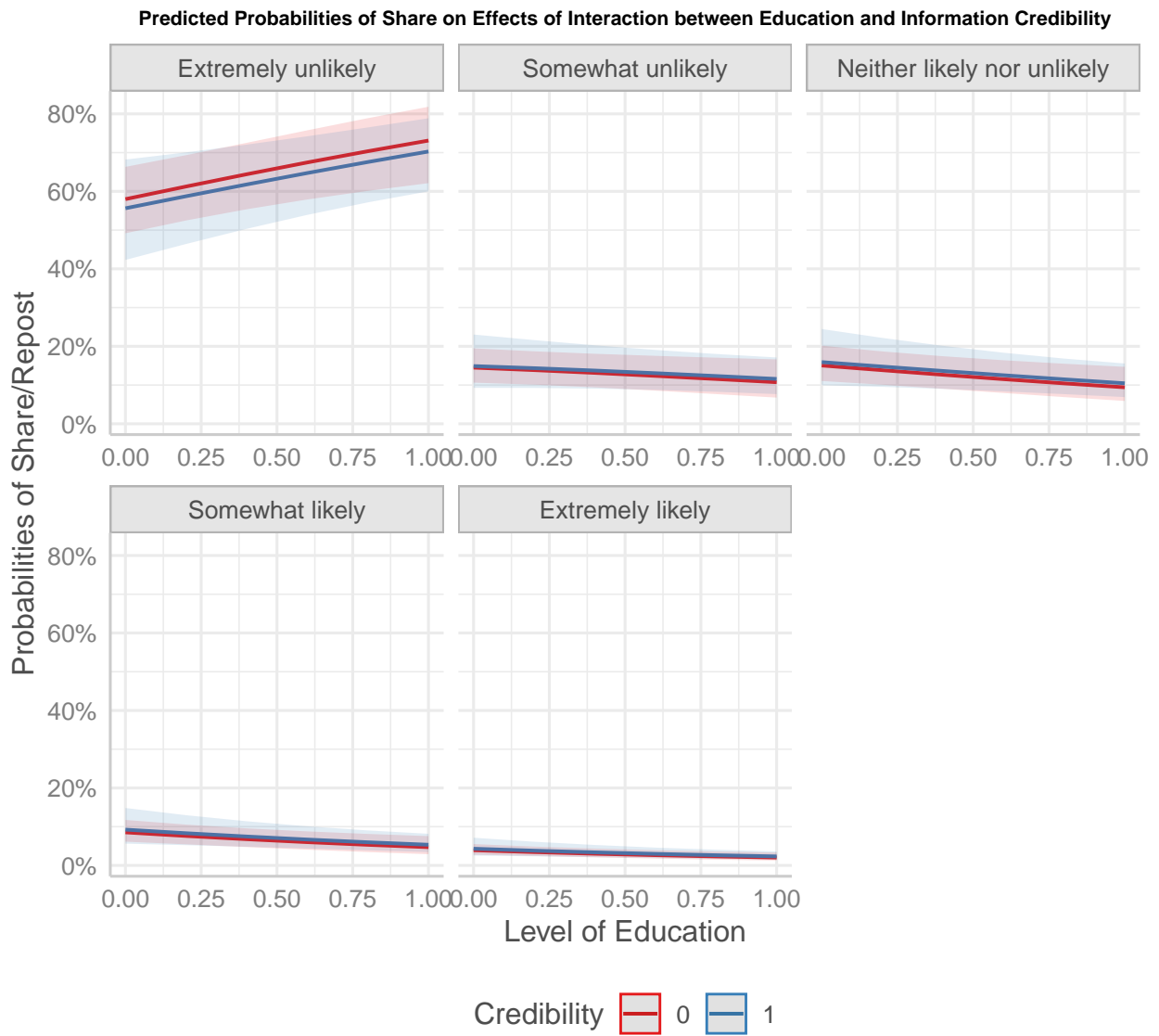


Figure 4: Predicted Probabilities of Share (Education Interacts with Information Credibility)

Based on the analyses above, Hypotheses 1 - 6 are supported, while Hypothesis 7 regarding information credibility is rejected. In other words, political knowledge, social media engagement, age, gender/sex, educational attainment are statistically correlated to disinformation sharing behavior, but information credibility is not a strong predictor of disinformation sharing behavior.

4 Discussion and conclusion

Disinformation is a new name for an old problem. However, the advances of information technology have escalated the proliferation of disinformation online. By distorting individual and collective attitudes and behaviors, political disinformation may undermine democratic institutions. It is, therefore, of pressing importance for political scientists and communication researchers to understand the mechanisms that promote the proliferation of disinformation and fake news. While literature on susceptibility to misinformation is vast, my research has made contributions by furthering the understanding of factors that contribute to disinformation sharing behavior.

The major finding of this project is that partisan motivation shapes disinformation sharing behavior. Results from the ordinal logistic regression model provide robust support to the observation that partisans tend to share disinformation congenial to or favorable towards their political preferences in social media. My study shows that Democrats are more likely to share partisan disinformation favorable towards Democrats and to withhold partisan disinformation unfavorable towards Democrats (See Figure 1). Likewise, Republicans are also more likely to share partisan disinformation favorable towards Republicans and to withhold partisan disinformation unfavorable towards Republicans (See Figure 2). A motivated reasoning account in the literature of political psychology provides a theoretical framework to understand the cognitive mechanisms behind disinformation sharing behavior: Belief in fake news and disinformation is driven primarily by partisanship as individuals tend to rely on partisan cues to process information, and make political decisions and inferences (Schaffner and Roche 2016; Clayton et al. 2019). Building on this account, political psychologists also argue that partisanship leads to motivated reasoning when individuals' group identity is threatened, for which partisans attend to and defend identity-congruent information while disregarding incongruent details (Kahan 2016; Bolsen, Druckman, and Cook 2014). In my project, it is likely that partisans share disinformation favorable towards their political identification to protect their political identities. According to Van Bavel and Pereira (2018), individuals who prioritize political identities above the truth often fail to discern truth from falsehoods, and they tend to believe ideologically concordant information. These accounts provide compelling theoretical support to my finding regarding partisan congeniality on (dis)information dissemination. Identifying and understanding the workings of political disinformation on social media platforms is crucial in guarding democracy against political disorder and ideological segregation.

From the perspective of the persuasion theory, sharing political disinformation is a behavior for polarized partisans to demonstrate their political attitudes and ideologies. The abundant literature on persuasion and motivation clearly delineates the association between belief and behavior: Individuals are more likely to believe information that is concordant with their political affiliation (Faragó, Kende, and Krekó 2019; Allcott and Gentzkow 2017). To conclude, partisans are intransigent to their political views. Prior research in political science and communication research has primarily focused on how disinformation is delivered, transmitted, processed, and received. Despite the seemingly *prima facie* “truth” that individuals may share disinformation on purpose, a dearth of empirical evidence has been gathered to lend weight to congruent conformity in partisan disinformation sharing. The results of this study not only show promising consistency with prior research on polarizing information acceptance and transmission, but also lend solid empirical support to the assumption that individuals’ information behaviors may be predicted by their political belief.

My study also finds that male and older individuals are more likely to share political disinformation. In accordance with popular belief, research results of this study suggest that age is a positive predictor of disinformation sharing behavior. According to the regression model, the older an individual is, the more likely the individual shares political disinformation. This finding lends empirical support to A. Guess, Nagler, and Tucker (2019)’s research on fake news, in which they found that people aged 65 and older shared more fake news stories than younger age groups on Facebook during the 2016 presidential election. Loos and Nijenhuis (2020)’s study of generational differences on consuming fake news on Facebook provides an explanation as to why the older generation are more susceptible to falsehoods: Older people are more likely to be exposed to fake news websites as they usually lack the digital literacy skills to discern factual information from false information, as opposed to the younger groups.

In addition, gender difference also plays a crucial role in disinformation sharing behavior. As the regression model suggests, males are more likely than females to share disinformation on social media compared to women. Consistent with the literature on political participation, men appear to be more, on average, likely to express interest in politics than women (Coffé and Bolzendahl 2010; Schlozman, Burns, and Verba 1994). It is potentially due to the fact that men usually assume more political leadership roles and are perceived to be more engaged in politics. For years, politics seems to be a “macho culture,” in which men tend to hold primary power and

predominance in political decision making. In this regard, given that men are usually more engaged in political activities and conversations, it is likely that men are more likely to spread political falsehoods than women. However, a competing account for the gender bias in disinformation dissemination is that women overall are simply less interested in political topics and information. A previous study by Almenar et al. (2021) shows that men tend to consume political disinformation while women tend to receive fake news about celebrities. This may explain the gender difference in political disinformation dissemination.

As the statistical results of this study reveal, one's educational level is negatively associated with his or her disinformation sharing behavior. Put differently, the less educated are more likely to share political disinformation than those better educated. This finding is in accordance with recent studies regarding susceptibility to disinformation (Khan and Idris 2019; Pop, Ene, and others 2019), in which scholars identify a negative association between educational attainment and disinformation acceptance. However, as mentioned earlier, my research focus is one's individual disinformation sharing behavior rather than disinformation acceptance or denial. In other words, my study does not examine the reasoning behind disinformation sharing behavior. It therefore requires further examination of how individuals' acceptance of disinformation may or may not translate to actual sharing behavior. It is generally assumed that highly educated individuals are less susceptible to fake news and conspiracy theories, among other forms of disinformation. As the regression model suggests, this assumption holds true. One likely explanation for this result is that less educated individuals have limited time and cognitive resources to process and verify information, and hence, have to depend on psychological cues for political information consumption. Even for the most intelligent and educated individuals, disinformation can be facilely engineered to bypass logical thinking and slip under the radar of their minds. Recent studies show that educative interventions are an effective means to guard citizens against disinformation (Schaffner and Luks 2018, 2018). My results yield practical implications for combating disinformation and misinformation online. Individuals with higher educational attainment maybe more likely to be resistant to corrections, for which governments and policy makers should invest more educational resources in order to fight against deceptive and misleading information.

Social media engagement increases the likelihood of sharing disinformation, according to the regression model. My initial assumption and hypothesis was that social media engagement increases a certain level of social media literacy, which assists social media users in distinguishing

true information from falsehoods. Although this study does not investigate the moderating effect of social media literacy on disinformation sharing behavior, the results do show that the more engaged an individual is in social media, the more likely the individual shares disinformation. This finding appears to be inconsistent with Munger et al. (2020)'s finding where they discovered that social media use leads to higher levels of public knowledge, and hence, better abilities to discern factual information from disinformation. However, recognizing and sharing disinformation are two separate topics that need to be further examined. It is possible that individuals may accidentally share more disinformation as they spend more time than others on social media platforms, or they share disinformation to bring attention to others. It is also a possibility that people are simply lazy to verify the accuracy of content they share online (Pennycook and Rand 2019b).

In terms of information credibility, my research suggests that it is not a robust predictor of disinformation sharing behavior. To examine whether the information source's credibility influences individuals' intention to share disinformation, respondents were randomly assigned to groups where they received disinformation either with or without referencing a credible source. Those who received the disinformation in reference to credible sources, including reputable academic institutions and journals were expected to manifest a higher level of trust in the disinformation presented to them and were predicted to be more likely to share disinformation. The experimental results of my study, however, suggest otherwise. Regardless of whether the information sources were credible or authoritative or not, individuals did not tend to share partisan disinformation holding other variables fixed. A possible explanation is that research participants did not consider academic institutions and journals more reputable and reliable sources than other types of information sources. Ognyanova et al. (2020) find that misinformation exposure is linked to lower trust in media organizations and political institutions. In my survey experiment, the credible sources were operationalized as renowned academic institutions and reputable academic journals. Given that academic sources are usually not as influential as political sources, which the news media frequently reference, respondents may have refrained from indicating their authentic sharing intent driven by political motivations. Moreover, the two types of information sources presented in my survey experiment were treated as equally. However, renowned academic institutions and reputable academic journals could potentially generate variation in survey responses given that the public maybe be familiar with renowned academic institutions, such as Harvard, Yale, and Princeton, but may have little knowledge or access to reputable academic

journals. Thus, it is likely that misinformation exposure is also associated with trust in academic institutions, though this hypothesis needs to be further investigated in future research.

In addition to that, this finding has important practical implications for fact-checking as my research suggests that fact-checking may have limited effects on combating disinformation. Accordingly, the impact of source credibility on information assessment is minimal. Apropos debunking disinformation, this study sheds negative light on the efficacy of correction. Humans are biased information-seekers and prefer to receive and share information that confirms our existing views (Sunstein 2016). Individuals may pertinaciously subscribe to their political doctrines that guide them through making political decisions. The implication of these findings is that fact checking may not be as useful as political scientists expect. As this study implies, people would still share disinformation despite the information was in reference to non-partisan and reputable sources. Political ideologies and identities seem to dictate individuals' disinformation sharing behaviors. Disinformation debunking and fact checking may shape voters' political views to some extent, but can hardly change their voting decisions (Aird et al. 2018). Political scientists and policy makers have been considering tackling the disinformation finesse from the supply side by proposing a system to certify and label trustworthy content in order to put the kibosh on the rampant dissemination of falsehoods (Pennycook and Rand 2019a; Walter et al. 2020; E. Porter and Wood 2021; Young et al. 2018). However, my research raises concerns about the effectiveness and efficacy of fact-checking and fact-checking organizations. If individuals show less trust in media and academic institutions, they are possibly less likely to trust fact-checking organizations. Furthermore, my research indicates that supply-side analyses of disinformation need to be further visited in order to better understand if accuracy and authenticity reduce sharing of disinformation. To some extent, high demands for disinformation appear to be an important reason that disinformation is still burgeoning on social media platforms.

Political knowledge is an important predictor of disinformation sharing behavior. My research offers solid empirical evidence that conforms to the hypothesis that the political literacy or political knowledge is negatively correlated to disinformation sharing. With other variables holding constant, the more political knowledge an individual has, the less likely he or she shares political disinformation. My research results provide further empirical evidence to Vegetti and Mancosu (2020)'s finding that individuals with higher levels of political sophistication perform better in truth discernment for political information regardless of partisan alignment. This implies that poor

truth discernment may be linked to a lack of political reasoning and relevant knowledge of politics and current affairs. Political scientists have documented the deficiencies in political knowledge among American citizens, but the relationship between political knowledge and disinformation susceptibility received surprisingly scant attention. Political knowledge is the central concept in the studies of political attitudes and behaviors as it is considered to foster “enlightened self-interest” among the public (Carpini and Keeter 1996, 238). Higher levels of political knowledge are positively correlated to acceptance of democratic principles and values. The attenuation of political knowledge makes it challenging to form a politically engaged citizenry. My research shows that the attenuation of political knowledge acts as an obstacle to debunk disinformation and fake news. A possible explanation is that individuals with higher levels of political knowledge have sufficient and careful reasoning to evaluate the veracity of political information and news. Those who lack sufficient amount of political literacy may be more susceptible to disinformation in social media. When they encounter unfamiliar political information that requires certain levels of discernment and critical assessment, they instead use heuristics to process information as it effectively reduces cognitive load (Ali and Zain-ul-abdin 2021; Chaiken and Ledgerwood 2011; Todorov, Chaiken, and Henderson 2002). Even though this explanation requires further examination, individuals are naturally inclined to relying on cognitive shortcuts to make quick judgments when they have little or limited prior knowledge for processing new information. Granted, debunking disinformation is seemingly a futile effort drawing on the findings. It certainly does not imply that we should desert individuals at the mercy of falsehoods. On the other hand, this study suggests that political knowledge or political literacy is a vital intervention in combating political disinformation.

5 Limitations and future work

Despite the important strengths aforementioned, this study is not without limitations. One of the most significant obstacles to my work is the limited number of previous studies focusing on disinformation sharing behavior. Notably, it is particularly challenging to document and study social media users' information behaviors online. In fact, my research examines individual disinformation sharing intention rather than actual disinformation sharing behavior. The survey I designed simulated how individuals would react to and act on disinformation in a hypothetical social media environment. This is similar to polling research, where respondents may report for whom they may vote, but they may not cast the ballot eventually. In reality, individuals' information sharing behaviors may be affected by many societal and psychological factors. For instance, people may be reluctant to share political messages in their social networks as it may have a negative impact on their relationships with family and friends. Fortunately, Mosleh, Pennycook, and Rand (2020)'s study shows that self-reported sharing intentions demonstrated in online surveys, such as MTurk, are generally consistent with what actually would be shared on social media, which justifies the use of my research method. Since my research measures respondents' sharing behavior rather than their attitudes, a possibility exists that respondents may have exhibited attitude-behavior incongruence with respect to disinformation acceptance in my study. In other words, individuals may believe the fabricated social media content presented to them but be reluctant to share it; or they may share it to others without actually believing it. This is another limitation that should be further investigated in future research.

In this project, disinformation is operationalized as a set of fabricated partisan claims in the format of Twitter posts. I used 16 question items to measure one's disinformation sharing behavior. To rule out the possible scenario in which respondents may have been exposed to existing disinformation or fake news stories before the survey, which may skew the survey results, I fabricated 16 social media posts and asked the respondents to report how they would react to such posts. For example, respondents who identified as Republicans may have received either the message "New study shows that Republicans are more likely than Democrats to be prone to science denial" or "New study shows that Democrats are more likely than Republicans to be prone to science denial." The wording of the first manipulation is obviously in favor of Democrats, and the second one is pro Republicans. In the results section, I congregated the responses by party alignment to perform statistical analysis. However, the experimental design in nature could

potentially obscure a host of complex interactions as a Republican respondent's reaction to the first manipulation is highly likely to be different from his or her reaction to the second manipulation. In addition, one may argue that the research design does not precisely gauge disinformation behavior as the social media content is fabricated and fictional. Without an universal definition, disinformation is usually considered as any media content that is deceptive (Lazer et al. 2018). According to Allcott and Gentzkow (2017), disinformation can be displayed as "news news articles that are intentionally and verifiably false, and could mislead readers." Therefore, in the case of my study, although the social media postings are fabricated by the researcher, they were designed in a fashion to intentionally and verifiably inaccurate, and therefore, should be safely classified as disinformation or fake news.

Another direction for future research is to understand the motives for individuals to share disinformation. My research investigates whether an individual is more or less likely to share fabricated messages, but does not examine the motivated reasoning for them to do so. Simply put, my research examines "how they share," but not "why they share." There could be many factors that drive an individual to share disinformation according to the political psychology literature: They may not believe the content of the information, but they share the information to inform others that it is suspicious information; Or they may believe the content of the information, and they share the information to promote it and let more people know about it. What prompts a social media user to share disinformation demands further research, but the literature on heuristics and elite persuasion may provide some theoretical insights into understanding (dis)information sharing behavior. Prior studies show that people usually use their endorsement in political figures as heuristics to guide political decision making and process unfamiliar information (Vis 2019; Miler 2009; Steenbergen et al. 2018; Gilens and Murakawa 2002), it is possible that they also use such heuristics to assess the veracity of disinformation. Furthermore, "disinformation" in this study is operationalized as fabricated social media messages that contain hyperpartisan information that likely represents a much larger proportion of Americans' social media diets. The actual on-platform exposure of social media users to real-world disinformation remains an open question.

In my research, I experimentally manipulated research participants' party identification, levels of political knowledge, along with other factors, to investigate their disinformation sharing behaviors. The research results show that partisans are much more likely to disseminate politically congenial disinformation. However, I did not manipulate prior factual beliefs and political

motivations. Thus, observing a difference in information sharing across ideological lines may not be sufficient evidence to conclude that partisan identity causes the difference in (dis)information sharing. Additionally, sampling bias is another concern in the research design. Given that the panel of respondents were recruited using MTurk, the sample was not drawn from the entire American population. To address this issue, I used raking as the statistical method to adjust the segments of the target population in proportions that did not match the proportions of those segments in the target population. Even though it is crucial to adjust the sample to ensure representativeness of the U.S. population, survey weighting may also result in problems such as reduced accuracy, which could potentially skew the results and findings.

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