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A little bit of knowledge: Facebook's News Feed and self-perceptions of knowledge

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Abstract

Given that approximately half of Internet users use Facebook to access news, it is no surprise that social media are increasingly seen as a viable source of political information. Despite the fact that the average social media user only clicks on a small fraction of political content available in their News Feed, social media use correlates with political knowledge. From where, then, does this knowledge come? We argue that Facebook's News Feed itself, with its short article previews, provides enough political information for learning to occur. However, this learning comes with an additional consequence: audiences who only read article previews think they know more than they actually do, especially individuals who are motivated to seek emotions. While we are agnostic to the normative implications of such overconfidence, it is worth noting that similar behaviors are associated with political efficacy, knowledge, and participation.

Keywords

Social media, knowledge, emotion, political communication, learning, overconfidence

Introduction

Decades of research shows that exposure to news makes people better informed. Yet these results come from an era when exposure to news meant long-form journalism on television or in newspapers. Today, though, 67% of Americans get their news from social media (Shearer and Gottfriend, 2017). We believe that this has important implications for how people learn about politics. Because most social media users only have a passing engagement with posted news, exposure to political information on social media may simply create the *illusion* of political learning. In this paper, we consider whether Facebook's News Feed contributes to political knowledge, and how exposure to small bits of information causes some individuals to believe they know more about issues than they actually do.

To do so, we conducted an experiment where we randomly presented subjects with either a full news article, a Facebook News Feed including a preview of that article, or no information at all, and measured how much knowledge they gained about the highlighted issue, as well as how much knowledge they *thought* they had gained. We found that Facebook's News Feed, with its short article previews, provides enough information for learning to occur. This in itself is an important and normatively positive finding: in a relatively new way of acquiring information, Facebook users are learning by merely scrolling through their News Feed. However, this learning comes with an additional consequence: audiences who only read article previews are overly confident in their knowledge, especially individuals who are motivated to experience strong emotions and, thus, tend to form strong opinions. These individuals demonstrating a high "need for affect" (Maio and Esses, 2001) are significantly more likely to overestimate their knowledge when encountering snippets of information in Facebook's News Feed.

We believe this disparity in perceived knowledge between high- and low-affective dispositions is important. With 68% of Facebook users using the site for news,

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Facebook has become an important source of political information (Shearer and Gottfried, 2017). However, much of that news exposure is in the form of headlines or previews: an average user only clicks 7% of the political news stories available in her Feed (Bakshy, Messing and Adamic, 2015). In other words, though social media are seen as a wealth of information, most users only have a passing engagement with posted news. This incongruity creates an opportunity for limited or biased information processing where the bite-sized presentation style of news contributes to affective audiences' overconfidence in their knowledge of the issues.

Political knowledge, need for affect, and overconfidence

Knowledge about politics is essential to a well-functioning democracy. Citizens must have sufficient knowledge about issues, policies, and candidates in order to make informed decisions. It is no surprise, then, that scholars have studied the relationship between political knowledge and democratic discourse (Delli Carpini and Keeter, 1997), voting (Berelson, Lazarsfeld and McPhee, 1954; Lau and Redlawsk, 2006), political efficacy (Galston, 2001; Jung, Kim and Gil de Zúñiga, 2011; Kenski and Stroud, 2006), and policy preferences (Bartels, 1996; Converse, 1964; Gilens, 2001; Luskin, Fishkin and Jowell, 2002).

Overconfidence in knowledge is often situated in the context of the classic motivated reasoning framework. Here, scholars draw an important distinction between being *un*informed (recognizing one's own ignorance) and being *mis*informed (confidently holding inaccurate beliefs), with overconfidence research focusing on the latter (Kuklinski et al., 2000). We argue that overconfidence stems from people's directional goals, or their desire to reach a particular conclusion (see Kunda, 1990). Directional goals manifest in two ways. The first is the desire to hold a certain attitude or belief (Abelson, 1986). This type of directional goal is the basis of most models of motivated reasoning in politics, since people possess ideological and partisan preferences that make some beliefs preferable to others. In doing so, people place more weight on information that agrees with their views and reject information with which they disagree (Edwards and Smith, 1996; Lord, Ross and Lepper, 1979; Taber and Lodge, 2006). The second directional goal, accuracy, motivates individuals to consider the quality and quantity of the evidence before them (Petty and Cacioppo, 1986) and display less false confidence in their knowledge, either by holding confident, correct beliefs or being less confident when the correctness of their beliefs is in doubt.

Given these different motivations, we do not expect everyone to be equally overconfident in their knowledge. Though we anticipate that individuals vary in the degree to which they are driven by accuracy goals, we want to stress that for some, the *feeling* of being accurate satisfies directional goals more easily than actually *being* accurate. We argue that these individuals are driven, in part, by a high need for affect. People vary in their need for affect, with some individuals seeking out strong emotions (regardless of whether they are positive or negative), some people trying to avoid feeling strong emotions, and everyone in between (Maio and Esses, 2001). Individuals who possess a high need for affect tend to be the most certain in the rightness of their attitudes and are more likely to form firm and strong opinions (Britt et al., 2009). Those scoring high in a need for affect also tend to take the party line on policies, even when it conflicts with their values, as well as apply double standards when evaluating politicians of the opposing party (Arceneaux and Vander Wielen, 2013, 2017). We extend this logic to epistemic overconfidence, as evidence indicates that a high need for affect moderates how individuals process political news (Ryan, Wells and Acree, 2016). Specifically, we expect those who are high in need for affect to form relatively strong opinions based on the limited information gleaned from the Facebook News Feed and, therefore, be more likely to come away with an illusion of confidence in their knowledge relative to those who score lower on need for affect.

Social media provide a relatively new avenue of research in political knowledge and overconfidence. Previous research has shown exposure to the mass media (Chaffee and Kanihan, 1997) and the Internet (Kenski and Stroud, 2006) can lead to significant gains in political knowledge, but social media differ from traditional media in significant ways. For example, social media facilitate inadvertent exposure to news. A user who logs onto Facebook for diversionary purposes may learn something from information encountered incidentally on her News Feed (Bode, 2016; Feezell, 2018; Kim, Hsu and Gil de Zúñiga, 2013; Mitchell et al., 2013; Karnowski et al., 2017; Oeldorf-Hirsch, 2018), thus mitigating the issue of self-selection associated with watching television or reading a newspaper (Arceneaux and Johnson, 2013). In addition to providing content to audiences who may habitually avoid such information, social networking sites also allow users to interact with posted content in a way not possible with television broadcasts or newspaper articles (see Eveland, 2003). This interaction, usually in the form of endorsements or comments, prompts audiences to read content that they may ignore in traditional media contexts (Anspach, 2017; Messing and Westwood, 2012). Inadvertent exposure and social influence combine to create an opportunity to inform audiences on a wide array of new issues. With this in mind, we hypothesize:

> H_1: Social media audiences learn from Facebook article previews, demonstrating more factual knowledge than those receiving no information.

If article previews in the Facebook News Feed can inform users, it is important to understand the effects of these small increases in knowledge. Because individuals with a high need for affect (henceforth, NFA) are more likely to seek out strong emotions (Maio and Esses, 2001), they tend to form strong attitudes (Arceneaux and Vander Wielen, 2013, 2017) and exhibit certainty in the rightness of those attitudes (Britt et al., 2009). Furthermore, we have a similar prediction when we consider epistemic directional goals. We expect that individuals scoring high in NFA will be more overconfident in their knowledge, particularly when only given limited information, as is often the case in Facebook's News Feed. When asked to consider gains in knowledge, we expect high-NFA individuals to go with their gut reaction, and to be likely to see themselves as knowledgeable even when they are not. Low-NFA individuals, on the other hand, should appreciate that they have only encountered a brief headline and, thus, should be less likely to form overconfident beliefs.

H_2: When reading Facebook article previews, high-NFA individuals exhibit more overconfidence in their knowledge of the highlighted issue than low-NFA individuals.

But how does NFA influence overconfidence in other informational situations? When no information is provided (as in a control group), we do not expect NFA to influence people's perceptions of their own knowledge. Because individuals have no new knowledge gain to which they can react, there will be no gut reaction. We also expect NFA to have less influence when individuals read full news articles, though for different reasons. Providing more information makes it more difficult to overestimate one's knowledge, as even people without strong accuracy goals learn the facts in information-rich environments (Kunda, 1990: 482–483). Moreover, people tend to adjust their beliefs in accordance with the available facts when they are "presented in a way that 'hits them between the eyes'" (Kuklinski et al., 2000: 805). Consequently, we expect the differences in overconfidence between low- and high-NFA individuals to attenuate when people read the entire article connected to a post.

H_3: Need for affect does not influence overconfidence when no information is provided.

H_4: Need for affect does not influence overconfidence when reading an entire article.

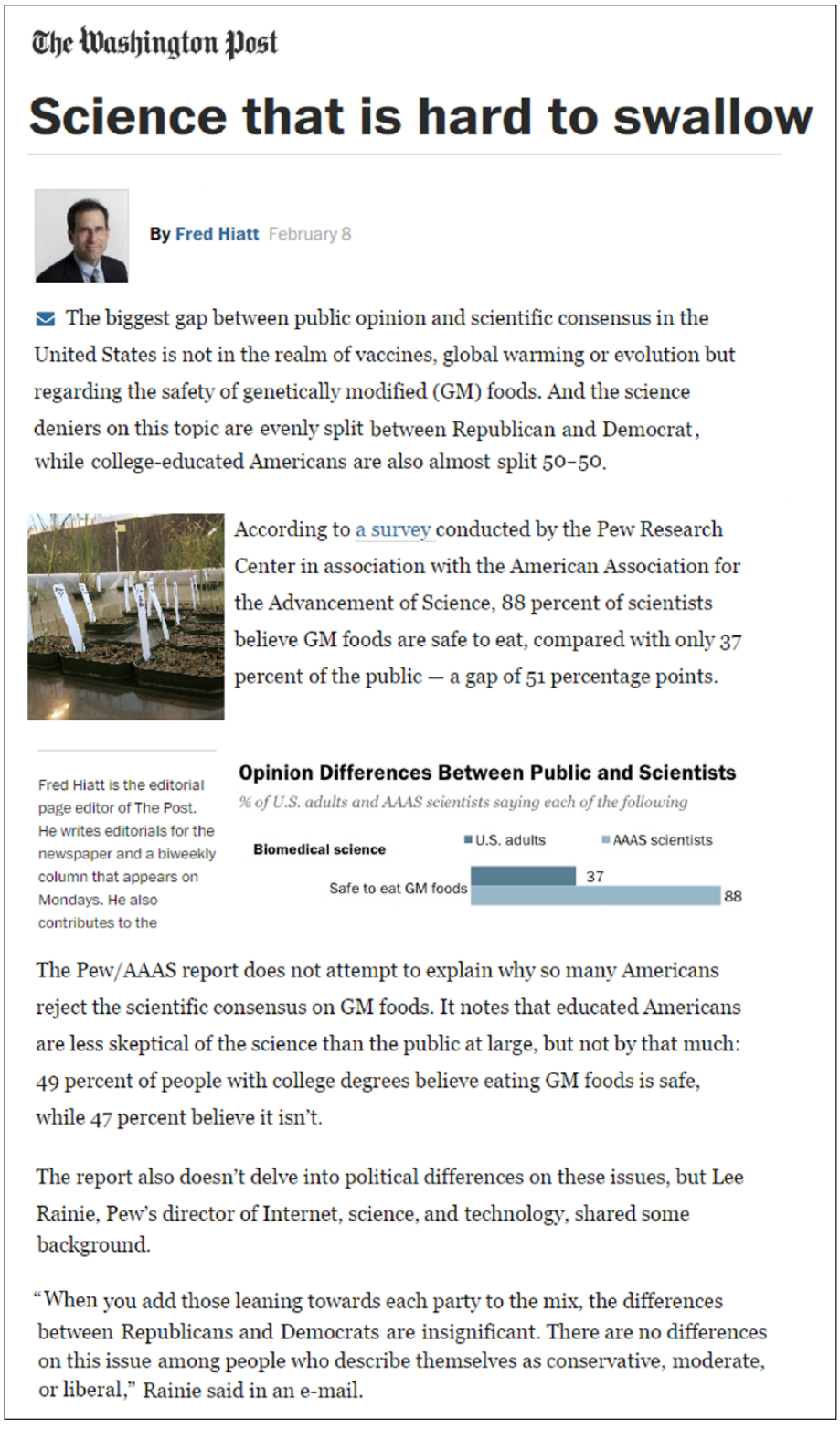
Research design

We deployed a survey experiment through Amazon's Mechanical Turk platform (MTurk) in order to ascertain whether Facebook's article previews inform audiences, and whether exposure to such posts leads to overconfidence in political knowledge. Because MTurk samples are recruited and surveyed online, they are especially useful for studying social media phenomena. Research from both political science (Berinsky, Huber and Lenz, 2012) and psychology (Buhrmester, Kwang and Gosling, 2011; Paolacci and Chandler, 2014) validate MTurk as a reliable source of data, featuring more diversity than college or other Internet samples (see Online Appendix for descriptive statistics). Any U.S. adult over the age of 18 was eligible for the study, and respondents were paid US$.50 for their participation.

The survey began by measuring subjects' basic demographic information, including age, education, race, party identification, gender, and income. Embedded within these demographic questions was an attention-check question, and any subjects who failed the attention check ($n = 36$) were immediately notified of their failure and removed from the online survey without payment. Following the demographic battery, we then measured the remaining subjects' ($n = 990$) cognitive styles, particularly NFA.[1] We adopt Maio and Esses' (2001) affect battery to measure subjects' NFA in which subjects indicate how much they agree with each statement using a five-point Likert scale (see Online Appendix). We then conducted a factor analysis on those responses to create an aggregate score for each subject's NFA.

Following the NFA measure, we then randomly assigned each subject to one of three experimental conditions. The first was the full article condition (Figure 1), in which subjects read an article from *The Washington Post* that summarized a Pew survey on the safety of genetically modified (GM) foods ($n = 320$). The second was a faux News Feed condition (Figure 2), in which subjects received a mock News Feed containing four article previews, one of which was of the Pew survey ($n = 319$). Included in this preview was some (but not all) of the information found in the full article condition. Finally, a control group ($n = 351$) did not receive any stimuli and proceeded immediately to the next portion of the survey described below.

Our News Feed condition avoided the flaws associated with forced-exposure experimental designs (see Arceneaux and Johnson, 2013), where researchers require subjects to read information they might never encounter in real life. On Facebook, users have little control over the posts that appear in their News Feeds (Bode, 2016), meaning much of the information encountered on the site is done so incidentally (Mitchell et al., 2013). Similarly, our News Feed condition featured a mix of entertainment and informational posts, and drew no particular attention to the GM food post. In this condition, subjects were instructed to select the post they would most likely click if browsing Facebook. This was for informational purposes only, as regardless of choice, subjects did not view the corresponding articles. Of those receiving the News Feed treatment, 92 (28.8%) selected the GM food post, and there were no significant



The Washington Post

Science that is hard to swallow

By Fred Hiatt February 8

The biggest gap between public opinion and scientific consensus in the United States is not in the realm of vaccines, global warming or evolution but regarding the safety of genetically modified (GM) foods. And the science deniers on this topic are evenly split between Republican and Democrat, while college-educated Americans are also almost split 50–50.

According to a survey conducted by the Pew Research Center in association with the American Association for the Advancement of Science, 88 percent of scientists believe GM foods are safe to eat, compared with only 37 percent of the public — a gap of 51 percentage points.

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Opinion Differences Between Public and Scientists

% of U.S. adults and AAAS scientists saying each of the following

The Pew/AAAS report does not attempt to explain why so many Americans reject the scientific consensus on GM foods. It notes that educated Americans are less skeptical of the science than the public at large, but not by that much: 49 percent of people with college degrees believe eating GM foods is safe, while 47 percent believe it isn't.

The report also doesn't delve into political differences on these issues, but Lee Rainie, Pew's director of Internet, science, and technology, shared some background.

"When you add those leaning towards each party to the mix, the differences between Republicans and Democrats are insignificant. There are no differences on this issue among people who describe themselves as conservative, moderate, or liberal," Rainie said in an e-mail.

Figure 1. Full article treatment.

differences in the outcome variables between those who selected the treatment post and those who did not (see Online Appendix).

Following the experimental treatments, we measured subjects' knowledge of GM foods using six factual questions (see Online Appendix). The answers to five of the six

Figure 2. GM food article preview used for News Feed treatment.

questions could be found in the full article, and three answers could be found in the article's News Feed preview. To determine each subject's level of overconfidence, we subtracted the number of correct answers by the number of questions the subject *believed* they answered correctly, a standard operationalization in overconfidence studies (Moore and Healy, 2008: 502).

Results

Figure 3 shows the differences in correct responses for each of the six GM food questions, based on experimental condition. Whether the answers to these questions were available to the subjects depended on the condition they were assigned to. The first set of bars represents the correct responses to the question of which state requires GM foods to be labeled. The answer to this question was not available in any condition, explaining the lack of any statistical difference between the experimental conditions. The answers to the second and third questions shown in Figure 3 were only featured in the full article condition. Roughly 70% of subjects assigned to this condition answered these questions correctly, as opposed to approximately 30% of the News Feed and control groups. Additionally, it should be noted that for these two questions, the difference in correct response rates for the News Feed and control groups was statistically insignificant.

The third set of questions in Figure 3 allowed us to determine whether, as H_1 predicts, article previews in a Facebook News Feed can inform audiences. Answers to this final set of questions were available in both the full article and News Feed conditions. Looking at the response rates to these questions, the full article group answered more questions correctly on average (2.21) than both the News Feed group (1.32; $t = 10.9$; $p < .05$) and the control group (1.16; $t = 13.5$; $p < .05$). This makes intuitive sense, as subjects were asked to read the entire news article, whereas we drew no special attention to the GM food post in the News Feed. Yet, despite the fact that the GM article preview was only one post among many in the faux News Feed, the News Feed group also answered more of these questions correctly on average than the control group ($t = 2.0$; $p < .05$). However, looking at Figure 3, we see that the News Feed group correctly answered only one question significantly more often than the control group. This indicates that though social media audiences do learn from News Feed article previews (thus providing support for H_1), the amount of knowledge acquired is modest. Next, we turn to the question of whether audiences realize these informational gains are minimal, or whether they are overconfident in how much they have learned.

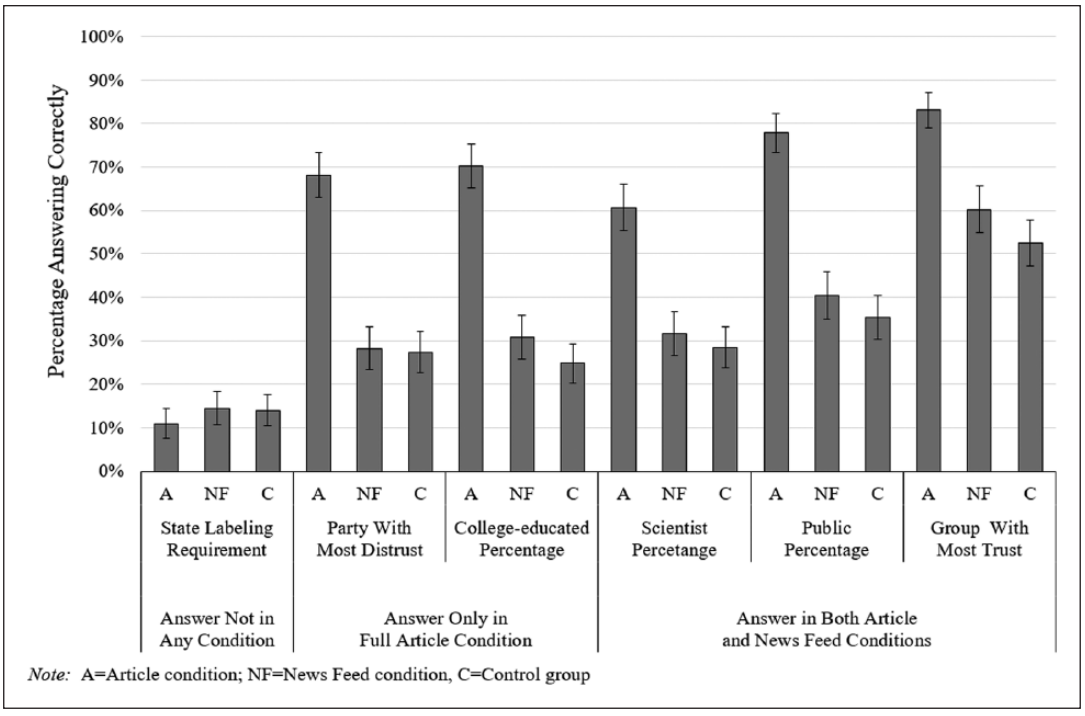

Figure 3. Correct response rates by experimental conditions.

Table 1 provides evidence that high-NFA individuals are most likely to exhibit such overconfidence (H_2). The first model of Table 1 shows the ordinary least squares (OLS) regression of knowledge of GM foods on NFA, interacted with each treatment, while the second model includes standard control variables. For both models, NFA has no effect on knowledge in any experimental condition. This is important with regard to interpreting subjects' overconfidence, as any changes in overconfidence attributed to NFA will be due to changes in subjects' *perceptions* of their knowledge, not in their *actual* knowledge. The final columns of Table 1 demonstrate how each of our experimental treatments interact with NFA to influence overconfidence, both with and without control variables. The most striking result of these regressions is how NFA reverses the direction of the article preview's effect on overconfidence. Among subjects exposed to a limited amount of information, those with a high NFA exhibit significantly more overconfidence than those scoring low on NFA, which indicates clear support for H_2. Though a need for affect does not cause individuals to actually learn more about GM foods, it does cause them *believe* they know more than they actually do. Upon gaining a little bit of knowledge from article previews, high-NFA subjects fail to reflect upon the fact that such previews convey an incomplete picture of the issue at hand. These individuals tend to evaluate their knowledge with their gut reactions, and display a higher level of overconfidence than their less emotive counterparts.

Just as interesting as NFA's influence on the News Feed's effect is the fact that NFA did not influence overconfidence in the other experimental conditions. In the

Table 1. OLS regressions of GM food knowledge and overconfidence.

	Knowledge		Overconfidence	
Full article treatment	**1.88**	**1.88**	**–0.89**	**–0.90**
	(0.11)	**(0.11)**	**(0.12)**	**(0.12)**
News Feed treatment	**0.23**	**0.22**	**–0.31**	**–0.32**
	(0.11)	**(0.11)**	**(0.12)**	**(0.12)**
Need for affect (NFA)	−0.09	−0.08	0.004	0.002
	(0.08)	(0.07)	(0.09)	(0.09)
NFA × full article	0.13	0.14	0.005	0.03
	(0.11)	(0.11)	(0.13)	(0.13)
NFA × News Feed	−0.02	0.01	**0.26**	**0.27**
	(0.11)	(0.11)	**(0.13)**	**(0.13)**
Age	–	0.005	–	**0.009**
		(0.003)		**(0.004)**
Education	–	0.06	–	−0.03
		(0.03)		(0.04)
White	–	0.21	–	−0.20
		(0.11)		(0.13)
Party ID	–	**–0.05**	–	0.01
		(0.02)		(0.02)
Male	–	**0.33**	–	0.15
		(0.09)		(0.10)
Income	–	0.01	–	−0.04
		(0.02)		(0.02)
Control group	**1.83**	**0.97**	**0.91**	**1.00**
	(0.07)	**(0.23)**	**(0.08)**	**(0.26)**
Observations	990	985	990	985
F-statistic	72.81	36.78	12.61	6.79
R^2	0.27	0.29	0.06	0.06

Note: standard errors in parentheses; significant coefficients ($p < .05$) presented in bold.

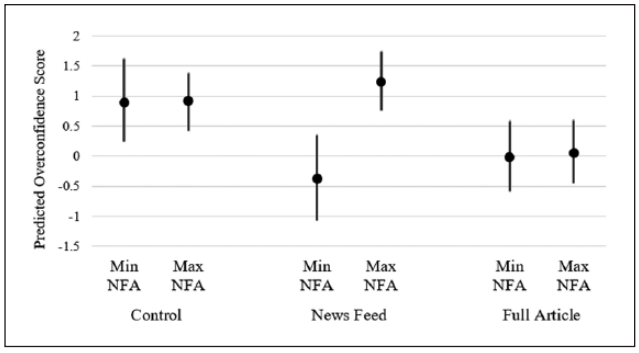

Figure 4. Minimum and maximum need for affect as predictors of overconfidence.

control group, low- and high-NFA subjects displayed statistically indistinguishable levels of overconfidence. Without any new facts provided, even low-NFA individuals had trouble assessing their knowledge on an issue. Because of this, they were equally likely to overestimate their knowledge of the GM foods issue as high-NFA individuals in the same condition, providing evidence in support of H_3.

Finally, it is important to note that NFA is similarly inconsequential in information-rich environments, such as our full article condition. Given a bevy of undisputed facts, subjects *actually* learned more, rather than simply *feeling* they had learned more. With this substantial gain in knowledge of GM foods, both high- and low-NFA subjects could accurately gauge their knowledge on the issue, thus providing support for H_4. To provide a fuller picture of NFA's influence, we calculated the predicted overconfidence scores for the minimum and maximum NFA scores in our data for each experimental condition (Figure 4). Even at the extremes, NFA had no effect on how people evaluated their knowledge in the control and full article conditions: subjects with minimum NFA were equally likely to overestimate their knowledge as those with a maximum NFA, while those scoring at the extremes were equally likely to evaluate their knowledge accurately in the full article condition. It was only in the News Feed condition that NFA predicted divergent outcomes. Though subjects with a minimum NFA were able to accurately gauge their accuracy on the six-item knowledge scale, those with maximum NFA overestimated their knowledge by a whole point. For some, a little bit of knowledge seems to be a dangerous thing.

Conclusion

These findings provide evidence that Facebook's article previews generate knowledge. However, there is a disparity in the effect of this knowledge, as evidenced by the rates of overconfidence. Those who are driven to seek and feel emotion learn something from the article previews, but are seemingly unaware of the limitations of their acquired knowledge. For these individuals, the positive feelings associated with being accurate are likely to be as important as actually being accurate. However, this NFA only influences overconfidence in a "middle ground" information environment; NFA effects do not exist when no information is provided, nor in an information-heavy context.

The motivated reasoning literature (Kunda, 1990) proposes that individuals vary in the degree to which they are motivated by accuracy goals. Those with a high NFA have strong gut reactions, or intuitions, and are not motivated to interrogate their intuitions, whereas those who are highly reflective are willing to second-guess and, if need be, override their intuitions (Stanovich, 2009; Stanovich and West, 2000). While theories of motivated reasoning have been used previously to predict reactions to partisan information, we have employed it here to predict differences in how subjects react to limited information in Facebook's article previews. Those who are more driven by emotion allow the positive feelings associated with being right to override the need for actual accuracy, thus coming away from limited exposure to information falsely overconfident in their knowledge of the subject matter.

We see these findings as important for two reasons. First, as Facebook is relied upon more and more as a news source (Shearer and Gottfried, 2017), these findings speak to the potential to gain political knowledge from article previews. Facebook users can learn political information by simply scrolling through their News Feeds, and knowledge (or even the *belief* in knowledge) is associated with political participation (Galston, 2001), political efficacy (Jung, Kim and Gil de Zúñiga, 2011), and voting correctly (Lau and Redlawsk, 2006).

Secondly, however, concern about the quality of information within these previews persists. In light of the recent "fake news" controversies surrounding the 2016 U.S. presidential election, Allcott and Gentzkow (2017) used a database of 156 fake news articles about either Clinton or Trump and found that those articles were shared nearly 40 million times on Facebook in the three months leading up to the election. Additional research indicates that misinformation is frequently found on social media, and Facebook audiences are easily misled by misinformation attached to article previews (Anspach and Carlson, 2018). We would expect this belief in misinformation to be particularly true if the audience exhibits a high NFA (Arceneaux and Vander Wielen, 2013, 2017). Future research should continue to investigate whether emotion can help us understand the spread and influence of fake news. As Facebook is increasingly relied on as a news source, audiences' overconfidence could be potentially troublesome, especially if the perceived knowledge gain is based on misinformation.

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Supplemental materials

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Note

1. In their study of motivated reasoning, Arceneaux and Vander Wielen (2017) use Need for Cognition (NFC) and NFA to measure people's propensity to be reflective and second-guess their partisan intuitions. In this study, we are less interested in people's willingness to second-guess themselves and more interested in how confident people are in their knowledge. Consequently, NFC is not as theoretically relevant to our question as NFA. We did collect measures of NFC and, as we show in the Online Appendix, it does not correlate with overconfidence.

References

Abelson RP (1986) Beliefs are like possessions. *Journal for the Theory of Social Behaviour* 16(3): 223–250.

Allcott H and Gentzkow M (2017) Social media and fake news in the 2016 election. *Journal of Economic Perspectives* 31(2): 211–236.

Anspach NM (2017) The new personal influence: How our Facebook friends influence the news we read. *Political Communication* 34(4): 590–606.

Anspach NM and Carlson TN (2018) What to believe? Social media commentary and belief in misinformation. *Political Behavior*, 1–22. DOI: 10.1007/s11109-018-9515-z

Arceneaux K and Johnson M (2013) *Changing Minds or Changing Channels? Media Effects in the Era of Expanded Choice*. Chicago, IL: University of Chicago.

Arceneaux K and Vander Wielen R (2013) The effects of need for cognition and need for affect on partisan evaluations. *Political Psychology* 34(1): 23–42.

Arceneaux K and Vander Wielen R (2017) *Taming Intuition: How Reflection Minimizes Partisan Reasoning and Promotes Democratic Accountability*. Cambridge: Cambridge University Press.

Bakshy E, Messing S and Adamic L (2015) Exposure to ideologically diverse news and opinion on Facebook. *Science* 348(6239): 1130–1132.

Bartels L (1996) Uninformed votes: Information effects in presidential elections. *American Journal of Political Science* 40(1): 194–230.

Berelson B, Lazarsfeld P and McPhee WN (1954) *Voting: A Study of Opinion Formation in a Presidential Campaign*. Chicago, IL: University of Chicago.

Berinsky A, Huber G and Lenz G (2012) Evaluating online labor markets for experimental research: Amazon.com's Mechanical Turk. *Political Analysis* 20(3): 351–68.

Bode L (2016) Political news in the news feed: Learning politics from social media. *Mass Communication and Society* 19(1): 24–48.

Britt TW, Millard MR, Sundareswaran T, et al. (2009) Personality variables predict strength-related attitude dimensions across objects. *Journal of Personality* 77(3): 859–882.

Buhrmester M, Kwang T and Gosling S (2011) Amazon's Mechanical Turk: A new source of inexpensive, yet high-quality, data? *Perspectives on Psychological Science* 6(1): 3–5.

Cacioppo JT and Petty RE (1982) The need for cognition. *Journal of Personality and Social Psychology* 42(1): 116–131.

Chaffee SH and Kanihan SF (1997) Learning about politics from the mass media. *Political communication*, 14(4), 421–430.

Converse P (1964) The nature of belief systems in mass publics. *Critical Review* 18(1–3): 1–74.

Delli Carpini MX and Keeter S (1997) *What Americans Know about Politics and Why it Matters*. New Haven, CT: Yale University.

Edwards K and Smith E (1996) A disconfirmation bias in the evaluation of arguments. *Journal of Personality and Social Psychology* 71(1): 5–24.

Eveland W (2003) A "mix of attributes" approach to the study of media effects and new communication technologies. *Journal of Communication* 53(3): 395–410.

Feezell J (2018) Agenda setting through social media: The importance of incidental news exposure and social filtering in the digital era. *Political Research Quarterly* 71(2): 482–494.

Galston WA (2001) Political knowledge, political engagement, and civic education. *Annual Review of Political Science* 4: 217–234.

Gilens M (2001) Political ignorance and collective policy preferences. *American Political Science Review* 95(2): 379–396.

Jung N, Kim Y and Gil de Zúñiga H (2011) The mediating role of knowledge and efficacy in the effects of communication on political participation. *Mass Communication and Society* 14(4): 407–430.

Karnowski V, Kümpel A, Leonhard L, et al. (2017) From incidental news exposure to news engagement. How perceptions of the news post and news usage patterns influence engagement with news articles encountered on Facebook. *Computers in Human Behavior* 7: 42–50.

Kenski K and Stroud NJ (2006) Connections between internet use and political efficacy, knowledge, and participation. *Journal of Broadcasting and Electronic Media* 50(2): 173–192.

Kim Y, Hsu S, Gil de and Zúñiga H (2013) Influence of social media use on discussion network heterogeneity and civic engagement: The moderating role of personality traits. *Journal of Communicaiton* 63(3): 498–516.

Kuklinski JH, Quirk PJ, Jerit J, et al. (2000) Misinformation and the currency of democratic citizenship. *The Journal of Politics* 62(3): 790–816.

Kunda Z (1990) The case for motivated reasoning. *Psychological Bulletin* 108(3): 480–498.

Lau RR and Redlawsk DP (2006) *How Voters Decide: Information Processing in Election Campaigns*. Cambridge, UK: Cambridge University Press.

Lord CG, Ross L and Lepper MR (1979) Biased assimilation and attitude polarization: the effects of prior theories on subsequently considered evidence. *Journal of Personality and Social Psychology* 37(11): 2098–2109.

Luskin RC, Fishkin JS and Jowell R (2002) Considered opinions: deliberative polling in Britain. *British Journal of Political Science* 32(3): 455–487.

Maio GR and Esses VM (2001) The need for affect: Individual differences in the motivation to approach or avoid emotions. *Journal of Personality* 69(4): 583–614.

Messing S and Westwood S (2012) Selective exposure in the age of social media: Endorsements trump partisan source affiliation when selecting news online. *Communication Research* 41(8): 1042–1106.

Mitchell A, Kiley J, Gottfried J, et al. (2013)The role of news on Facebook. Available at: http://www.journalism.org/files/2013/10/facebook_news_10–24–2013.pdf (accessed 27 February 2017).

Moore DA and Healy PJ (2008) The trouble with overconfidence. *Psychological Review* 115(2): 502–517.

Oeldorf-Hirsch A (2018) The role of engagement in learning from active and incidental news exposure on social media. *Mass Communication and Society* 21(2): 225–247.

Paolacci G and Chandler J (2014) Understanding mechanical turk as a participant pool. *Current Directions in Psychological Science* 23(3): 184–188.

Petty RE and Cacioppo JT (1986) The elaboration likelihood model of persuasion. *Advances in experimental social psychology* 19: 123–205.

Ryan TJ, Wells MS and Acree BDL (2016) Emotional responses to disturbing political news: The role of personality. *Journal of Experimental Political Science* 3(2): 174–184.

Shearer E and Gottfried J (2017) News use across social media platforms 2017. Available at: http://www.journalism.org/2016/05/26/news-use-across-social-media-platforms-2016/ (accessed 27 February 2017).

Stanovich KE (2009) Distinguishing the reflective, algorithmic, and autonomous minds: Is it time for a tri-process theory? In: Evans J and Frankish K (eds) *In Two Minds: Dual processes and Beyond*. New York: Oxford University Press, pp. 55–88.

Stanovich KE and West RF (2000) Individual differences in reasoning: Implications for the rationality debate. *Behavioral and Brain Sciences* 23: 645–726.

Taber CS and Lodge M (2006) Motivated skepticism in the evaluation of political beliefs. *American Journal of Political Science* 50(3): 755–769.