Despite renewed interest in news literacy (NL) as a way to combat mis- and dis-information, existing scholarship is plagued by insufficient theory building and inadequate conceptualization of both “NL” and its application. We address this concern by offering a concise definition of NL and suggest five key knowledge and skill domains that comprise this literacy. We distinguish NL from its application to behaviors that communication scholars have been interested in, including news exposure, verification, and identifying misinformation. We propose an adapted Theory of Planned Behavior (TPB) to include NL in addition to the existing components (attitudes towards the behavior, social norms, perceived behavioral control) when modeling NL Behaviors. We discuss how this model can unite scholars across subfields and propose a research agenda for moving scholarship forward.

**Keywords:** News Literacy (NL), News Literacy Behaviors (NLB), Theory of Planned Behavior (TPB), Misinformation, Journalism

*Corresponding author: Emily Vraga; e-mail: ekvraga@umn.edu*
high-quality information in the sea of available content (e.g., Lazer et al., 2018; Lewandowsky, Ecker, & Cook, 2017; Vosoughi, Roy, & Aral, 2018).

The fact that it is no longer clear, if it ever was, who is a “journalist,” what is “news,” and where to place one’s trust, underscores the need to better understand what constitutes NL, which we define as knowledge and skills regarding news content, systems, and practices. Long before the 2016 U.S. presidential election campaign raised concerns about “fake news” to a fever pitch, researchers, educators, fact-checkers, and others have been working to define what it means to be news literate and investigate how literacy is linked to civic engagement (Ashley, Maksl, & Craft, 2017; Mihailidis & Thevenin, 2013). This conversation is occurring in a number of disciplines—communication, political science, psychology, information science, sociology, rhetoric—but not enough across disciplinary boundaries, which slows progress in theory-building and creating evidence-based interventions that empower people with the knowledge, skills, and motivation to navigate ever-changing media environments.

We propose a theoretical approach to this interdisciplinary field that draws on existing work in news literacy (NL) and related research addressing similar questions and issues. We argue that becoming news literate is not an end in itself but, rather, that it is the application of NL that explains individuals’ behaviors. Our approach builds from existing research that finds that news knowledge plays a powerful role in predicting behaviors, including news consumption, identification of misinformation, rejection of conspiracy beliefs, and civic engagement (Amazeen & Bucy, 2019; Craft, Ashley, & Maksl, 2017; Kahne & Bowyer, 2017; Newman, Fletcher, Kalogeropolous, & Nielsen, 2019). We argue that these behaviors represent the application of NL, which is distinct from the knowledge and skills required to be news literate.

We theoretically ground our investigation of the other components that predict behavior by drawing from the Theory of Planned Behavior (TPB) (Ajzen, 1985, 1991) to suggest that NL works in conjunction with attitudes, social norms, and perceived behavioral control to predict News Literacy Behaviors (NLB)—for example, consuming news, evaluating it fairly, identifying misinformation, and verifying content. By applying this model, we can identify the gaps between knowledge and behavior, investigate whether the factors that predict NLB differ across individuals or countries, and develop more precise ways to improve these practices. In doing so, we better position NL research to address current challenges, including the crisis that the misinformation and “fake news” conversation has underscored.

**News, media, and related literacies**

Debate abounds regarding what news is and what it ought to be (Armstrong, McAdams, & Cain, 2015; Edgerly, 2017; Schudson, 1998). The rise of social media has encouraged a broadening and blurring of the definition. People scroll through their “News Feed” on Facebook to see content from professional news outlets alongside news and updates shared by friends and family. Some scholars embrace this
broad definition, defining news on social media as “any asserted claim” (Vosoughi et al., 2018, p. 1146; see also Edgerly, 2017). Similarly, Edgerly and Vraga (2019) propose that we expand beyond production-oriented definitions of news (e.g., rooted in journalistic news values) to consider audiences’ assessments of the “newness” of content, which depend on content features, source cues, and audience predispositions.

We adopt a similarly inclusive view of news when considering one’s ability to develop and apply NL to behavior. We define news as any accurate information that facilitates decision-making on both personal and social issues, thus enabling people to more effectively engage with society. This definition also underscores one of the main goals of developing NL: being able to differentiate news and quality information that can come from a variety of sources from the plethora of content that circulates online, some of which is designed to mislead audiences about the source and the standards upheld in creating it (Amazeen & Bucy, 2019; Jeong, Cho, & Hwang, 2012; Kahne & Bowyer, 2017; Malik, Cortesi, & Gasser, 2013).

NL has typically been regarded as a subtype of media literacy, defined as the ability to access, analyze, evaluate and communicate messages in a variety of forms. This definition stems from a 1992 National Leadership Conference on Media Literacy in the U.S. that highlighted widely shared precepts of media literacy including: that media are constructed and construct reality, and have commercial, political, and ideological implications. The conference report went on to note that the “fundamental objective of media literacy is critical autonomy in relationship to all media” but that “emphases in media literacy training range widely, including informed citizenship, aesthetic appreciation and expression, social advocacy, self-esteem, and consumer competence” (Aufderheide & Firestone, 1993, p. 9).

Approaches to media literacy and related literacies (e.g., digital, information, news) are more fractured than cohesive, which has led to definitional and measurement problems in research as well as curriculum and intervention development (Potter, 2004). According to one review, media literacy scholarship consists of a patchwork of conceptualizations, and measures often lack content or face validity because researchers measure beliefs or attitudes about media literacy capabilities and not actual performance (Potter & Thai, 2019).

In both scholarly and popular discourse, NL likewise lacks a broadly agreed upon definition or an obvious method of assessment. In the popular press, NL is frequently offered as an antidote to “fake news” and characterized as the ability to spot hoaxes, check facts, and understand and appreciate the work of traditional journalists (Barron, 2017; Miller, 2019)—behaviors that we argue follow from the application of NL, rather than constituting NL itself. Some researchers have worked to situate NL in a theoretically grounded context within the broader domain of media literacy (Maksl, Ashley, & Craft, 2015; Vraga, Tully, Kotcher, Smithson, & Broeckelman-Post, 2015), but even these efforts sometimes conflate normative beliefs and attitudes about journalism with the knowledge needed to judge the quality or reliability of news content (Ashley, Maksl, & Craft, 2013).
NL advocates and educators have largely taken an a-theoretical approach, emphasizing instruction about the important role of news in society and the norms and practices professional journalists employ in gathering it. The influential Center for News Literacy at Stony Brook University places the journalistic process at the center of its approach, suggesting that becoming news literate is akin to “acquir[ing] the critical thinking skills of a journalist” (Klurfeld & Schneider, 2014, p.19) One assessment of the effectiveness of the Stony Brook curriculum found that students who took the class scored higher on an independent survey of news media knowledge structures, had greater motivation to consume news, and were more knowledgeable about current events than students who had not taken the class (Maksl, Craft, Ashley, & Miller, 2017).

While these findings might support the usefulness of NL in general, there is an assumed connection between the knowledge students gain through NL education and the behaviors educators hope or expect students to exhibit as a result. This emphasis on learning how journalists think and what they do or, more generally, developing critical thinking skills “to judge the reliability and credibility of information” (“What is News Literacy?,” 2016) does not distinguish between having knowledge and skills and applying those knowledge and skills. This approach also does not address the role of motivation in either gaining knowledge or applying it. For example, one could understand how journalists conduct their work but never act upon that understanding with regard to one’s own consumption of news. Therefore, we argue definitions of NL need to move beyond newsroom practices and norms to encompass how these practices develop and their implications, the broader system in which news is embedded, the ways in which people engage with news, and how these processes differ across contexts and countries. Additionally, we must recognize that NL is one component of a model that leads people to apply this knowledge in the performance of NLBs.

Potter (2004) comes closest to offering a theoretical understanding of media literacy—incorporating skills and competencies as well as knowledge structures and information processing. At the same time, the broad stretch of this model and absence of empirical grounding makes it difficult to operationalize or assess (Maksl et al., 2015). Existing measures do not capture the complexity of NL or keep up with the changing news and information landscape (Jones-Jang, Mortensen, & Liu, 2019; Tully, Maksl, Ashley, Vraga, & Craft, 2019). NL research needs to explore news defined broadly to reflect audiences’ perspectives and changing structures and news production and delivery (Edgerly & Vraga, 2019) and to expand beyond U.S. and Western perspectives often favored in scholarship (Reese, 2012).

Research in the related area of information literacy has also suffered from a plethora of conceptualizations and limited theorizing. UNESCO (2013), for example, which had previously differentiated media and information literacy, ultimately combined them—along with news, television, film, computer, Internet, digital, and social media literacies—into “media and information literacy.” UNESCO called this a “composite concept” and declined to define it beyond saying it “encompasses
knowledge, skills and attitudes” (p. 13). While a skills-oriented approach focused on the ability to find, control, and evaluate information dominated the early literature in information literacy (Bruce, 1997; Webber & Johnston, 2000), scholarly discourse fragmented to include definitions of information literacy as the cultivation of “habits of mind” and as “engagement in information-rich social practices” (Addison & Meyers, 2013, para. 1), making synthesis difficult. Notably, this array of conceptualizations echoes the emphasis on skills, attitudes, and social norms that we propose explain the application of NL.

The diversity of approaches to NL demonstrates the need for greater precision in its conceptualization and measurement, and in generating hypotheses regarding its relationship to behaviors. Before turning our attention to how NL must be placed in a broader theoretical framework to understand its application to NLBs, we briefly review this conceptualization (see Tully et al., 2019 for a complete review).

**Conceptualizing news literacy: the 5 Cs**

Definitions of NL have become bloated, comprising attitudes, behaviors, skills, and knowledge that should remain distinct. We urge scholars to return to a conceptualization of literacy as fundamentally about knowledge and skills, reflecting historical and widely employed definitions of literacy centered on the ability to read and write with understanding (UNESCO, 2013). We therefore define NL as knowledge of the personal and social processes by which news is produced, distributed, and consumed, and skills that allow users some control over these processes.

We are not the first to argue that NL must involve knowledge and skills. Research by Maksl et al. (2015) built on Potter’s cognitive theory of media literacy (2004) to develop a scale to assess knowledge about news content (e.g., trends in election coverage, understanding objectivity, proportionality of minority news coverage), industries (e.g., news media ownership, financial structures, aggregation), and effects (e.g., third-person effect, mean world syndrome, agenda-setting). While the scale proved useful in distinguishing individuals by their relative levels of literacy (Campos & Sardo, 2018; Craft et al., 2017), the need to update items to reflect current conditions in the news landscape as well as the scale’s specificity to the United States limit its generalizability and validity. Future research should employ a broader range of theoretically founded measures validated through empirical evidence to develop approaches that are useful and accurate across different populations, contexts, and time periods.

We propose five domains—context, creation, content, circulation, and consumption—that make up NL. These domains holistically address the role of news in society and build on existing work that argues to develop NL requires an understanding of both the content and contexts of news production and consumption (e.g., Amazeen & Bucy, 2019; Ashley et al., 2017; Potter, 2019; Vraga & Tully, 2015). Importantly, the knowledge and skills measures derived from these domains can be
adapted to address contexts beyond the West, which has tended to dominate the research. We briefly describe each domain below.

**Context**
We define context as *the social, legal, and economic environment in which news is produced*. We draw on news sociology scholarship, such as gatekeeping theory and the hierarchical influences model (Shoemaker & Reese, 2014; Shoemaker & Vos, 2009), with particular focus on organizations, institutions, and social systems (Perloff, 2017). We propose that knowledge about news contexts includes identifying dominant business structures of news organizations and how they vary around the world, the roles other institutions like public relations and government can play in influencing content, and the legal protections and constraints in which journalism organizations and journalists operate in different contexts. Skills related to news contexts might assess how individuals interpret constraints to speech and expressive behavior in different societies, whether by evaluating terms of service for social media sites or deciding if laws would protect specific types of objectionable online speech.

**Creation**
We define news creation as *the process in which journalists and others engage in conceiving, reporting, and ultimately creating news stories and other journalistic content*. As with context, we draw on gatekeeping theory and the hierarchical influences model with particular focus on the individual and routine levels of influence (Shoemaker & Reese, 2014; Shoemaker & Vos, 2009). We propose that knowledge about news creation includes knowledge about characteristics of journalists, identifying conceptions journalists have about their roles in society as well as how those roles differ among societies, the norms that underlie their work, and the routines in which journalists engage in reporting and content creation taking into account cross-cultural similarities and differences (Hanitzsch, Hanusch, Ramaprasad, & de Beer, 2019). Creation skills involve the ability to discern newsworthiness and to use that information to create messages, such as tweets or posts that share news (Kovach & Rosenstiel, 2011).

**Content**
We define content as *the qualitative characteristics of a news story that distinguishes it from other types of media content*. We draw on research that has defined news and differentiated it from other content and explores the effects of news attributes on audience behaviors and perceptions (Armstrong et al., 2015; Gans, 1979; Mothes, Knobloch-Westerwick, & Pearson, 2019; Shoemaker & Cohen, 2006). We propose that knowledge of news content includes recognizing news values, understanding dominant ways in which news is often presented, such as episodic or thematic frames, and recognizing key features of news, such as use of sources and...
evidence of verification (Kovach & Rosenstiel, 2011). It also includes developing skills to identify various kinds of news content, as opposed to opinion or advertising, and evaluate the quality and credibility of news.

**Circulation**

We define circulation as *the process through which news is distributed and spread to potential audiences*. We draw on gatekeeping, intermedia agenda setting, and news networks research that explores the influence of these various actors—organizations, individuals, and machines—on how news is circulated (Ananny & Crawford, 2015; Domingo, Masip, & Costera Meijer, 2015; McCombs & Funk, 2011; Nielsen & Ganter, 2018; Wallace, 2018). We propose that knowledge about news circulation first requires that news consumers recognize that news circulation is a process influenced by a variety of actors in a social system. Skills related to circulation include recognizing the outcome of personalization in search and social feeds or customizing social media settings. These skills reflect that users understand circulation and are able to exercise some control over their exposure (Potter, 2004).

**Consumption**

We define news consumption as *the personal factors that contribute to news exposure, attention, and evaluation*. We draw on selective avoidance, exposure, and attention research as well as hostile media effects research to explore the influence of our personal predispositions and biases on news consumption (Messing & Westwood, 2014; Stroud, 2011; Vallone, Ross, & Lepper, 1985). We propose that knowledge about news consumption involves understanding that our personal biases and predispositions affect news exposure, attention, and evaluation. Skills related to consumption should focus on individuals’ ability to evaluate their own news exposure and consumption choices, attention, and evaluation and then to curate a news diet with diverse sources that fits their information needs.

Together, these five domains comprise NL. Focusing on this narrow definition of NL while still holistically addressing context, creation, content, circulation, and consumption offers conceptual clarity and flexibility to develop and update NL measures that keep up with the pace of change in the news, information, and technology sectors. These domains are specific to news while remaining adaptable to changing media environments and diverse global contexts. In other words, the domains are lasting while the specific measures used to capture them may evolve over time and across contexts.

Acquiring the knowledge and skills that make up NL should enable a more thoughtful critique of news. For example, knowing norms about how sources are typically identified and interviewed (creation) may facilitate challenges to these common techniques that prompt consumers to diversify their news diets (curation and consumption) or challenge existing systems (context). Thus, recognizing how news is structured and its role in society does not mean passively accepting that...
role, but actively considering how that role may need to be adapted in changing media and political landscapes.

**News literacy behaviors**

NL, as we define it, is the knowledge and skills one *can use* to critically engage with news and other content, but it does not ensure one *will engage* with it. That is, NL alone, like previous conceptualizations of media literacy, only measures capabilities to use knowledge and skills but not *performance* of literacy (Potter & Thai, 2019). This relationship is similar to health behaviors, such as quitting smoking or exercising, that have been addressed by the TPB. For example, a person can have knowledge about the physical and mental benefits of exercising and might be able to operate fitness equipment, but that knowledge and those skills may not lead to exercise.

We define NLB as the *behaviors that occur when people engage with news content in a critical and mindful manner* (Potter, 2004). Our definition of NLB aligns with other definitions of the core outcomes of news and media literacy programs, such as “critical autonomy” with regards to news content (Aufderheide & Firestone, 1993, p. 9) or “conscious processing of information” (Potter, 2004, p. 68), which describes active control of one’s relationship with news and information. Similarly, we think of critical engagement as conscious and thoughtful interrogation of news messages, applying NL (e.g., knowledge and skills) to interpreting their meaning and integrating it into mental schemas.

Not only is NLB distinct from NL, but it extends beyond news consumption. In giving a consistent name to the core NL outcomes, we can empirically test the effects of NL on a range of behaviors and offer a more consistent exploration of which interventions and programs are successful, under which circumstances, and—potentially—for which specific behaviors.

One such behavior is identification of misinformation. Scholars have theorized that NL may enable people to identify misinformation and mitigate its impact (Amazeen & Bucy, 2019; Lewandowsky et al., 2017; Mihailidis & Viotty, 2017; Tully, Vraga, & Bode, 2020), but empirical evidence has been mixed. Several studies have found that NL knowledge or training can help people correctly identify misinformation (Amazeen & Bucy, 2019; Kahne & Bowyer, 2017), but NL interventions on social media have had mixed or limited effects in helping people recognize misinformation (Clayton et al., 2019; Tully et al., 2020). While the diverse ways of measuring NL may explain these competing findings, these studies suggest that *identification of misinformation* is a behavior that merits further investigation. Other NLBs could include exposing oneself to diverse sources of news and political content (Maksł et al., 2015; Vraga & Tully, 2019), participating in cross-cutting political conversations (Tully & Vraga, 2017), verifying news content (Edgerly, Mourao, Thorson, & Tham, 2020), or other emerging behaviors (e.g., recognizing “deep fakes”).
Research has not presented a clear picture of the effects of NL—particularly defined as we do here—on these behaviors. These disparate findings may result both from widely differing definitions of news literacy as well as a failure to consider the multiple forces that will lead some people, but not others, to apply their NL. We turn to the TPB as a foundation to propose a model for explaining the relationship between NL, attitudes, perceived norms, perceived control, and NLB.

The Theory of Planned Behavior

The TPB is one of the most widely used theories in the field of communication (Ajzen, 1985, 1991, 2011). The TPB suggests three factors influence behavioral intentions: (a) attitudes towards the behavior, (b) social norms regarding the behavior, and (c) perceived behavioral control over performing the behavior (Ajzen & Fishbein, 1980; Ajzen, 1985). Behavioral intentions then predict actual behavior. Meta-analyses have confirmed the robust relationship between each of these factors, behavioral intentions, and behaviors (Ajzen, 2011; Armitage & Conner, 2001; McEachan, Conner, Taylor, & Lawton, 2011; Rivis & Sheeran, 2003). The TPB is designed to be flexible for cases in which people do not have full control over their behaviors (Ajzen, 1985), which seems appropriate to applying NL to behaviors in a media environment in which algorithms and decisions by others influence the content we consume (Domingo et al., 2015; Thorson & Wells, 2016; Wallace, 2018).

The TPB has rarely been examined in the context of news behaviors, with a few notable exceptions. Studies have examined the TPB as a predictor of engaging with digital media; for example, predicting posting anonymous comments on a news article (Soffer & Gordoni, 2018), engaging in privacy protections on Facebook (Saeri, Ogilvie, Macchia, Smith, & Louis, 2014), or listening to podcasts (Mou & Lin, 2015), but have not considered its application to NLBs. We examine how attitudes towards the behavior, social norms, and perceived behavioral control must be adapted for NLB, before arguing that “NL” needs to be added to the model to predict NLB.

Attitudes

Attitudes are defined as an individual’s evaluation of the behavior being considered (Ajzen, 1985), and consistently demonstrate a positive relationship with intentions to perform that behavior (Ajzen, 2011; Armitage & Conner, 2001; McEachan et al., 2011; Rivis & Sheeran, 2003). Typically, these measures combine an evaluative (e.g., whether the behavior is good or bad) and a strength component (e.g., how important the attitude is) toward the behavior (Ajzen, 1991), but may also consider the benefits, costs, or affect towards performing a behavior; these must be carefully selected to elicit salient beliefs about a behavior (Ajzen, 1991, 2011; Ajzen & Driver, 1991; Ajzen & Sheikh, 2013). In the context of NLB, measures should focus narrowly on a specific behavior, considering the direction, strength, and affective value of those attitudes. For example, individuals might rate their evaluation of how
beneficial it is to perform a behavior (like identifying misinformation or verifying sources), how much enjoyment they would derive from it, as well as how important it is to engage in this behavior.

In existing research, attitudes toward NLB appear to have largely been overlooked or operationalized in ways that limit comparability and theorizing. Attitudinal questions have largely served as proxies for knowledge questions (e.g., Ashley et al., 2013; Vraga et al., 2015) or incorporated as a range of attitudes about journalism and democracy or the value of media literacy to society more broadly (e.g., Tully & Vraga, 2017). Therefore, crafting measures that gauge attitudes toward specific behaviors is essential.

Social norms
Social norms broadly consider the social pressures individuals perceive with regards to performing the behavior, and include both injunctive norms about what an individual should do, and descriptive norms, regarding what one’s peers are actually doing (Ajzen, 1985, 2011; Rivis & Sheeran, 2003; Saeri et al., 2014). In applying the TPB to NLB, measures of social norms should incorporate both whether they perceive people are expected to engage in the NLB examined, as well as whether others like them are actually doing so. For example, if verification is being considered, social norms measures could ask whether individuals perceive that their peers believe it is important to verify news content and whether they believe their peers do so.

However, NLB represents a socially oriented behavior in a way that many behaviors studied by the TPB do not. NL curricula often emphasize the relationship between NL and civic engagement (Kahne & Bowyer, 2017; Mihailidis & Viotty, 2017), which might produce a third social norm: the value of NL for society. The Value for Media Literacy scale proposed by Vraga et al. (2015), which asks participants about the perceived importance of media literacy in a democratic society, has been validated as distinct from other NL attitudes (Alam, Cho, and Kim, 2018; Vraga et al., 2015). This measure would need to be revised to focus more narrowly on NL (rather than media literacy) and to incorporate other civic social norms, but may represent a starting point for a third social norm (“perceived civic norms”) when modeling NLB.

Perceived behavioral control
Perceived behavioral control, which predicts behaviors both directly and indirectly through intentions, examines whether individuals believe the behavior in question is personally achievable. For studying NLB, scholars should incorporate both internal and external barriers to performing the behavior. For example, individuals may believe they are capable of engaging critically with news (high self-efficacy), but face external barriers like time or resource constraints that prohibit this engagement (low controllability) (Tully & Vraga, 2018a).
Two existing NL measures hold promise for measuring perceived behavioral control. First, Media Locus of Control describes the extent to which people feel “in control of whether and how news media influences” them (Maksl et al., 2015, p. 33; see also Potter, 2004, p. 97). Measures from this scale—for example, the statement: “I am in control of the information I get from the news media” (Maksl et al., 2015)—may be used to measure perceived behavioral control in the context of NL, but other measures dealing with recognizing misinformation may work as measures of NLB, rather than perceived behavioral control toward those behaviors. Self-Perceived Media Literacy, which examines “individuals’ belief that they are in fact media literate and thus able to access, analyze and evaluate media content,” (Vraga et al., 2015, p. 43) also holds promise. Having positive perceptions about knowledge and skills, narrowly defined (e.g., “I am confident in my ability to judge the quality of news”), rather than broader perceptions of media literacy and its definition (e.g., “I have a good understanding of the concept of media literacy”), have been shown to relate to less skepticism of information on social media (Vraga & Tully, 2019), suggesting this concept has value in predicting at least some NLB. However, additional measures that tap into both internal and external barriers for NLB need to be developed.

Adding news literacy to the TPB
The TPB provides an important theoretical framework that helps situate and incorporate existing studies into NL and its application. However, the TPB offers a second advantage to other theories: its amenability to adaptation. The TPB itself has been amended: first to add perceived behavioral control (Ajzen, 1985) and later to distinguish descriptive norms from injunctive social norms (Fishbein & Ajzen, 2010). Ajzen outlines five steps for adapting the model, noting proposed changes must be: (a) behavior-specific, (b) a causal factor for intention and action, (c) conceptually independent of the existing predictors, (d) applicable to a wide range of behaviors, and (e) consistently improve prediction of intentions or behavior (2011, p. 1119-1120). We argue that in the context of predicting NLBs, adding NL (knowledge and skills) to the framework meets the first four criteria, although empirical tests are needed to confirm the last requirement is met.

We are not the first to consider the role of knowledge as part of the TPB. At several points during its development, Ajzen (1991, 2011) clarifies that the attitudes at the heart of the model may not be factual. Moreover, Ajzen, Joyce, Sheikh, and Cote (2011) directly test whether adding knowledge about the behavior could serve as an independent predictor of intentions or behaviors, but find little evidence that information accuracy predicts intentions across four studies. They suggest that knowledge may serve as a proxy for attitudes on the topic (2011, p. 115), which aligns with theories of “expressive responding” to match existing beliefs as an explanation for many seemingly inaccurate attitudes (e.g., Bullock, Gerber, Hill, & Huber, 2013; Prior, Sood, & Khanna, 2015; but see Berinsky, 2018). Given their null
findings, Ajzen et al. suggest that “from the perspective of the TPB, information accuracy is neither necessary nor sufficient; indeed, it can be irrelevant to decision making” (2011, p. 115).

While Ajzen et al. explored these relationships across several issues—including environmental behaviors, alcohol consumption, and outgroup prejudice—we argue that these may not be issues for which knowledge is a fundamental antecedent to behavior. That is, while accurate knowledge about Islam or the dangers of alcohol (for example) may be valuable, they are not required to attend a religious service or to drink less. Ajzen et al. recognize this possibility, pointing out that knowledge “often [has] no clear implication for behavioral performance” (2011, p. 115).

We argue that for NLB, NL plays a necessary (but not sufficient) role. An understanding of how the news media function, of content characteristics that distinguish news from other content, and of potential effects, is a prerequisite to judiciously engage with content (Potter, 2004). This proposition is supported by existing research, which has found positive relationships between news knowledge and current events knowledge, political activity, and self-efficacy (Ashley et al., 2017; Maksl et al., 2015), and negative relationships to endorsement of conspiracy theories (Craft et al., 2017) and acceptance of misinformation (Amazeen & Bucy, 2019; Kahne & Bowyer, 2017). In a leading textbook on media literacy, Potter (2019) argues that knowledge, skills, and personal locus of control are the fundamental building blocks of media literacy. Similarly, in Potter’s (2004) cognitive model, knowledge and skills must be developed and used regularly to act “in a media literate manner” when engaging with media messages (p. 61). Drawing from these roots and from the TPB, we propose a new theoretical model for NLB.

A Model of News Literacy Behaviors

Uniting NL research with the constructs of the TPB represents a theoretically robust framework for understanding who engages in NLB. In predicting NLB, studies should include measures regarding attitudes towards NLB, perceived injunctive, descriptive, and civic norms regarding NLB, and perceived behavioral control regarding NLB, as derived from the TPB, as well as measures of NL, conceptualized as knowledge and skills in five domains of context, creation, content, circulation, and consumption (the 5 Cs).

Much like the TPB, we expect that each of these domains will be related to one another. Those who believe NL is beneficial would likely have higher NL; likewise, those with greater NL should also perceive they have greater control over their ability to apply those skills to behavior. Existing research supports that these domains are related but distinct (Vraga et al., 2015), but has not incorporated all of these concepts into a single model to predict behaviors that should occur when an individual applies their NL.

Adding NL as a domain in this model should produce both an indirect pathway (through intentions) as well as a direct relationship on NLB. We expect NL to
produce a direct effect because it may function either consciously or unconsciously to impact NLB. For example, we expect that highly news literate individuals would plan to apply those skills in future news behaviors (e.g., Maksl et al., 2015)—but also that someone with higher NL may unconsciously apply it to their behaviors, even without having the intention to do so (Tully & Vraga, 2018a). We therefore offer this model for predicting NLB.

An agenda for future research

The need for a greater understanding of NL and its application to behavior is critical as we face a news environment that is constantly changing and increasingly difficult to navigate. Concerns with misinformation and fake news have focused public attention on the potential role for NL to help the public respond (e.g., Bulger & Davison, 2018), offering a unique opportunity for scholars to respond with robust theoretical and practical recommendations. However, the current state of the field is chaotic, with scholars across disciplines applying different terms and drawing from discrete literatures to address these questions.

We offer five recommendations for those interested in NL and its application: (a) agreeing upon a clear definition for “NL,” (b) distinguishing NL from its application to behaviors, (c) proposing a new model for studying NLBs derived from the TPB, (d) empirically testing this model across a range of individuals, groups, and contexts, and (e) utilizing the knowledge derived from this model to propose and test interventions to improve the application of NL to promote civic outcomes.

First, we offer a definition of NL as knowledge and skills related to news production, distribution, and consumption that more closely aligns with public understandings of the term, creating both constancy in its conceptualization and flexibility in its application. We propose that NL measures should incorporate knowledge and skills across five clearly defined domains—context, creation, content, circulation, and consumption. Having NL measures that are conceptually defined but flexible facilitates comparison across a wide range of contexts, opening the study of NL beyond Western contexts and the journalistic systems they tend to produce that have dominated research. The development and testing of specific measures are beyond the scope of this article as we expect substantial variation by media system but are addressed in our concurrent work (Tully et al., 2019).

Second, we argue that a clear line must be drawn between NL and its application or the behaviors that it produces. Just as being able to read is a necessary but not sufficient condition for reading, possessing knowledge and skills regarding news processes does not mean they will be applied to behaviors. Knowledge and skills—which we argue are, in fact, NL—facilitate the application of NL without demanding it. We must consider other factors that encourage people to apply NL to their behaviors, which our model offers.

Third, drawing upon the TPB provides a concrete, validated, and interdisciplinary model to consider the concurrent forces that should contribute to the
application of NL. Adding NL to this model alongside attitudes, social norms, and perceived behavioral control is essential to explaining NLB. Using an amended TPB as a theoretical model to explain NLB may also facilitate conversation among scholars across disciplines—including communication, psychology, sociology, and political science—interested in NL and the behaviors it promotes.

Fourth, empirical research is needed to test our proposed model across contexts. Confirming that NL improves the prediction of intentions or behaviors is an essential step of theory amendment (Ajzen, 2011), and is especially important in light of existing research that found no meaningful contribution of knowledge across four behaviors (Ajzen et al., 2011). We contend that previous research found no role for knowledge because it was not a prerequisite to performing the behavior studied, offering a testable hypothesis for future NLB research. Moreover, our model of NLB should be tested with a range of audiences and contexts to offer insights on overall fit, the relative weight of the components in the model, and to consider which components of the model are particularly powerful in diverse applications. For example, social norms may be particularly important in predicting who consumes news content, whereas NL may predict who is able to identify misinformation (Amazeen & Bucy, 2019).

We highlight two avenues for future research that seem particularly important. First, current research into NL is largely limited to Western contexts (Newman et al., 2019), but using this model of NLB opens the doors to inquiry in a wide range of societies with different media and political systems (Hanitzsch et al., 2019). We do not claim that the model will perform equally in each space—for example, more weight may be given to perceived behavioral control in more open media systems—but that is an empirical question enabled by adopting our model and testing relevant outcomes. Second, empirical tests of the model should investigate both overall model fit and the relative weight of each component of the model depending on individual characteristics. For example, social norms may prove more powerful for young adults in predicting NLBs compared to older adults.

Fifth, if validated, this model provides guidance for those developing interventions to encourage the application of NL to a wide range of behaviors. The model will help identify those components where intervention is most needed for particular groups or particular behaviors. For example, if empirical tests find that social norms regarding NLB matter more to young adults, effective interventions for young adults may do more to incorporate these norms than interventions for older adults. We suggest that interventions will likely need to tap into multiple components of the model—for example, both conveying knowledge and encouraging perceived behavioral control—to be successful, a proposition that future research can test.

Likewise, using this more robust theoretical model may help resolve existing debates about the effects of NL on behaviors. The debate over the role of NL in identifying misinformation is particularly notable—differences in how HL has been defined and what other attitudes and behaviors are considered may explain why
some studies find NL has a powerful impact on distinguishing high- and low-quality information (e.g., Amazeen & Bucy, 2019; Craft et al., 2017; Kahne & Bowyer, 2017) but produces no relationship or a negative relationship for others (e.g., Jones-Jang, Mortensen, & Liu, 2019). Additionally, because existing studies have not conceptually distinguished between NL (knowledge and skills) and NLB (their application), studies demonstrating that knowledge helps people identify and reject misinformation and conspiracy theories, for example (Amazeen & Bucy,

<table>
<thead>
<tr>
<th>Key Terms</th>
<th>Definition</th>
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<tbody>
<tr>
<td>News Literacy</td>
<td>Accurate information that facilitates decision-making on both personal and social issues that enables people to more effectively engage with society</td>
</tr>
<tr>
<td>News literacy</td>
<td>Knowledge of the personal and social processes by which news is produced, distributed, and consumed, and skills that allow users some control over these processes</td>
</tr>
<tr>
<td>News Literacy Behaviors</td>
<td>Behaviors that occur when people engage with news content in a critical and mindful manner. These behaviors may include: • Consuming news • Distinguishing news from other content • Evaluating news fairly and without bias (e.g., limiting Hostile Media Perceptions) • Verification of content • Identifying misinformation</td>
</tr>
<tr>
<td>5 Cs: News Literacy Domains</td>
<td></td>
</tr>
<tr>
<td>Context</td>
<td>Social, legal, and economic environment in which news is produced</td>
</tr>
<tr>
<td>Creation</td>
<td>Process in which journalists and others engage in conceiving, reporting, and creating news stories and other journalistic content</td>
</tr>
<tr>
<td>Content</td>
<td>Characteristics of a news story or piece of news that distinguishes it from other types of media content</td>
</tr>
<tr>
<td>Circulation</td>
<td>Process through which news is distributed and spread to potential audiences</td>
</tr>
<tr>
<td>Consumption</td>
<td>Personal factors that contribute to news exposure, attention, and evaluation</td>
</tr>
<tr>
<td>Theory of Planned Behavior</td>
<td></td>
</tr>
<tr>
<td>Attitudes</td>
<td>An individual’s favorable or unfavorable evaluation of the behavior being considered</td>
</tr>
<tr>
<td>Social norms</td>
<td>The social pressures individuals perceive with regards to performing the behavior</td>
</tr>
<tr>
<td>Perceived behavioral control</td>
<td>Whether individuals believe the behavior in question is within their control; captures both internal and external factors</td>
</tr>
</tbody>
</table>
cannot speak as to whether this application is a result of conscious or unconscious processing. Separating these constructs—knowledge and skills from application—offers a conceptual advantage and provides insight into the mechanisms that explain behaviors.

We deliberately offer a conceptual definition of NLB as the theoretical outcome of this model. We draw from existing research to propose several potential applications of NL: identification of misinformation, verification, and news exposure, to name a few. However, these represent exemplars rather than an exhaustive list. Indeed, NLB of interest may differ by discipline, society, or context, and may change with evolving news and media systems. We hope future research will build on the NLB suggested here.

Moreover, while we suggest that these behaviors are the most proximate outcomes of NLB, other research has considered the relationship between NL and political orientations, such as efficacy, conversation, and participation (Ashley et al., 2017; Kahne, Lee, & Feezell, 2012; Tully & Vraga, 2018a) We suggest these outcomes follow from NLB, but could be explored as co-existing alongside NLB. Future research is needed to disentangle these complicated relationships and consider the broader impact of NL for civic engagement, an area of concern to NL researchers (Ashley et al., 2013; Mihailidis & Thevenin, 2013; Kahne et al., 2012).

Ultimately, situating the study of NL within the broader theoretical domain of the TPB offers a number of advantages. Most notably, such a framework allows for better communication among scholars across subfields who are interested in how people engage judiciously with news and media content. We also align our definitions of NL with popular understandings of key terms, allowing conversations not
just among academics but also with journalists, advocates, and the public interested in this topic. By adopting and adapting this model, we can provide a more theoretically robust understanding of NL and its application on which to base theoretical and practical recommendations.

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References


Theorizing News Literacy Behaviors

E. K. Vraga et al.


