NEWS LITERACY AND MISINFORMATION

Melissa Tully

As high-profile examples of misinformation circulating on social media have come to public attention in recent years, calls for improving media literacy as a response have become commonplace. Educators and scholars have heeded this call by developing courses and research programmes to address both improved literacy and responses to misinformation. These approaches often focus on ways of developing knowledge and skills to navigate contemporary news environments where misinformation circulates and competes with news and information and testing and evaluating these approaches. With this backdrop in mind, this chapter addresses news literacy as a response to misinformation by providing a definition of news literacy and offering a framework for how equipping citizens with news literacy could be part of a solution to tackling misinformation while also addressing its shortcomings. The chapter also provides an overview of relevant studies that have looked at the relationship between news literacy and misinformation, highlighting consistencies and contradictions in this work. It will conclude with some takeaways for scholars interested in this area of research.

Defining news literacy

Defining and distinguishing various literacies – media, information, digital, and news – has always been a challenge for researchers and educators who work in these interdisciplinary domains (Aufderheide and Firestone 1993; Bulger and Davidson 2018; Potter and Thai 2019; Vraga, Tully et al. 2020). This challenge has led to a plethora of definitions and disagreements (Hobbs 2011; Potter 2010), which has made both research and educational efforts challenging, particularly in regards to isolating and measuring effects (which is often the goal of researchers) and impacts (which is often the goal of educators seeking to evaluate their curricula and programs) and developing theoretically robust research in this area (Hobbs and Frost 2003; Vraga, Tully et al. 2020).

News literacy has often been characterised as a type or subset of media literacy that focuses on news production, consumption, and contexts (Vraga and Tully 2015, 2016). Putting it under this broad umbrella has meant that its definition is often tied to a popular media literacy definition which emerged in the 1990s and describes media literacy as the ability to access, analyse, evaluate, create, and act using mediated messages (Aufderheide and Firestone 1993). Although this definition is useful for capturing a broad range of media and behaviors, it is less useful when
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we think about how to operationalise it and measure it across different domains with media that serve very different purposes in our lives (Tully et al. 2019; Vraga, Tully et al. 2020). For example, the knowledge and skills needed to access, analyse, and evaluate video game content are undoubtedly different than the knowledge and skills needed to access, analyse, and evaluate news. Similarly, creating a persuasive social media post or shooting compelling images requires a different set of skills than writing a news story.

Given the differences in media and their roles in our lives, my colleagues and I have argued that news literacy requires its own definition and should be separated from other related literacies, which deserve their own definitions and scholarly attention (Vraga, Tully et al. 2020). We argue that news literacy is particularly relevant to identifying and rejecting misinformation, given the unique relationship between news and misinformation, which is either deliberately intended to look like news or is often perceived as news by audiences (Tandoc 2019). In other words, the knowledge and skills needed to identify news are the same as those needed to identify misinformation, and the resulting behaviors – sharing, fact-checking, verifying, and correcting, for example – are also arguably built on the same knowledge and skills.

We argue that developing news literacy means building knowledge and skills related to news processes and the role of news in society. If we understand what knowledge and skills contribute to news literacy, then we can measure and evaluate it and determine when and how individuals apply their news literacy. With this in mind, we define news literacy 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’ (Vraga, Tully et al., 2020, p. 5). To develop news literacy, then, requires building relevant knowledge and skills in areas related to the news process from production to consumption (Tully et al. 2019). Therefore, we propose and define five domains – context, creation, content, circulation, and consumption – that make up news literacy building on existing research in this area (Ashley, Maksl and Craft 2017; Vraga and Tully 2016).

By narrowing the definition and scope of news literacy, we are able to develop measures to empirically test and evaluate news literacy efforts, which is essential to see what works for addressing the spread of misinformation. With this conceptual clarity, then, we can measure individuals’ news literacy to see if and how it influences news choices, analysis, and evaluation with the goal of improving the knowledge and skills that matter for recognising and responding to misinformation (Amazeen and Bucy 2019; Craft, Ashley and Maksl 2017; Vraga and Tully 2019).

Knowledge about news contexts or the ‘social, legal, and economic environment in which news is produced’ would contribute to a greater understanding of the constraints on news processes, the ethics that guide news production and distribution, and the role of outside entities like technology firms in these processes. Research suggests that understanding this context contributes to valuing news more (Newman et al. 2018). As it relates to misinformation, this contextual knowledge should also contribute to an understanding of speech laws and regulations and the role of technology companies and governments in platform governance.

Knowledge about news creation, the ‘process in which journalists and others engage in conceiving, reporting, and creating news stories and other journalistic content’, should provide audiences with an understanding of the journalistic process and how it differs from other media creation. This should help audiences evaluate newsworthiness and other elements that separate news from misinformation. And, although most audiences will not regularly create news, they do post and share news, which contributes to its spread. Using journalistic skills like verification could ensure that they are sharing quality news and information, not misinformation.
Knowledge about news content or the ‘characteristics of a news story or piece of news that distinguishes it from other types of media content’ seems particularly relevant to recognising misinformation and differentiating it from news. This is an area that has been explored in news and media literacy research, education, and practice, which often focuses on identifying content characteristics that distinguish news from other media (Fleming 2014; Malik, Cortesi and Gasser 2013). Skills related to identifying news and distinguishing it from misinformation include evaluating the quality and credibility of sources in a story, recognising how claims are reported and supported, and differentiating between facts and opinions in stories.

News circulation or the ‘process through which news is distributed and spread to potential audiences’ is particularly important in a media environment where news and misinformation are circulated on social media. Understanding the role of various actors – organisations, humans, and computers – in circulation is becoming increasingly important as we turn to social media for much of our news and information (Thorson and Wells 2015). Newman et al. (2018) found that only 29 percent of survey respondents knew that the news they see on Facebook is determined by an algorithm, and many responded that they did not know how these decisions were made. Being able to customise settings on social media or curate feeds with high-quality news and information should contribute to news diets that are relatively free from misinformation, thus cutting down exposure to (and the likelihood of sharing) this kind of content (Newman et al. 2018; Vraga and Tully 2019).

Finally, knowledge about consumption or the ‘personal factors that contribute to news exposure, attention, and evaluation’ means that audiences recognise how their biases and predispositions influence news choices and interpretations. Research suggests that news literacy interventions can prompt people to more fairly evaluate news and to make choices that could lead to more diverse news diets (Vraga and Tully 2015). Skills related to consumption should prompt news consumers to seek out news and information, dedicate time to news, and evaluate it critically but fairly. This recognition and ‘mindful processing’ should prompt audiences to avoid being misled by misinformation as they evaluate it more critically (Craft, et al. 2017; Maksl, Ashley and Craft 2015).

This definition of news literacy does not determine how or if this literacy is put to use and intentionally separates knowledge and skills from attitudes, motivations, and other factors that may relate to news literacy but are distinct from it. Putting news literacy to use or applying news literacy would mean that audiences make news and information decisions that are informed by their news literacy, which should influence their exposure to and engagement with misinformation (Amazeen and Bucy 2019; Vraga, Tully et al. 2020). Therefore, we propose a model for predicting relevant behaviors that builds on our definition of news literacy and the theory

<table>
<thead>
<tr>
<th>Domain</th>
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<tr>
<td>Context</td>
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<tr>
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<td>Personal factors that contribute to news exposure, attention, and evaluation</td>
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Source: Adapted from Vraga, Tully et al. 2020
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The role of news literacy in identifying misinformation has been the subject of scholarly debate and disagreement. In some studies, news literacy is shown to have a powerful effect on distinguishing high- and low-quality information and misinformation (Amazeen and Bucy, 2019; Craft, et al. 2017) but produces no relationship or a negative relationship for others (Jones-Jang, Mortensen and Liu 2019). Some of these differences are perhaps a result in how news literacy has been defined and operationalised and what other characteristics, attitudes, and behaviours are also considered. Resolving the definitional issues explored in the first part of this chapter is a necessary first step to addressing some of the contradictions in existing research. However, reviewing this research offers some key contributions that can be used to continue to build the research in this area. First, a number of survey studies have shown that news knowledge does predict rejection of or scepticism towards misinformation, offering a starting point for building the knowledge and skills that make up news literacy. Second, experimental studies on interventions and messages have shown that specific messages with actionable steps are more effective at addressing misinformation than general warnings or messages about news literacy broadly. These studies suggest that tapping into different news literacy constructs and drawing on existing attitudes and perceived norms (from the TBP) may be effective, a proposition that needs to be further developed and tested. As a result, we propose a model of news literacy behaviours that will allow for just this kind of empirical work.

A number of survey studies have examined the relationship between news literacy and misinformation in various forms – conspiracy theories, false news, native advertisements, and information posted on social media. In three studies that relied on surveys of Americans, news knowledge was found to be positively related to rejecting misinformation. In a study that looked at the relationship between news literacy and conspiracy theory endorsement, Craft, Ashley and Maksl (2017) found that greater knowledge about the news media predicted a lower likelihood of supporting conspiracy theories, even those that aligned with participants’ political predispositions. Importantly, this study found that news knowledge, specifically, predicted lower conspiracy theory endorsement:

the greater one’s knowledge about the news media – from the kinds of news covered, to the commercial context in which news is produced, to the effects on public opinion news can have – the less likely one will fall prey to conspiracy theories.

(Craft, et al. 2017: 9)
Relatedly, Amazeen and Bucy (2019) found that knowledge of how the news operates contributed to a greater ability to identify false news and native advertising (ads designed to look like news). In their study, Amazeen and Bucy (2019) built on existing news literacy research to focus on knowledge of news industries and editorial practices (and not effects, which have been included in other research).

Using a nationally representative sample of US adults, Vraga and Tully (2019) looked at news literacy and misinformation on social media and found that those with higher news knowledge see and share less misinformation and are more sceptical of the information they see on social media, suggesting that news literacy shapes perceptions of information on social media. We measured news literacy using ten items from Maksl, Ashley, and Craft (2015) that capture news knowledge. In addition, we measured two related constructs – self-perceived media literacy (SPML) and value of media literacy (VML) – which tap into perceived efficacy and perceived democratic value of news literacy. Importantly, both news literacy (knowledge) and VML produced less social media engagement; SPML produced more exposure to news and information on social media and less scepticism. These results reiterate the importance of news literacy and suggest that related orientations warrant additional exploration as these perceptions and values may contribute to how and when individuals apply their news literacy, a proposition supported by the TBP and put forth in our model of news literacy behaviors (Ajzen 2011; Vraga, Tully et al. 2020).

However, Jones-Jang, Mortensen, and Liu (2019) found that higher news literacy did not increase the likelihood of identifying false news stories. In their study, only information literacy increased the likelihood of identifying false news posts. Importantly, however, Jones-Jang, Mortensen, and Liu (2019) did not measure news knowledge (questions with correct or incorrect answers), but rather used a different set of news literacy measures (from Ashley, Maksl and Craft 2013) that measure agreement-disagreement with a number of statements about the news media. Their findings could be attributed, in part, to this difference in measurement, which, again, reinforces the need for stronger theory and measurement in this area (Vraga, Tully et al. 2020).

In perhaps the only large-scale, multicountry assessment of news literacy, Newman and colleagues (2018) measured respondents’ news literacy using three news knowledge questions adapted from Maksl, Ashley, and Craft (2015), offering a comparative perspective on differing levels of news literacy. Most relevant to the study of misinformation are findings that show that respondents with higher news literacy rely less on social media for news and are more discerning when using social media for this purpose. They look for credibility cues like news outlet and headline to help make decisions and are less likely to rely on popularity cues (e.g. comments and likes on social media) than those with lower news literacy, although all groups do use these cues. In addition, news literacy is also associated with sharing news and news diets. Respondents with higher news literacy share less and have more diverse news diets. This finding aligns with Vraga and Tully’s (2019) findings regarding who sees and shares misinformation, suggesting that the less informed are perhaps sharing more news and information and may be contributing to the spread of misinformation. Finally, those with higher news literacy are most concerned about misinformation and believe that media and technology companies should do more to curb its spread (Newman et al. 2018).

A body of research has specifically examined the effects of exposure to news literacy interventions or messages on a number of outcomes related to misinformation using experimental studies. This work has looked at the effectiveness of messages on social media that attempt to warn participants about potential exposure to misinformation, provide steps or guidance for how to identify misinformation and to differentiate it from news and high-quality information,
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or encourage users to be responsible and critical news consumers (e.g. Clayton et al. 2020; Tully, Vraga and Bode 2020; Vraga, Bode and Tully 2020; Wojdynski, Binford and Jefferson 2019). This research has found mixed results in the effectiveness of these messages on a number of outcomes, including perceptions of misinformation and bolstering corrections of misinformation.

A strand of research has looked at ‘warning’ messages and reception of false news and misinformation (Clayton et al. 2020; Wojdynski, Binford and Jefferson 2019). Some research has found that warning people about misleading tactics can neutralise the effects of misinformation messages (Cook, Lewandowsky and Ecker 2017; van der Linden, Leiserowitz, Rosenthal and Maibach 2017). Wojdynski, Binford, and Jefferson (2019) found that warning participants about the presence of false news stories significantly increased their likelihood of detecting subsequent false stories and decreased the likelihood of misclassifying stories as fake when they were real. In addition, the warnings had no effect on subjects’ ability to detect real stories but did make them more likely to misclassify these stories as false. In another experimental study, Clayton and colleagues (2020) found that a general warning message led to lower accuracy ratings for both misinformation and accurate information, suggesting an unintended spillover effect in which participants were more sceptical of all content after being warned. In addition, although a general warning message did reduce accuracy ratings for a false post, a specific warning was more effective at reducing accuracy perceptions of false information. Seeing a general warning in addition to the specific warning did not bolster the effectiveness of the specific warning. Importantly, neither of these studies situate their work in the realm of news literacy despite using messages that resonate with news literacy concepts, an issue that could be addressed by a stronger definition, explication, and operationalisation of news literacy that appeals to scholars across disciplines and offers much-needed clarity to the field (Tully et al. 2019; Vraga, Tully et al. 2020).

In a series of studies that specifically examined news literacy tweets, findings suggest that the effectiveness of these messages depends on both message characteristics and misinformation context (Tully et al. 2020; Vraga, Bode et al. 2020). First, in one experimental study, we found that a news literacy tweet that encouraged audiences to recognise how their viewpoints affected their news choices did not increase scepticism towards a misinformation tweet about genetically modified foods. Although the message in this tweet was developed from a review of relevant literature and from previous research that validated the message (Vraga and Tully 2016), it was not tailored for Twitter or social media specifically and did not provide actionable steps for users to take when evaluating news and information. Therefore, we designed a second study to test another news literacy message that specifically addressed misinformation and offered guidance on how to spot ‘fake news’.

In this study, the news literacy tweet was able to affect perceptions of misinformation about the seasonal flu vaccine (Tully et al. 2020). In this case, the news literacy message and the misinformation post were more aligned: the news literacy tweet specifically mentioned ‘fake news’ and how to spot it, and the misinformation tweet featured a false story about the flu vaccine from an unreliable source known for circulating false stories. This finding suggests that messages need to be tailored for social media environments and that the messages must resonate with the kinds of content that audiences are seeing online, which is a challenge given the networked nature of social media and the algorithmic filtering that occurs on these platforms (Thorson and Wells 2015).

In addition, across two experiments, three different news literacy tweets did not enhance the effectiveness of user correction of misinformation, which were effective at correcting misperceptions on their own (Vraga, Bode et al. 2020). Furthermore, these tweets were not always
noticed as they competed with other posts on the page. In fact, they were noticed less often than other content on the simulated Twitter feed. In part, taken together, these studies found that a single message cannot be expected to achieve multiple goals, a finding that suggests that campaigns need to be multipronged and messages repeated to be effective. Our findings echo Clayton and colleagues' (2020) findings that general warnings (like the tweets used in our experiments and the warning posts used in theirs) are not as effective as corrections or specific messages to debunk claims. In short, the findings from this body of work are inconclusive as to the effectiveness of these messages, and more work is needed to refine and test these messages in a variety of topical and social media contexts.

A one-size-fits-all approach will clearly not work when it comes to designing effective news literacy interventions and messages, but continued research could offer insights into characteristics or factors that contribute to the effectiveness of these messages and that do not produce spillover effects that make audiences sceptical of all news and information they encounter, a challenge that has beguiled news literacy educators and researchers who want to promote healthy scepticism without leading to cynicism or distrust towards all news (Craft, Ashley and Maksli 2016; Mihailidis 2008).

If, as the current body of research suggests, news knowledge does contribute to rejecting misinformation, then this seems like an area that warrants additional exploration. What knowledge, in particular, is most relevant to and effective at addressing misinformation? How can we ensure that audiences are exposed to the information they need to develop this knowledge and a set of related skills to respond to misinformation? Addressing these key questions will not only contribute to stronger news literacy curricula in K–12 and college classrooms but can also help researchers interested in isolating effects and building theory and practitioners who develop interventions and messages targeted to audiences on social media platforms where audiences get their news and where misinformation circulates.

Next steps

The current state of the field suggests that building news literacy – knowledge and skills – should be part of a solution to addressing misinformation. Focusing on news consumers, of course, does not take the onus off news outlets, technology companies, and governments to respond to misinformation (Marwick 2019; Newman et al. 2018). In fact, the misinformation landscape is so complex that it requires a multipronged solution, including changes to how technology companies operate, how governments regulate, how news outlets do their business, and how audiences interact with news and information, something that news literacy education, interventions, and research can and should address (Bulger and Davidson 2018). Acknowledging that user response to misinformation is just one piece of the puzzle and that empowering users is a moot point if we do not have better regulations and responses from tech companies is necessary if news literacy research is going to be leveraged as part of a solution. Additionally, ensuring that news literacy encompasses knowledge and skills related to technology companies, regulations, and legal frameworks is essential if audiences are going to be equipped with the necessary knowledge and skills to navigate contemporary media environments and to have some control over their experiences.

Finally, as interest in news (and other related) literacies has grown, it has become clear that consistency in definitions and measures is key to theory building and empirical studies to understand the relationship between news literacy and experiences with misinformation, including exposure, sharing, and correcting (Amazeen and Bucy 2019; Tully et al. 2020; Vraga and Tully 2019). Given inconsistencies in theoretical grounding and measurement, we cannot fully
articulate, at this point, the relationship between news literacy and misinformation, although research is consistently showing that news literacy – defined as knowledge – is a predictor worthy of increased scholarly attention. Continuing to refine these knowledge measures by building on the existing literature and adding the necessary skills measures, which build from this knowledge, are much needed as they are sorely lacking in most research. This approach should provide a robust agenda for researchers and should result in valuable insights for educators and practitioners looking to develop curricula, interventions, and messages to improve news literacy that can be applied to evaluating news and (mis)information.

References


