EPISTEMOLOGIES OF DIGITAL JOURNALISM AND MISINFORMATION

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Introduction

Verified, fact-based information is presumed to be an important feature in society, for citizens individually and for democratic governance as a whole. During much the 20th century, legacy news media enjoyed a prominent position in attempting to fulfill that role, reporting on happenings near and far. Journalists professionalized over time, developing standards, norms, methods, and networks of sources that enabled them to make knowledge claims (Carlson, 2009). In recent years, journalists have further developed their knowledge-based practices to fit the affordances of digital media platforms, such as sourcing on social media (e.g., Lecheler & Kruikemeier, 2016; Hermida, Lewis, & Zamith, 2014). Journalists' epistemological activities—presumed to provide factual and reliable public information—have made journalism one of the most influential knowledge-producing institutions in society (Ekström & Westlund, 2019a).

However, changes—both slow and sudden—are challenging the role of journalism in society. There is an ongoing but gradual shift from legacy media to digital media. On the one hand, this shift has opened new pathways for news access and distribution across an array of platforms—social, mobile, apps, and the like. On the other hand, this shift has generally undercut the business models of legacy news media organizations, resulting in the weakening and downsizing of newsrooms and the fragmenting of collective audiences for news, altogether raising questions about the continued viability of journalism to produce reliable information. Meanwhile, the more sudden change in the information landscape is the rapidly expanding abilities of a wide array of actors to sow doubt through misinformation, circulate conspiracy theories, provide "alternative facts," or otherwise question the accounts of news media. This comes at a moment when many people, particularly in developed countries, appear to have little confidence in the press (e.g., Fletcher & Park, 2017), much as they have diminished faith in institutions as a whole, and when social actors of many kinds pursue a deliberate strategy of disinformation for political or financial purposes, including through forms of computational propaganda (Woolley & Howard, 2019). The dramatic diffusion of misinformation (Tandoc, Lim, & Ling, 2018), as well as related forms of "dark participation" more generally (Quandt, 2018), has led to widespread debate about what some are calling a "post-truth" era (McIntyre, 2018).

Altogether, these developments point to many opportunities for research and theory. A general question concerns how the epistemologies of journalism—knowledge claims, norms, and practices—are shaped by the changes and challenges in digital news production. How do journalists know what they know, and how are their knowledge claims articulated and justified? Moreover, it is essential to better understand how citizens perceive news, "fake" or otherwise; e.g., how do they evaluate and act upon such claims? Citizens also need media literacy and source criticism skills to assess the quality of information; what constitutes such literacy, and how does it respond to the knowledge conditions of the contemporary digital environment? As a response to the recent rise in misinformation as well as concerns about problematic information broadly, groups across many nations, institutions, and organizations have mobilized to investigate the qualities and contours of information creation, circulation, and consumption (see overview in Caplan, Hanson, & Donovan, 2018). The functioning and implications of such mobilizations (such as international fact-checking movements, as described by Graves, 2016), as well as digital media tools that aid citizens and professionals in verifying information, are important for understanding

how determinations surrounding information verification are made in a changing news media landscape.

In 2017, in connection with this special issue, we made a call for empirical studies, historical explanations, and theoretical developments focusing on the above-mentioned areas and issues. We received 140 extended abstracts in late 2017, from which we invited full paper submissions from 17 by the summer of 2018. Following a rigorous peer-review process, we are proud to present the nine articles that constitute this special issue. These articles contribute to important scholarly advancements in communication, media studies and (digital) journalism studies. More specifically, this special issue advances research in two emerging sub-fields: (1) epistemologies of digital journalism, and (2) the study of misinformation.

Epistemologies of Digital Journalism

Scholars have studied various aspects and forms of journalistic epistemology for decades, from investigative journalism (Ettema & Glasser, 1985) and television journalism (Ekström, 2002) to the emergence of blogging (Matheson, 2004) and live blogging (Thurman & Walters, 2013). Recent years have seen an upswing in research into diverse epistemologies of digital journalism. This includes but is not limited to special issues on online sourcing (Van Leuven, Kruikemeier, Lecheler, & Hermans, 2018) and journalism and big data (Lewis, 2015), along with comprehensive comparisons of online journalism and live blogging (Thorsen and Jackson, 2018) as well as research on the empirical (Cheruiyot & Ferrer-Conill, 2018) and conceptual aspects of data journalism and epistemology (Westlund & Lewis, 2017). Related research on concepts such as automated journalism (Carlson, 2018a) and measurable journalism (Carlson, 2018b) have illustrated the epistemological aspects at play in combinations of metrics, machines, and news production, much as there has been new emphasis on the epistemic practices of journalists on social media platforms (Hågvar, 2019).

In total, these and other studies on epistemologies of digital journalism gesture to the overall "dislocation" of news, as it moves from platforms produced and controlled by traditional news media to platforms outside their jurisdiction, altogether complicating how news functions as knowledge (Ekström & Westlund, 2019b). Indeed, recent longitudinal mappings of digital journalism studies reveal that epistemology is among several key dimensions of emerging research (Steensen, Larsen, Hågvar & Fonn, 2019). On the basis of this growing scholarly interest and output, Ekström and Westlund (2019b) have proposed that this myriad of studies should be seen as advancing an emerging sub-field of research referred to as "Epistemologies of Digital Journalism." The plural term is used to acknowledge that there is a range of different forms of knowledge, practices of knowledge production, and justifications of knowledge claims in digital journalism.

A mix of theoretical debates and renewal, and a rich variety of in-depth empirical studies, define "the epistemologies of digital journalism" as an innovative and dynamic research area. Moreover, it may serve as a conceptual anchor point for advancing theory and the research frontier in the field of digital journalism studies (cf. Eldridge, Hess, Tandoc & Westlund, 2019). This section presents three papers presenting original theoretical contributions and three empirical papers analyzing epistemic practices in digital journalism.

First, the intensified debate around and scholarly interest in the epistemologies of journalism make it urgent to revisit discussions on the meta-theoretical foundations of journalism

research. In this issue, Yigal Godler, Zvi Reich, and Boaz Miller introduce and develop *Social Epistemology* as an approach that recognizes the social dimensions of knowledge, of knowledge production and justifications, without moving into anti-realist positions. It is presented as an alternative to the social constructivist approaches characterizing much research on how facts and truth are handled in news production. Social epistemology, the authors argue, provides a fruitful approach to "bridge the gap between how scholars and practitioners view journalistic fact-finding." It draws on philosophical insights on knowledge and experiences of concrete practices. It claims to provide tools for critical analyses and assessments of journalism, as well as an understanding of best practices in knowledge-acquisition and validation of facts in journalism. The authors illustrate the implications of social epistemology in analyses of "testimony-based knowledge in journalism" and "technology-based knowledge in journalism."

Matt Carlson's article presents a theoretical account of journalistic epistemology, and more specifically the epistemic authority of journalism, emphasizing the circulation practices as distinctive features of digital news. In exploring three components of circulation (infrastructure, circulation practices, and epistemic contests), Carlson adds to previous conceptualizations of news epistemology, and lays the foundation for a more holistic framework that integrates ongoing transformations in the media landscape. The three components of circulation form the conditions for news journalism as a more or less authoritative institution, providing valid public knowledge about the external world. In that way, he points out several important areas for future research.

Third and finally among the theoretical articles in this special issue, Nikki Usher makes the case that the role of place has been a critically under-examined area in the study of journalism and its destabilized epistemic authority. She examines how journalists work to establish provenance over the "where" through their use of cartography, as in the case of digital news maps today. In her view, such digital maps, mostly neglected in the widespread research on data journalism thus far, "not only create epistemological tensions within journalistic practice but also about journalism itself." She offers a three-part perspective on map-making—journalists as mapmakers, journalists as map-users, and journalists as map-subjects—that serves to illustrate a larger conceptual discussion about how journalistic claims to authority over public knowledge are both helped and hindered in an era of big data.

Turning now to empirically grounded contributions that are introduced in this special issue, Neta Kligler-Vilenchik and Ori Tenenboim report from the frontiers of participatory journalism via non-proprietary platforms—in this case, exploring how an Israeli journalist manages to establish a "meso-newspace." In contrast to the more restrictive patterns of control and exclusion that have marked how journalists have traditionally managed audience participation online via their proprietary platforms (e.g., news websites), this journalist has invited a broader audience via WhatsApp groups to get involved as active participants in virtually every stage of the news production process. Kligler-Vilenchik and Tenenboim conducted and analyzed interviews alongside group conversations and blog posts. They conclude that the journalist is co-constructing knowledge together with the active participants in a fashion marked by reciprocal exchanges, described as a form of sustained reciprocity in accordance with that proposed by Lewis, Holton, and Coddington (2014).

Moving from matters of audiences to those of sources, Soomin Seo presents a unique study into online sourcing practices that differ from common practices in that domain (cf. Van

Leuven et al. 2018; Thorsen & Jackson, 2018). Her article studies how specific news publishers have turned to digital sources they can comfortably work with from a far distance in reporting on Iran and North Korea, where there are many hurdles involved in gaining access to first-hand as well as credible information. She shows how foreign reporters can employ digital media, such as Flickr datasets with geotagged photographs from tourists as well as satellite footage, to advance sourcing techniques and become less dependent on official sources (such as authorities) that are traditionally placed higher in the hierarchy of news sources. The upshot is an "epistemological hierarchy of sources and sourcing channels that differs substantially from the norms of more traditional forms of journalism." This finding harmonizes with previous research into how foreign correspondents turn to alternative sources on the Web (Van Leuven et al., 2015)—and how it can be advantageous, in fact, for journalists to perceive affairs "with the added perspective of distance."

Third among the empirically driven contributions is Donald Matheson and Karin Wahl-Jorgensen's article on the epistemology of live blogging. Matheson and Wahl-Jorgensen present a systematic analysis of one live news blog in New Zealand (Radio New Zealand) and the UK (BBC) in their reports of major news events in 2016. The authors present five key features of live blogs in comparison to a more general epistemology of news stories. These include (1) narrative structure (fragmentation and lack of textual coherence), (2) temporality (layered texts with multiple voices for moments of time), (3) journalistic role (the curation of varied textual objects to put forth "networked balance"), (4) authorial stance (more heterarchical approach to audience through co-presence), and (5) status of text (enables other forms of publicness).

Making Sense of Misinformation

The remainder of the special issue contributes more broadly to the study of misinformation. This is a rapidly ascendant area of research and discussion, as scholars, policymakers, technologists, journalists, and others have sought to make sense of in recent years. Various forms of misinformation have long existed (Tandoc, Lim & Ling, 2018), and recently have been associated with eroding public trust in media, politicians, and institutions, the threatened integrity of electoral processes, and intensifying social polarization (European Commission 2018). Misinformation may undermine the functioning and legitimacy of democracy even as its production and distribution proves successful as a business model on account of programmatic advertising (Braun & Eklund, 2018). This special issue moves beyond these baseline understandings of the misinformation phenomenon today to contribute three novel dimensions: (1) a reconsideration of what the social panic around "fake news" offers to the study of media and digital infrastructures, (2) a case study of how journalistic fact-checking practices are implicated in producing news in a structured fashion for search algorithms; and (3) a depiction of "personal epistemologies" to explain how people make sense of and validate news as knowledge.

First, Jonathan Gray, Liliana Bounegru, and Tommaso Venturini describe "how the social disturbance precipitated by 'fake news' can be viewed as a kind of infrastructural uncanny"—that is, not simply as a problem to be solved in an instrumental sense but also as an opportunity for re-evaluating the everyday infrastructures that mediate the circulation of online content. This includes, for example, reassessing the routine movement and monetization of content on social media, "interrogate, challenge and change how these infrastructures participate in economic, cultural and political life." The unsettling implications of "fake news" thereby present a window

through which to consider three dimensions of interest: a link economy through which content is ranked; a like economy through which engagement is defined and measured; and a tracker economy through which attention is commoditized.

Second, Lucas Graves and C. W. Anderson illustrate the close connections between the fact-checking phenomenon, on the one hand, and the emergence of computationally oriented structured journalism, on the other. They present an empirical study of professional factchecking organizations and how they have approached structured journalism through the Share the Facts widget, a form of technological actant that mediates between the fact-checkers and their audiences, as well as the platform companies involved. The Share the Facts widget was put into practice in 2016 on PolitiFact, FactCheck.org, and The Washington Post's Fact Checker, and in 2017 both Google and Bing began using it, displaying in search results snippets of key information developed by publishers using the widget. The widget is situated as "a device designed to give fact-checks greater purchase in algorithmically governed media networks." Technologists and journalists, by using such systems to advance the goals set by fact-checking initiatives, thus exert a disciplining influence alongside the platform companies that act as algorithmic gatekeepers—altogether enabling professional fact-checkers to police the boundaries of their subfield. In all, Graves and Anderson reveal "tensions that have emerged as this infrastructural technology promotes particular institutional arrangements in the factchecking world."

Third, Christian Schwarzenegger contributes to our understanding of the epistemological dimensions of people's media practices, in the context of the broader public discourses of fake news and post-truth. How people understand and validate news as knowledge are complex issues as they involve social, habitual, discursive, cognitive and reflexive practices. Schwarzenegger develops the concept of "personal epistemologies" to analyze how people act on and interact with media, how the credibility of news is rejected or accepted, based on pre-understandings, experiences and attitudes toward various media. Using rich data from 49 in-depth interviews, he explores the epistemological grounds of consumers' media repertoires, their different understandings of the credibility of information, and the strategies developed to validate news. The study identifies *selective criticality*, *pragmatic trust*, and *competence-confidence* as three dimensions in how individuals process news. An overall conclusion suggests that individuals' selection and justification of news should be understood in relation to media repertoires embedded in social contexts and based on various beliefs and worldviews.

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