

Epistemology and Journalism

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Abstract

Epistemology is a central issue in journalism research. Journalism is among the most influential knowledge-producing institutions in modern society, associated with high claims of providing relevant, accurate, and verified public knowledge on a daily basis. More specifically, epistemology is the study of how, in this case, journalists and news organizations know what they know and how the knowledge claims are articulated and justified. Practices related to justification have been studied in (a) text and discourse; (b) journalist practices, norms, and routines within and outside the newsroom; and (c) audience assessment of news items and acceptance or rejection of the knowledge claims of journalism. Epistemology also includes the study of news and journalism as particular forms of knowledge. In journalism research, sociological approaches on epistemology have been developed to understand the institutionalized norms and practices in the processing of information and in socially shared and variable standards of justification, as well as in the authority of journalism in providing exclusive forms of knowledge in society. In recent years, epistemology has received increased scholarly interest in response to transformations within journalism: digitalization, emerging forms of data journalism, the acceleration of the news cycle, diminished human resources and financial pressure, and forms of audience participation.

The Centrality and Complexity of Epistemology

Epistemology is the study of knowledge: what we know, how we know, and how knowledge is justified. Thus, it comes as no surprise that epistemology is a central issue in journalism research. Journalism is among the most influential knowledge-producing institutions in modern society. The norms and claims of contemporary journalism are shifting with respect to aspects of epistemology (such as neutrality, objectivity, fact-checking, and transparency). Journalism is nevertheless often associated with high claims of providing authoritative, accurate, and verified knowledge about current events on a daily basis (Barnhurst, 2015; Carlson, 2017; Ekström; Hermida, 2012).

From early research on news and journalism to the current day, questions about news as a particular form of knowledge, and the norms and methods applied in the processing and justification of information, have occasionally been on the agenda (Ekström, 2002; Ettema & Glasser, 1987; Godler & Reich, 2017b; Park, 1940; Schudson, 1989; Tuchman, 1978; Zelizer, 2004). In recent years scholarly interest in epistemology has increased, much in response to a diverse set of ongoing transformations affecting journalism, including the intersections of journalism and social media, analytics and data-driven processes, automation, forms of audience participation, acceleration of the news cycle, diminished human resources, and financial pressure. Knowledge claims and standards in journalism have been refashioned (Karlsson, 2011; Thurman & Walters, 2013). There are concerns about journalists having difficulties sustaining basic requirements of accuracy in their everyday newswork (Compton & Benedetti, 2010; McChesney, 2012). There are intensified discussions about the processing of sources (van Leuven et al, 2018), new forms of fact-checking (Graves, 2017), processes of justification (Hermida, 2012), and the shifting contexts in which news is assessed as valid knowledge (Tandoc et al., 8a).

As indicated, “journalism and epistemology” relates to a broad spectrum of issues. There is a risk that the concept of epistemology is used so broadly that most aspects of journalism are included and that the concept this way loses its analytical sharpness and power. This article offers an overview of the field structured around the definition of two principal objects in the study of epistemology and journalism.

First, epistemology is the study of *how journalists know what they know and how knowledge claims are articulated and justified*. Practices related to the justification of news (truth, accuracy, etc.) have been extensively explored in three interrelated contexts: (a) in textual practices and the discursive articulation of knowledge claims; (b) in journalist practices, norms, and routines within and outside the newsroom; and (c) in the context of audience activities, assessment of news items, and acceptance or rejection of journalist’s knowledge claims.

The *second* object of inquiry in the epistemology of journalism is about journalism and news as *form of knowledge*. What form of knowledge is news? What knowledge of the world do people get as news audiences and through journalism? Important to note, the form of knowledge and the practices of justification are interrelated. News is a form of knowledge associated with particular expectations and standards of justification, distinct from, for example, how knowledge is produced and justified in scientific discourse.

These two interrelated aspects of epistemology have, in turn, been related to larger questions about the authority of professional journalism and the power and legitimacy of particular forms of knowledge (Anderson, 2017; Carlson, 2018a). The authority of professional journalism is dependent on its role in providing valuable and relatively unique public

knowledge. This authority is unstable and sometimes disputed with respect to both the quality of the knowledge produced and the control of the particular domain of knowledge (Carlson, 2018a; Deuze & Witschge, 2017). Theories of professionalism have been applied to understand the struggles in journalism to achieve epistemic authority (Schudson & Anderson, 2009). The centrality of epistemology in journalistic authority was thoroughly analyzed by Carlson (2017), and the power of the knowledge distributed in news media has been extensively researched in, for example, sociology and critical discourse studies.

Another circumstance contributing to the complexity in the study of epistemology is that epistemology belongs to the main areas of philosophy, where theories of the nature of knowledge, truth, and justification have been intensively discussed for centuries. How should research on the epistemology of journalism relate to the philosophical discourse? The literature shows two clear strands of research. On the one hand, journalism studies have mainly defined epistemology sociologically, rather than philosophically, in focusing on the institutionalized norms, roles, and practices in the processing of information and justification of knowledge in different social contexts (Ekström 2002; Ettema & Glasser, 1987; Carlson, 2017; Örnebring, 2017). However, the empiricist, constructivist, and realist accounts of truth developed in philosophy, have, on the other hand, informed and enriched the study of norms and practices in journalism (Godler, Reich, & Miller, 2019; Munoz-Torres, 2012; Ward, 2018).

This article discusses research on a selection of key topics and is organized as follows. First it sets the context by briefly presenting the *sociology of epistemology* and a *meta-theoretical (philosophical) account on epistemology*. Next follows a close discussion on the nexus of journalism and epistemology, focusing on *forms of knowledge*. Thereafter follow three sections focusing on *knowledge claims, production of knowledge and justification of*

knowledge in journalism and audience activities. The concluding section suggests *directions for future research*.

The Sociology of Epistemology

In the sociology of epistemology, knowledge is studied as a social phenomenon (different from approaches analyzing cognitive processes or logical principles). In this context, “sociology” does not refer to a particular theory, but to the general sociological accounts of knowledge, that is, how knowledge is produced and used, and how knowledge claims are articulated and justified, in social contexts and institutions such as news journalism (Ekström, 2002; Ettema & Glasser, 1987).

Sociological approaches have long been common in journalism studies. They were developed most explicitly in the classical newsroom studies in the 1970s, drawing on organizational theories and social constructivism (Schudson, 1989; Tuchman, 1978). As Schudson (1989, p. 263) notes, this research, in which news is explained as an output of organization and routines, challenged a professional self-understanding. To some extent the analyses were misunderstood within the profession, understanding “the making” as a criticism of “faking.” Some research within the social constructivist approach might have overemphasized the determining routines (Cottle, 2000) and even dismissed “the possibility that reality could be depicted or that truth could be established” (Godler & Reich, 2013, p. 674). Truly, there are arguments in the classical newsroom research indicating a radical form constructivism. However, it is important not to confuse the objects of inquiry. In her seminal study, Tuchman (1972) suggests that objectivity is a strategic ritual applied to cope with strict deadlines and minimizing the risk of criticism, and she identifies different practices through which objectivity is constructed in news discourse. She is *not* studying the level of objectivity or the

extent to which news refers to actual state of affairs, nor is she questioning a possible rational evaluation of the fallibility of news. From Tuchman's seminal study up to today, scholars have had the ambition to understand news production in a social context, without falling into the dead end of radical constructivism. The next section elaborates on this from a meta-theoretical perspective.

Critical Realism: A Meta-Theoretical Account

In recent years, the meta-theoretical accounts of truth and truth seeking in journalism have been critically discussed in several studies (Godler et al., 2019; Munoz-Torres, 2012; Ward, 2018). What they have in common is the questioning of the dualism of positivism/empiricism and constructivism/relativism that have influenced the norms within journalism as well as the perspectives applied in journalism research. Munoz-Torres (2012, p. 579) argues that the premises of positivism and its related "fact-value dichotomy" have been uncritically applied in theories of journalistic objectivity and created misunderstandings of truth. Ward (2018, p. 78) shows how the constructivist approaches have "enriched journalism epistemology," but concludes that there is a need for a new philosophical foundation. Godler and colleagues (2013, 2019) introduce *social epistemology* as such an alternative meta-theory for journalism studies. Social epistemology emphasizes the social dimensions of knowledge and integrates philosophical accounts of knowledge and, in this case, the practices of journalism in order to understand the actual challenges of journalism and to identify best practices of truth seeking. Discussions in the literature clearly show the importance of meta-theoretical perspectives that help to avoid dualistic notions of news as *either* socially produced within news organizations *or* more or less reliable information about the world outside. Critical realism provides such a meta-theory.

Critical realism represents a position beyond positivism and radical constructivism, and the related dichotomy of realism versus anti-realism (Bhaskar, 1978; Danermark, Ekström, Jakobsen, & Karlsson, 2002; Elder-Vass, 2012). The core of critical realism is the differentiation and combination of *ontological realism*, *epistemological relativism*, and *judgmental rationality* (Archer, Bhaskar, Collier, Lawson, & Norrie, 1998, p. xi). Elder-Vass (2012, p. 230) explains *epistemological relativism* as follows: “The standards by which we may justify our knowledge claims, then, are socially agreed and socially variable. And a wide range of social forces may also influence which beliefs come to be authorized as knowledge in a given social space.” Knowledge is thus socially constructed and always fallible. As Graves (2017, p. 530) notes, the general idea that “factual inquiry and discourse” are socially conditioned, including shared understandings of what counts as evidence, basically applies to science as well as journalism. This does not mean, however, that all knowledge is equally fallible. There are methods (*judgmental rationality*) to discriminate between different beliefs and representations of reality; what is correct and incorrect, what is clarifying and misleading (Elder-Vass, 2012, p. 230). The justification of knowledge claims in journalism has been explained as dependent on the power of the profession. Expertise is, however, more than power (Anderson, 2017). Judgmental rationality is assumed and applied in most practices of journalism: in the evaluation of sources, the design of headlines, the framing of interview quotes in edited news, and various practices of fact-checking (Graves, 2017; Reich, 2011; Godler et al., 2019; Thorsen & Jackson, 2018). Epistemic relativism is also compatible with *ontological realism*, that is, the fundamental idea that structures, mechanisms, and events exist independent of the knowledge-producing activities of, for example, journalism or research.

Critical realism claims a moderate social constructivism and relativism but rejects a radical one (Bhaskar, 1978; Danermark et al., 2002; Elder-Vass, 2012, p. 6). Knowledge is a social product, dependent on (but not determined by) norms, shared understandings and social organization of the activities in which knowledge is produced. And the knowledge is *about* a world not produced in these activities. The moderate social constructivism is in agreement with the seminal works on the sociology of knowledge, such as Berger and Luckmann's (1966) *The Social Construction of Reality*. Anderson (2017, p. 1315) makes a similar argument in discussing Michael Schudson's contribution to the study of knowledge and expertise in journalism: "Knowledge may be constructed, but it is not constructed out of nothing, and it is not constructed by society alone."

News as Form(s) of Knowledge

In social institutions, particular forms of knowledge are produced, disseminated and authorized. The knowledge offered and claimed to be valuable within the different sub-genres of news journalism is distinct from knowledge in education, science, or public administration, although epistemologies interact, such as when news is treated as a valuable knowledge in school or politics. Journalism offers specific ways to perceive and talk about current events—as real and with certain characteristics.

Park (1940) analyzed "news as a form of knowledge" in his seminal article of the same name with the subtitle "A Chapter in the Sociology of Knowledge." The analysis is based on a distinction between knowledge as "acquaintance with" and "knowledge about." Briefly, "acquaintance with" refers to the practical knowledge, abilities, and familiarity that come with everyday experiences and habitual engagement in different activities. "Knowledge about," in contrast, is a more formal and systematic knowledge obtained by investigations, observations,

and analyses. These forms of knowledge are embedded in different institutions and have different functions in social life. Park (1940, p. 675) suggests that the two constitute a continuum at which news “has a location of its own.” News is typically concerned with series of relatively isolated actual events (rather than causal, structural, historical relationships). News prioritizes the unexpected, has a transient quality, and is communicated in ways that make it easy to comprehend, repeat, share, and talk about. What is more, news is a communal and everyday knowledge about events beyond people’s first-hand everyday experiences (Carlsson, 2017: 17, 40). It is methodically produced knowledge, but also less systematic, analytical, and structural than scientific knowledge.

Nielsen (2017) suggests that digital news marks “a new chapter in the sociology of knowledge.” Referring to Park (1940), Nielsen makes two important arguments. First, he shows that Park’s analysis is still relevant as a characterization of distinctive features of news as knowledge. Second, Nielsen argues, and provides empirical examples to illustrate, that news has become more diverse and shifting in the era of digital and social media. Nielsen identifies three “ideal-typical” forms of public knowledge in digital news: (a) “news-as-impression” (“decontextualized snippets of information” in, for example, headline services, news alerts, and social media); (b) “news-as-items” (the more archetypical forms of daily news in discrete articles and broadcast news reports); and (c) “news-about-relations” (the more in-depth, contextual and explanatory journalism, in which data journalism and interactivity add to established genres of investigative reporting). Nielsen understands the first form as close to “acquaintance with” and the third form as primarily “knowledge about,” and argues that digital news to a large extent is developing toward these extremes. However, important to note, “acquaintance with” also refers to a form of familiarity that hardly corresponds to news as “decontextualized snippets of information.” “Acquaintance with” is

knowing *how*, that is, the practical knowledge and abilities attained and enacted in everyday activities. News in its different forms is still primarily knowledge *about* events outside everyday experiences.

To distinguish news as forms of knowledge is a difficult matter. What significance should be attributed to the form of the news, the knowledge processes they are the result of, and how the news are understood and used in different social contexts? Current research does not provide clear answers. Particular aspects have been studied, though without being integrated in a coherent theoretical framework on news as a form of knowledge.

Extensive research suggests that the form of knowledge is structured by the genres of journalism. In television journalism, knowledge is, for instance, typically communicated in genres of talk and conversation (e.g., Montgomery, 2007). Performative aspects are central to the credibility of knowledge and enactment of expertise (Ekström & Kroon Lundell, 2011). The packaging of news in broadcast formats favors voices of simplified messages rather than elaborated arguments. In edited news reports, visual and verbal relationships are constructed in different styles of reporting that prioritize different forms of knowledge: informative, documentary, entertaining, and skeptical (Thornborrow & Haarman, 2017).

Research has in recent years paid increasing attention to trends in digital journalism, with implications for the knowledge produced and communicated. These include research on (a) statistics and visualizations in data journalism (Coddington, 2015; Lewis & Westlund, 2015b); (b) algorithmic and automated selection and framing of news (Carlson, 2018a); (c) the hybridization of genres (news reports, blogging, advertising, storytelling), language (factual and emotionalized) and voices (formal news reporters and personal opinions) in

online news environments (Chadwick, 2013; Papacharissi, 2015); and (d) the implications of changes in the distribution of news in online and social media (Ekström and Westlund, 2019). In answering the question “what form of knowledge is news?,” different aspects must be taken into consideration. Two aspects are central: (a) *What characterizes reality* as it is known in and through the news? (b) *How is news integrated in social activities*; used, shared and justified as particular form of knowledge about the world? In a seminal study in the sociology of knowledge, also referred to in journalism research (e.g., Godler & Reich, 2013; Tuchman, 1978), Berger and Luckmann (1966, p. 1) define knowledge as “the certainty that phenomena are real and that they possess specific characteristics,” and they continue to clarify the object of inquiry: “a ‘sociology of knowledge’ will have to deal not only with the empirical variety of ‘knowledge’ in human societies, but also with the processes by which *any* body of ‘knowledge’ comes to be socially established *as* ‘reality’” (p. 3). The sociology of knowledge points out something essential for the study of journalism and epistemology. To understand how news is socially established, justified or disputed as a form of knowledge, the close analyses of concrete epistemic practices—in text and discourse, news production, and news consumption—should be related to the analyses of the wider institutional contexts and social activities in which news is produced, used and communicated. Carlson (2017) provides an elaborated contribution to such a contextual approach on epistemology..

The Articulation and Justification of Knowledge Claims in Text and Discourse

News Discourse and the Construction of Factuality

News journalism is a fact-based discourse associated with claims to truth, promising to know with high certainty and provide authoritative information about current events (Karlsson,

Clerwall, & Nord, 2017). This is articulated in meta-discourses—discussions and narratives—about professional news journalism (Carlson, 2017, p. 77). Most important is, however, how knowledge claims are articulated in the conventional forms and everyday language of news. This involves the voice of journalists, the contextualization of sources, and the discursive representations of the world outside in talk, text, and visuals (Montgomery, 2007). News forms are thus “laden with epistemological premises that shape the type of knowledge they communicate and, by extension, contain an argument for their legitimation” (Carlson, 2017, p. 73).

The facticity of the news is constructed through the linguistic resources used in describing events (Potter, 1996, p. 112). In news headlines, descriptions are typically constructed as certain, unproblematic, and separated from the author. Facticity is shaped by constructions of “out-there-ness” in visuals indexing a reality to be taken for granted and in various forms of live news reporting (Montgomery, 2007, pp. 33, 64, 120). There is a “hierarchy of modalization” (Latour & Wolgar, 1986) in relation to which the distinctiveness of the epistemic claims of descriptions can be understood. Potter (1996, p. 112) illustrates the hierarchy in formulations such as “X,” “X is a fact,” “I know that X,” “I think that X,” “X is possible.” The descriptions at the top of the hierarchy characterize the voice of the journalists in conventional news genres. As Montgomery (2007, p. 32) argues in a comprehensive study of the discourse of broadcast news: “News discourse is assumed to be in a veridical relationship to the truth and so there is no need to modalise degrees of commitment to the factuality of its statements” (“modalise” = indicating a particular epistemic stance or way of knowing). The “X” is thus a typical form in descriptions without “attenuation of their claim to truth” (Montgomery, 2007, p. 32). However, as Montgomery (2007) also shows, the construction of factuality in news involves a dynamic use of resources, modality choices, and markers of evidentiality. More personal views and voices (“I think,” “I believe”) are, for

example, articulated in correspondent reports and in interviews with experts, public figures, and “ordinary” people. The actor’s particular form of expertise is constructed in the contextualization of voices, and in some contexts also undermined (Ekström & Kroon, 2011). With respect to epistemic claims, news journalism is definitely not a homogeneous discourse. The characteristics of partisan news reporting, challenging the idea of journalistic objectivity, are recognized in, for example, the research on news shows and political talk shows in the United States (Hutchby, 2011; Jones, 2005). Research indicates an increase in interpretive and even speculative news journalism (Salgado & Strömbäck, 2012), although it remains to be studied how this is discursively articulated and negotiated. The diversity and hybridity in journalism, partly related to transformations in the mediascape, have been analyzed in several studies (Chadwick, 2013; Hutchby, 2011).

Objectivity and Neutral Stance

The claiming of objectivity (and neutralism) is central to professional journalism, although the views of objectivity within journalism have shifted over time (Schudson, 1978; Schudson & Anderson, 2009). What objectivity more specifically means and to what extent it can be achieved in practice is also disputed (Anderson, 2017; Reese, 1997; Örnebring, 2017). The orientation to norms of objectivity in news discourse is, however, well documented. Tuchman (1972), for example, described the forms of quoting, and the separation of facts and opinions in news, as procedures through which objectivity is articulated. Quotes are integrated as main units in most journalism across genres and media, and the quoting techniques form the discursive resources through which evidence is presented; objectivity is demonstrated; and the voices of actors are recontextualized for the particular news stories (Ekström, 2006). In quoting, journalists manage “to make claims without the accompanying responsibility” (Zelizer, 1995, p. 35). The rewording and redesign of others’ voices, marked as quotes, is

shown to be standard practice within news journalism (Haapanen, 2017). Voices from interviews are reformulated into a monologue by the interviewee. The quotations can appear as unprompted comments and the role of the journalist is obscured.

In contemporary research, the orientation to neutralism is thoroughly studied in the context of news interviews. Neutralism is understood as a stance articulated in question strategies (Clayman & Heritage, 2002; Ekström & Tolson, 2017). Neutralism is thus a performed quality that is managed by the interviewer in the interaction (as it is for the journalist adopting a particular stance in writing). In the canonical form of live news interviewing, journalists enact the principle of neutralism in asking questions on behalf of the audience and avoiding explicit evaluations of answers (Clayman & Heritage, 2002). Several studies have analyzed forms of political interviewing in which journalists clearly deviate from the neutral stance of professional and impartial journalism (Ekström, 2015). This is not to assume that interviews could be strictly neutral (Clayman & Heritage, 2002, p. 188). Not least in accountability interviews, questions are framed in a way that indicates critical attitudes and perspectives. Nevertheless, to maintain the professional code of impartiality, interviewers try to refrain from expressing their own opinions. In the context of some broadcast news, talk shows, and current affairs, interviewers, however, also breach the norms of impartiality in performance of an extraordinary aggressive and confrontational style of questioning (Ekström & Tolson, 2017); in explicit articulations of disagreements and opinions (Patrona, 2011); or in the development of a personalized and argumentative style in the context of partisan news shows, infotainment genres, and celebrity journalism (Ekström & Tolson, 2017; Hutchby, 2011). The more personal voice of journalism in news discourse entails a shift in how journalists claim expertise and professional authority (Schudson & Anderson, 2009).

Knowledge Claims in Changing Forms of News Journalism

The knowledge claims of journalism are negotiated and refashioned in the context of digital journalism and social media. Live blogging presents one example. Live blogging is distinct from conventional news, in tempo and in relationship to sources (Matheson & Wahl-Jorgensen, 2019; Thorsen & Jackson, 2018, Thurman & Walters, 2013). In live blogging, journalists publish information from secondary sources “in close to real time,” and they relay comments “as events are unfolding” (Thurman & Walters, 2013, p. 83). In this context, the authoritative voice of the journalist is thus reformulated into the role of a “curator” managing and disseminating “snippets” of information and comments from various sources.

With regard to the articulations of truth claims, two aspects are significant. First, in the role as curator in this particular format of news, journalists reinforce a tendency in conventional news reporting of attributing truth claims to quoted sources rather than to the reporter him- or herself (Haapanen, 2017; Kroon Lundell & Ekström, 2010). Second, in live blogging and other formats of “bite-sized” news, news is to some extent constructed as continuous pieces of facts (although they might also involve voices of opinions). In adding facts and quickly correcting inaccurate information, live bloggers and news organizations more generally can maintain the claims of providing accurate news in accelerating news cycles (Joseph, 2011; Karlsson et al., 2017).

The orientation to information as partial and provisory indicates a shift in the discourse of factuality in certain contexts. Karlsson (2011) conceptualizes this as a shift in truth telling from a *traditional approach*—in which professional journalism promises to deliver rigorously verified and unbiased information to audiences who are expected to trust this information—to a *transparency approach*—based on the ideas of openness, co-production, and processes of corrections and adding multiple views. The traditional approach to truth telling is, however,

still dominant in many contexts. Moreover, as Karlsson et al. (2017) show, it is doubtful whether audiences have lowered their expectations that published news should be correct from the start.

The rise of automated forms of news processing has clear implications for the discourses of factuality and objectivity. As Carlson (2018a) notes, the “algorithmic judgment” has been legitimized as objective, presuming the non-involvement of human subjectivity and the standardized non-biased processing of all input. The distribution of automated news possibly strengthens an illusion of knowledge as independent of agency, though depending on the transparency of the news production and the identification of authorship (Montal & Reich, 2017; Carlson, 2018a). At the same time, some scholars have studied and reflected on how editorial judgment is built into automatized news publishing processes (Westlund, 2011). Others have problematized the difficulties involved in opening the black box of code through so-called reverse engineering (Diakopoulos, 2015). Although reflections on methods and judgments are untypical for news discourse, journalism thus differs with respect to the level of transparency (Karlsson, 2011; Montal & Reich, 2017). As a new area, much remains to be investigated concerning how knowledge claims are articulated when automation is implemented in different news genres.

Dislocation of Journalism, Obscured Knowledge Claims, and Mock News

Dislocation of news journalism refers to a significant ongoing disruption of news media in the mediascape, one that is closely related to the emergence of social media platforms. This dislocation has implications for the articulation of knowledge claims, as the relationships between distributed texts and the principals behind the news are increasingly loosened or obscured (Ekström & Westlund, 2019). Prior to the rise of social media, legacy media

maintained the control of the platforms used for publishing and distributing news. The news was thus closely connected to the institutional identity and original context of news production. Owning and managing widely used proprietary platforms means news media can take charge of their editorial activities, and what is more, the knowledge claim of the particular text partly relies on the institutional voice of news media. Although legacy news media remain much in control of their proprietary platforms, there has been a parallel rise of widely used and influential nonproprietary platforms. These include, but are not limited to, companies such as Facebook, Twitter, and Google. Over time, social media, and especially Facebook, have become an important gateway for people (incidentally) accessing the news. Many news media have thus become dependent on nonproprietary platforms in order to gain a wider audience, with these acting as a digital intermediary and also outcompeting them in attention and advertising spend (Ekström & Westlund, 2019). Some news publishers strategically engage in “platform counterbalancing” to reduce their reliance on platform companies, as shown in longitudinal research of two Singaporean news publishers (Chua & Westlund, 2019). Altogether, recent research suggests legacy news media struggle to balance short-term operational opportunities connected to social media vis-à-vis becoming too dependent on social media in the long term (Nielsen & Ganter, 2018).

Importantly, unlike news publishers, the platform companies do not take editorial and legal responsibility for content published on their platforms. Who the actors are, actually articulating knowledge claims, has become increasingly vague. This is naturally problematic because social media have become significant gateways for publishing and widely distributing not only journalistic news but also propaganda and so-called “fake news,” which is produced with distinct political and/or economic interests in mind (Tandoc, Lim, & Ling, 2018). As an alternative to “fake news,” the concept “mock news” has been proposed by Ekström and Westlund (2019) because “mock is a concept connoting something being artificial, mimicked

and imitated, as well as fake and bad. Thus it encompasses the practice of imitating the tone and appearance of journalistic news material, but embodying it with artificial content that is intentionally fake.” In claiming truth, mock news thus essentially takes the advantage of the established discourses of factuality in news *and* the obscured institutional voice in the dissemination of news. With news journalism becoming dislocated, and with news material being imitated by other actors (including also native advertising), the news media may have to incorporate various kinds of meta-communication so as to communicate the institutional identity, the context of news production, and the related knowledge claims (Ekström & Westlund, 9).

The Construction of Epistemic Authority

News discourse is socially consequential (Wodak & Meyer, 2016, p. 6). How journalists produce and frame news reports has implications for the public agenda, the reproduction of social identities, and relationships between groups in society. A crucial aspect concerns the way in which the epistemic status of different actors is constructed and signified in news discourse. The concept of epistemic status here refers to social actors’ assumed access to domains of knowledge, what they are supposed to know, and how they know (cf. Heritage, 2012). This is related to the entitlement of different actors to have a voice, “speak about the action of others,” and appear as “authorized knowers” in the media (Carlson, 2017, pp. 124, 127).

In news discourse, actors are treated as entitled to know, and have the right to know, in representing different roles. The distribution of epistemic status is institutionalized in news genres and narratives. Extensive research shows that citizens most often have a subordinated role and a less authoritative voice in the news (Ekström & Tolson, 2017; Kleemans, Schaap, & Hermans, 2017; Lewis, Inthorn, & Wahl-Jorgensen, 2005). For example, an in-depth study

of social media appropriation in journalism at the BBC by Belair-Gagnon (2015) shows how social media practices were institutionalized in ways in which the journalist rarely reached out to new sources (such as citizens) unless they really had to. In vox pops, citizens are featured as exemplars, representing categories of opinions and reacting to what the more powerful actors are saying and doing. News is a genre in which the most authoritative and knowledgeable voices are typically assigned to the political elite, journalists, commentators, and pundits (Blumler & Coleman, 2010; Gans, 1979; Lewis Inthorn, & Wahl-Jorgensen, 2015). Citizens are entitled to have a voice within the “epistemic territory” of first-hand knowledge (their own beliefs, opinions, emotions) and are more seldom treated as knowing about public matters. Studies even show how citizens’ political knowledge is trivialized in election campaign reporting (Ekström & Tolson, 2017).

Knowledge and epistemic status is distributed in the framing of sources and the interaction in news interviews. Using Conversation Analysis, Roth (2002) has analyzed how question practices in news interviews position the interviewee as more or less knowledgeable and how interviewees fulfill or negotiate the knowledge attributed to them. A similar interactional approach was applied in a study by Ekström & Kroon (2011), showing how the expert identity of correspondents and in-house commentators is promoted in journalist-to-journalist live dialogues in broadcast news. The opposite applies to accountability interviews, where the epistemic statuses of interviewees are typically undermined (Clayman & Heritage, 2002). The characteristic allocations of epistemic authority in “traditional” news journalism are to some extent renegotiated in genres of popular journalism. The challenging of elite-centered political news discourse and the upgrading of lay discourse (ordinary expertise) have been thoroughly analyzed in research on talk shows and entertainment programming (Jones, 2005; Livingstone & Lunt, 1994).

The epistemic entitlement of different sources is thus central to the articulation of knowledge claims in journalism. Journalists rely much on the veracity of the actors interviewed, quoted, and referred to. Research on broadcast news has analyzed the construction of privileged knowledge in expert interviews and experiential, or witness, interviews. Although experts have privileged knowledge in representing specialized expertise of relevance for the particular issue, witnesses rely on authenticity, first-hand accounts, and a “truth to experience” (Montgomery, 2007, p. 168). Social media and mobile media have enabled an increase of eyewitness accounts in news reporting (Hermida, 2010; Westlund, 2013) as well as forms of citizen journalism such as “black witnessing” via Twitter on mobile devices (Richardson, 2017).

Production of Knowledge: Contexts and Practices of Justification

This section discusses research on the knowledge-producing practices within journalism. This involves asking questions about the norms, standards, and methods applied in the processing of facts and the justification of knowledge claims (Ekström, 2002). Following the sociological approach to epistemology, these questions are investigated not primarily to decide whether the published information is true or reliable, but instead to understand what characterizes the institutionalized ways of producing knowledge in the context of various forms of journalism. How do journalists verify facts and decide what is sufficiently justified to be published in different contexts?

Epistemic practices are more or less institutionalized (Ekström, 2002). Institutionalization occurs when the activities of members of social groups and organizations are habitualized and oriented to shared understandings. Two related aspects of institutions have been distinguished: (a) the habits, roles, routines, and enduring procedures in the performance and

collective coordination of different tasks (cf. Jepperson, 1991); and (b) the community of norms, values, and understandings that make institutions cohesive and legitimate (cf. Douglas, 1986). More specifically, the institutionalized activities of news production involve, for example, the typifications and framing of events in the making of different news stories (Tuchman, 1973); the routinized use of different sources (Reich, 2011); and the relatively stable roles and practices in genres of interviewing (Montgomery, 2007). In such practices knowledge claims are justified.

Shifting Contexts of Justification

Among the most significant contributions to the study of journalism and epistemology is Ettema and Glasser's work on investigative journalism, published in the book *Custodian and Conscience: Investigative Reporting and Public Virtue* and related articles (1987, 1989). In comparing daily news reporting and investigative reporting, Ettema and Glasser identify significant differences in the practices of justification and what they conceptualize as "the context of justifications." The concept, well known in the philosophy of sciences and the analysis of the different principles within the contexts of discovery and justification, is thus translated into a study of the sociology of epistemology. In doing this, Ettema and Glasser emphasize the context dependency of justifications in journalism.

Referring to the newsroom studies of the 1970s (Fishman, 1980; Gans, 1979; Tuchman, 1978), Ettema and Glasser (1987) argue that the knowledge claims of daily reporting are bureaucratically justified. The reporters largely rely on sources providing pre-justified accounts and information accepted at face value. They thus "avoid responsibility for justifying their claims" (Ettema & Glasser, 1998, p. 159). In the newsroom studies, sociological approaches were applied to analyze the organization and day-to-day working routines in the making of news (Schudson, 1989). The routines of newswork were understood as being

embedded in an institutionalized beat system, which provides a continuous flow of news events from sources of high credibility—relatively unproblematic facts and credible accounts (Ettema & Glasser, 1987, p. 341; Fishman, 1980; Tuchman, 1973). Several scholars have problematized the role of organization and routines in explaining the distinctive epistemologies of daily news reporting (Cottle, 2000; Stonbely, 2015).

The main argument in Ettema and Glasser's study suggests that investigative reporting is associated with more independent and rigorous processes of justification. Because of the truth claims, the questioning of official facts, the processing of disputable facts, and the moral implication of the stories published, the reporter cannot rely on pre-justified accounts.

Investigative reporters are accountable and have to assess the quality of facts and justify "the larger truth of the story" (Ettema & Glasser, 1987, p. 357). Ettema and Glasser (1987) also developed a model that provides a point of departure for analyzing the specific steps in the process of justification in traditional investigative reporting. Research also shows how facts are constructed and evaluated in relation to the overall objectives of presenting undeniable, hard-hitting, and dramaturgically effective stories of moral disorder (Ekström, 2002). This is manifest in, for example, the discursive construction of general truths out of often extreme and non-representative individual cases. The most important contribution of Ettema and Glasser's empirical study is, perhaps, that they manage to show that justification is a "creative achievement" of individual reporters in interaction with colleagues in particular social contexts; a process in which moral claims and epistemic claims are interrelated and balanced. Moral standards are to some extent objectified and reported as facts, and the evidence required to publish a story is evaluated in relation to the moral sensitivity of the story. The contrastive analysis of daily and investigative reporting identifies two significantly different orientations to facts in journalism. The analytical distinction is still relevant.

However, contemporary research also shows a diversity in the assumption of facts and the practical verifications of facts in genres of journalism (e.g., Godler & Reich, 2013; Graves, 2017; Cheruiyot & Ferrer-Conill, 2018). As Graves (2017) shows in an ethnographic study, the rise of organized fact checking across countries provides an important case for exploring and theorizing the practical epistemologies in journalism.

The context of justification is a powerful concept, though, for some peculiar reasons, not further developed and applied in the study of journalism. It can be applied on different levels of analysis in comparisons between forms and genres of journalism (as in the examples above) as well as in the analysis of the more specific circumstances under which journalists (individually or in collaboration with colleagues) justify information from sources and the presentation of facts in news stories (Godler & Reich, 2013; Risberg, 2014). As will be indicated in the following presentation of a selection of recent studies on central aspects of epistemology in journalism, much indicates that the contexts of justification are in flux (not to deny form of stability) in the era of social media and online journalism.

Sources

The processing—selections, evaluations, representations, and authorizations—of sources has been a main object of study in journalism research (Gans, 1979; Godler & Reich, 2017a; Lecheler & Kruikemeier, 2016; Reich, 2011; Sigal, 1986; Van Leuven, Kruikemeier, Lecheler, & Hermans, 2018). The processing of sources, and the more or less institutionalized journalist–source relationships, are fundamental to the epistemology of journalism.

Interviewing and quoting sources constitute central practices of knowledge seeking and truth telling. The orientation to the credibility of sources is thus a central aspect of the epistemology of journalism (that is, *what they know, how they know and how knowledge is*

justified). Journalists' expertise and authority have been described as primarily based on these practices and on journalists' unique access to important sources, rather than an expertise in the subject matters reported on in the news (Reich & Godler, 2017).

What sources are considered sufficiently reliable to publish? What aspects are crucial in the assessment of sources? To what extent and in what situations do journalists cross-check sources to confirm information? These are central questions investigated in previous research. As indicated in an overview by Godler and Reich (2017a), research hardly provides general answers to such questions. Nevertheless, the research presented suggests (a) a tendency in journalism to accept information as credible facts with reference to the legitimacy and face value of the sources; (b) that the social and organizational affiliations and the formal authority of sources are decisive; (c) that many sources are accepted without cross-checking; and (d) that the time devoted to verification represents a small part of the work at least in some contexts. Godler and Reich's (2017a) study, based on reconstruction interviews (related to a selection of news items) with reporters from Israeli news organizations, reports cross-verification in about half of the cases studied. The study suggests that journalists apply different forms of evidence, such as knowledge about the social affiliation and interests of the sources, prior contacts, and evaluations of sources information and reasoning. Godler and Reich (2017a, p. 570) conclude that cross-checking might occur primarily "when all other paths of evidence and knowledge have been exhausted." Journalists' orientation to the credibility of sources is thus context dependent (see also Reich, 2011).

An important aspect is the performed role and authority of the journalist. Contemporary journalism involves journalists acting with profiled authorship articulating their own interpretations; journalists claiming expertise within particular fields; reporters acting as mediators of trustworthy information; and reporters performing the role of a detached and

neutral distributor of seemingly unproblematic facts or voices representing both sides of a story. The different roles and reliance of sources represent tensions within contemporary journalism associated with different truth claims and performed authority (Undurraga, 2017a). As Carlson (2017, p. 141) notes, there is a potential conflict in journalism between the claims of professional epistemic autonomy and the “need to connect every assertion with an attributed source.”

The implications of online media on the processing of sources are investigated in a number of studies (Lecheler & Kruikemeier, 2016; Van Leuven et al., 2018). Social media sources and online sourcing techniques are generally embraced in journalism. Routines in the categorization and assessment of sources are to some extent destabilized. Journalists have to update their skills and strategies to handle, for example, the geolocation of online data, the sometimes obscured principals and authors behind different voices, or the assessments of eyewitness information (Lecheler & Kruikemeier, 2016, p. 164). In important respects, established patterns are also reproduced. This involves the distribution of epistemic authority in the news. Elite sources are still dominant. Online media complement traditional sources and have not in any significant way upgraded the role of the public in the news (Lecheler & Kruikemeier, 2016, p. 157; cf. Belair-Gagnon, 2015; Vliegthart & Boukes, 2018), although research shows how journalists in some contexts use digital and social media to broaden their contact with sources (Chernobrov, 2018). Trends in digital journalism also shape different processing of sources. Some genres of journalism, such as live blogging, tend to promote rapid publishing of voices, recognized as sufficiently sincere and trusted, in “a relatively loose culture of corroboration” (Thurman & Walters, 2013, p. 98), and also involve a bigger and more diverse set of sources (Thorsen & Jackson, 2018). Digital journalism also involves the invention of genres developing the critical assessment of facts and challenging traditional

distinction between facts and opinions (Graves, 2015). Moreover, research indicates different standards applied in the verifications of social media sources. Although journalists in many contexts are reluctant to quote voices from social media in the news, there are also examples where such voices are treated as newsworthy. Research on tabloid newspapers presents examples of how tweets are “taken at face value” and published without any form of verification (Broersma & Graham, 2013, p. 461).

Time and Epistemology

Time is a critical factor in news journalism, with implications for the epistemologies applied (Reich and Godler, 2014). Usher (2018) describes immediacy, being fast and first, as a “defining pillar” of the professional ideology. The temporality of news production was emphasized by Tuchman (1972, p. 662) as a structural condition reducing the possibilities for epistemological consideration and shaping the routines in how objectivity is achieved in the processing of news: “He (the newsmen) must make immediate decisions concerning validity, reliability, and ‘truth’ . . . Processing news leaves no time for reflexive epistemological examination. Nonetheless, the newsmen need some working notions of objectivity to minimize the risk imposed by deadlines, libel suits, and superiors’ reprimand.” Time is also central in Schlesinger’s (1987) newsroom study, introducing the concept of a “stop-watch culture” in analyses of the synchronization of roles and activities in relation to temporal cycles and deadlines in news journalism.

The transformations of news appear as a paradigmatic example of what Rosa (2015) describes as the social and technological acceleration in modern society. In a long-term perspective, mechanisms of acceleration are manifested in the shifts from news being disseminated through the postal services via horseback, to the modern press based on ever-faster communication technologies, to live news in radio and television, and the principles of

immediacy, instant publishing, and high-speed of processing information in online media. However, research also shows considerable variation in the temporality of journalist practices related to subgenres and units within online newsrooms (Boczkowski, 2010; Nielsen, 2017). Without contesting variation in temporality, Usher (2018, p. 24) notes a general pressure on news journalists to publish fast and first, and a tendency of the previously different temporalities of different news media (local and national television news, newspapers, radio news, and online news) to converge in the same immediacy and deadline “NOW.” Based on a study of four U.S. metropolitan newspapers, Usher (2018) shows how the fear of not being fast enough, and thus irrelevant in relation to other media, permeates the newsroom and motivates constant updates. What is more, Usher (2018) suggests that this orientation to immediacy is central to the role that journalists seek to maintain as authoritative truth tellers. News must obviously be timely in order not to be outdated as news. But news production also takes time. The consequences of acceleration in processing online news has received increased scholarly interest (Mitchelstein & Boczkowski, 2013; Karlsson et al., 2017). Acceleration in the circulation and processing of information in online and social media is likely to increase the risk of incorrect information and inadequate news being published (Karlsson, 2011; Karlsson et al., 2017; Lecheler & Kruike-meier, 2016). To some extent this might be compensated by the possibilities of correcting mistakes and revising news in constant updates of online news, but the pressure of updating can also create new mistakes (Joseph, 2011; Usher, 2018).

The possible effects of acceleration are not, however, limited to the correctness of individual facts. The speed of the news cycle influences the *form of knowledge* that is prioritized. News tends to be delivered in bits of factual information and voices. Truth is almost reduced to accuracy of facts, figures, and quotes (cf. Ekström, 2002). What defines the truth and quality

of news (as knowledge) is also the time for *reflexive epistemological examination* regarding relevance, the framing of the news, what is implied as common understandings, and so on (that is, *what characterizes reality as it is known in the news*). Speed affects the opportunity for the journalists to collect information independent of public relation activities and elite sources, and to provide different perspectives, possible explanations, and critical examinations. The latter relate to highly valued professional norms in journalism that in practice tend to be marginalized as the speed and productivity requirements increase (Undurraga, 2017a; Wiik, 2014; Witschge, 2012).

A study based on interviews with reporters in television, radio, print, and online media indicates that time pressure negatively affects source diversity, cross-checking, and independence of public relations (Reich & Godler, 2014). Undurraga (2017b) took advantage of the opportunities to study the impact on news-making practices when a real-time online news service was introduced in a newsroom in Brazil. The study is based on ethnographic fieldwork in the newsroom and shows how the form of news changed significantly in the context of the online platform and its related temporality. The real-time news cycle resulted in “the generation of much smaller slices or ‘bits’ of news,” defined by immediacy and price shaping as a “distinctive set of newsworthiness criteria” (Undurraga, 2017b, p. 87). The expectations of fast output reduced the time for reflection in the news production.

Data Journalism

Different forms of data journalism have gained traction throughout the 2010s and have also sparked much scholarly interest. Many kinds of news media around the world have initiated and implemented work with data journalism in their organizations (Anderson, 2013; Lewis, 2015). To the best of our knowledge, there are still no comprehensive studies focusing

exclusively on the epistemology of data journalism. However, several studies have witnessed emerging forms of data journalism (Coddington, 2015; Lewis, 2015) and have also discussed how this connects with key questions such as epistemology (Carlson, 2017, p. 158; Floridi, 2012; Westlund & Lewis, 2017), privacy, and accuracy (Boyd & Crawford, 2012), but also its close connection to expertise, ethics, and economics (Lewis & Westlund, 2015b). Obviously, data are integral to this more specific form of digital journalism, and practitioners and scholars envision it can play significance in several different ways in the future (Stalph & Borges-Rey, 2018). In practice, data journalism involves social actors such as journalists or technological actants in the form of automated journalism, carrying out statistical and computer-supported analyses of quantitative data sets and thereafter publishing findings in the form of visualizations and interactive representations of data. This knowledge-oriented work may require journalists to develop skills in exploring and analyzing data (Coddington, 2015; Lewis & Usher, 2014) but also requires coordinating and collaborating with a computationally skilled technologist (Lewis & Westlund, 2015a; Westlund, 2011). Automated journalism involves social actors inscribing their technological actants, such as algorithms and content management systems, with instructions for extracting and analyzing data from reliable data sets, and producing and/or publishing news stories, infographics, and so on (Anderson, 2013; Carlson, 2018a; Lewis & Westlund, 2015a; Linden, 2016; Westlund, 2013).

News production in data journalism may result in journalism taking other forms of knowledge claims than have been done in traditional news journalism. One key difference involves data journalism possibly strengthening the knowledge and subsequent knowledge claims that journalists can produce around specific topics. Data journalism has been linked to, for example, new practices of investigative journalism involving systematic extraction and statistical analysis of large data sets (Parasie, 2015). Data journalism creates enhanced possibilities for investigative journalism through complex gathering and analysis of data (see,

e.g., the so-called “Panama papers”). Statistics produced on the basis of large data sets tend to be treated as “facts,” as if data carry an objective nature that cannot be manipulated. However, scholars have clearly made the case that “raw data is an oxymoron” (Gitelman, 2013), and thus data should not be taken as a proxy for the “science of what is” in the ontological sense. Journalists and journalism scholars alike must be critically aware of how computerized and automatized processes of news production that may come into play in data journalism can cloud the visibility of justifications and claims. The practice of data journalism may transcend beyond journalists to technologists and other social actors internal and external to the news organization, and clearly involves technological actants and may actively engage audiences (Coddington, 2015; Lewis & Westlund, 2015a). It is critically important, albeit very complex, to determine who takes part in, and responsibility for, the claims being made in data journalism.

Audience Acceptance or Rejection of Knowledge Claims

In the introduction we identified the justification of knowledge claims as a central aspect of epistemology. In the study of journalism, this also includes the analysis of how the knowledge claims of individual news reports *as well as* the role of journalists as authoritative truth tellers are justified from the audience point of view. The power and legitimacy of journalism is dependent on its ability to redeem the claims of providing fact-based news and on audiences perceiving the news as reliable and continuing to turn to journalism to be informed about the world outside (Ekström, 2002). This relational perspective on the justification of knowledge claims has been developed by Carlson (2017) in his theory of journalistic authority. The authority of journalism is basically dependent on contingent relationships between journalists claiming unique access to knowledge worth listening to *and* audiences accepting or rejecting these epistemic claims.

Over the last years, transformations in the mediascape, the speed and volume in the circulation of news from different sources and via diverse platforms, and most recently the debates about “fake news” have spurred increased scholarly interest in the conditions for audiences’ trust in news media, and the skills and efforts required of the audiences to be able to authenticate news (Tandoc et al., 2018a). Research indicates that trust in information is related to pre-understandings of the institutional voices and sources behind the news, as well as the habitual experiences of everyday news consumption, which means that audiences do not need to critically assess individual news items except in situations where they have particular reasons to doubt or are invited to question (Tandoc et al., 2018a, pp. 3–4). Moreover, individuals are more willing to believe information that supports their viewpoint. Tandoc et al. (2018a) explain audiences’ authentication of news in social media in relation to internal activities (their own judgment based on knowledge and the characteristics of the news) and external activities (seeking information from trusted people in their social networks and cross-checking with institutional sources). Audiences are likely to turn to external forms of authentication when in doubt of the credibility of the news. Thus, verification involves cognitive and social processes. The verification of information in social media and the identification of fake news have also been explained as dependent on the authority of the author behind the information, plausibility, how information is presented, and processes of independent corroboration (Zubiaga & Ji, 2014). However, we have rather scant knowledge about the effects of the shifting voices, sources, and news formats on audiences’ inclination to accept the truth claims of news journalism (Lecheler & Kruikemeier, 2016, p. 167). The sociological and constructivist approach to epistemology emphasizes the social practices and socially agreed-on standards by which knowledge claims are justified and knowledge is authorized in particular social contexts (cf. Elder-Vass, 2012, p. 230). This implies an understanding of the roles of the audiences in the justification of news and journalism that

goes beyond the skills and efforts of assessing the veracity of individual news items. The analysis should also focus on audience-related practices of justification and how various news is authorized as knowledge in everyday contexts and social spaces such as peers networks and political groups.

Thus, important to note, the knowledge claims of journalism are justified in *audience practices on different levels*. The veracity of information is accepted or rejected in individuals reading, listening and interpreting the news from different sources. News is also justified and questioned in acts of sharing and conversations in, for example, social media. What is more, knowledge claims are also indirectly accepted or rejected in the ways in which particular forms of journalism are regularly consumed, that is the extent to which people show that journalists and particular news media are worth being listened to.

In journalism research, several ongoing trends have implications for the conditions under which the knowledge claims of journalism are justified by audiences. We conclude by synthesizing six important trends. *First*, the broken monopoly of professional journalism and legacy media, as well as the increased distribution of news in various social media platforms and digital news services, most likely shapes a diversity of competing knowledge claims from other actors with both good and dark intentions (Quandt, 2018), including but not limited to diverse kinds of alternative media (Holt, 2018). This may also shape different audience practices and processes of verification. To some extent the epistemic authority of traditional news genres is destabilized and challenged (in some cases articulated in a radical distrust), however, with different implications, depending on media systems, cultural, and sociopolitical context (Tandoc et al., 2018b). *Second*, as an aspect of digitalization and new business models, audience metrics have developed as increasingly efficient and decisive forms of

feedback influencing the selection and packaging of news (Carlson, 2018b; Zamith, 2018). Most likely, this has consequences for how journalists understand their relation to the audiences and, most important, their authority as truth tellers (Usher, 2018). *Third*, the processes of validating individual news items have become more complex as a consequence of the dislocation of journalism to non-proprietary social media platforms, and the fact that the principals and the original context of production are often obscured (Ekström & Westlund, 2019). *Fourth*, there are contrasting tendencies in news journalism toward, on the one hand, forms of transparency that promote audience evaluations and critical reflections (Karlsson, 2011) *and*, on the other hand, forms of news constructed as independent of agents, drawing attention away from the responsibilities of the producers and assumed to be taken for granted as neutral and unproblematic facts. Automated journalism represents a salient example (Carlson, 2017, p. 159). *Fifth*, the infrastructure, norms, and practices of social media shape contexts for a reorganization of the verification of news toward more collaborative forms based on distributed rather than centralized expertise, and involving audiences in active roles of producing supplementary and corrective information, validating, and criticizing (Hermida, 2012; Shin, 2015). *Sixth* and finally, social media adds new dynamics to the authorization of news as knowledge in different social spaces and groups. For example, as the sharing and commenting on news, facilitated by news sites and social media platforms, is increasingly integrated in news as a form of knowledge, audiences not only contribute to the content of the news, but interpersonal relationships also become central in the validation of news and news sources.

Directions for Future Research

In this article we have discussed theoretical frameworks, key topics, and results in the research on journalism and epistemology. Challenges for future research have also been

indicated. In this final section, we summarize what we consider important directions for the future.

Although the research on topics related to epistemology has increased in recent years, much remains to be investigated in how acceleration and shifting temporalities in the news cycle, the emerging forms of data journalism, and automated journalism affect the epistemologies—the forms of knowledge, the norms and practices of knowledge production, the knowledge claims articulated, and the standards of justification—in various contexts of contemporary news journalism. Based on the theoretical insights from the sociology of epistemology, we can expect the shared assumptions about facts and sources, and the practices of verification, to be reshaped in relation to structural conditions, technological affordances, and the working routines in different organizations. This is not a simple process of adaptation. Transformations within and outside the newsroom, for example, create professional controversies (Undurraga, 2017b). Professional roles and norms are modified and refashioned in concrete practices (e.g., Tandoc, 2014; Tandoc, Hellmueller, & Vos, 2013). Research taking an ethno-methodological approach shows how norms related to epistemology are oriented to and negotiated in the situated and collaborative work of news production (Risberg, 2014).

This research should benefit from multi-methodological approaches. However, ethnographic research is vital to achieve a more in-depth knowledge of the more or less institutionalized norms, standards, and routines that altogether shape the epistemologies in different contexts. The transformations of news journalism have inspired a new wave of ethnographic newsroom studies (e.g., Cottle, 2000; Tandoc, 2014; Undurraga, 2017b) well suited for research on epistemology. Methodological challenges include those that occur when news production takes place in collaborative processes in different locations inside and outside the newsroom,

and sometimes in “networks of loosely affiliated competitor-colleagues” (Deuze & Witschge, 2017, p. 12).

Digital and social media have contributed a heterogenization of journalism and news production. To develop the knowledge of generic aspects of epistemologies, as well as contextual variations and specificities of different genres of journalism, systematic comparative research is urgent. To our best knowledge, few have studied and compared the epistemologies of journalism across countries, sociopolitical contexts, and media systems (cf. Godler & Reich, 2017b).

Research should also focus on audience’s skills and strategies in verifying news from different sources. What is more, in this article we have described several changes in the institutionalized production and distribution of news, as well as in the articulation of knowledge claims, that raise a number of questions about the role of the audience in processes of news verification in online and social media. Finally, we suggest further theorizing and empirical studies systematically analyzing concrete epistemic practices in relation to the bigger questions about the authority of journalism and the legitimacy of news knowledge in different social, cultural and political contexts.

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