FULL PAPER

The paradox of knowing more and less:
Audience metrics and the erosion of epistemic standards
on the internet

Das Wissensparadoxon: Journalistische Publikumsorientierung
und die Erosion epistemischer Standards im Internet

Mario Haim & Christoph Neuberger

Mario Haim (Prof. Dr.), LMU Munich, Department of Media and Communication, Akademiestraße 7, 80799 Munich, Germany. Contact: haim@ifkw.lmu.de. ORCID: https://orcid.org/0000-0002-0643-2299

Christoph Neuberger (Prof. Dr.), Weizenbaum Institute for the Networked Society, Hardenbergstraße 32, 10623 Berlin, and Freie Universität Berlin, Institute for Media and Communication Studies, Berlin, Germany. Contact: christoph.neuberger@fu-berlin.de. ORCID: https://orcid.org/0000-0003-0892-610X

FULL PAPER

The paradox of knowing more and less: Audience metrics and the erosion of epistemic standards on the internet

Das Wissensparadoxon: Journalistische Publikumsorientierung und die Erosion epistemischer Standards im Internet

Mario Haim & Christoph Neuberger

Abstract: Journalism is crucial to modern democracies in that it provides valid knowledge about current events in the form of news. Through shared epistemic standards and the professional norm of objectivity, journalism helps to generate societal knowledge and to make informed decisions. Yet, this surveillance function is also driven by knowledge about audiences. Knowledge about audiences informs both journalism's and mutual recipients' expectations toward anticipated audiences. It allows to gauge shared epistemic standards and thus to reduce risks of criticism when participating in public discourse. Online, changes in possibilities and necessities to monitor audiences, however, have paved the way to engage in a mode of addressing more tailored standards of anticipated audiences. Such epistemic tribalism contrasts widely shared epistemic standards of professional journalism and has yielded a paradox in which an increase in knowledge about audiences possibly leads to less common knowledge about current events because epistemic standards are no longer shared across the public. Based on this diagnose, we offer two potential pathways for the future of epistemic standards on the internet. A negative one where polarization will benefit from an intensified identification with epistemic tribes and a positive one where discursive spaces will allow for an institutionalized rebalancing of epistemic standards between journalism and audiences.

Keywords: Journalism, platforms, knowledge, news practices, epistemology, democracy, digital public sphere.

Zusammenfassung: Der Journalismus ist für moderne Demokratien wichtig, weil er valides Wissen über aktuelle Ereignisse in Form von Nachrichten produziert. Gesellschaftlich akzeptierte epistemische Standards und die professionelle Objektivitätsnorm tragen zum gesellschaftlichen Wissensvorrat bei und ermöglichen fundierte Entscheidungen. Ergänzt wird diese journalistische Funktion der Umweltbeobachtung durch das Wissen über das Publikum. Das Wissen über das Publikum bestimmt sowohl die Erwartungen des Journalismus als auch jene der Rezipierenden an das Mitpublikum. Es ermöglicht die Herausbildung gemeinsamer epistemischer Standards, wodurch sich das Risiko von Kritik bei der Teilnahme am öffentlichen Diskurs verringert. Die veränderten Möglichkeiten und auch Notwendigkeiten der Publikumsbeobachtung im Internet haben den Weg dafür geebnet, dass sich Redaktionen mit maßgeschneiderten epistemischen Standards an das erwartete Publikum wenden. Ein solcher zielgruppenspezifischer Zuschnitt epistemischer Standards

steht im Gegensatz zu geteilten Normen und hat zum Paradoxon geführt, dass die Zunahme des Wissens über das Publikum möglicherweise mit weniger gemeinsam geteiltem Wissen über aktuelle Ereignisse einhergeht, weil professionelle Standards nicht mehr geteilt werden. Auf der Grundlage dieser Diagnose diskutieren wir zwei mögliche Zukunftspfade für epistemische Standards im Internet: einen negativen, bei dem die Polarisierung aufgrund einer verstärkten Identifikation mit epistemisch distinkten Zielgruppen zunehmen könnte, und einen positiven, bei dem diskursive Räume einen institutionalisierten Diskurs epistemischer Standards zwischen Journalismus und Publikum ermöglichen.

Schlagwörter: Journalismus, Intermediäre, Plattformen, Wissen, Epistemologie, Demokratie, digitale Öffentlichkeit, Medienwandel.

1. Introduction

Journalism provides societies with news as valid knowledge about current events. As such, news are an essential prerequisite for individual and public opinion formation, and collective decision-making in democracy. Thereby, epistemic standards are the foundation upon which knowledge is negotiated. For professional journalism, the set of shared epistemic standards operationalizes the central norm of objectivity (Neuberger, 2017). In journalism research, epistemic standards are also called "verification practices". Practices are defined as "typical patterns of action" (Buschow, 2020, p. 231). Examples for verification practices in journalism are cross-verification, source transparency, and the separation of news and opinion (Godler & Reich, 2017; Kovach & Rosenstiel, 2021, pp. 78–112).

Epistemic standards have long been acknowledged also by the audience. However, recent changes in the news environment have made it both a possibility and a necessity for news outlets to algorithmically monitor their audiences across a plethora of platforms. As an effect of this algorithmic monitoring and as we will lay out in greater detail below, the main thesis in this essay is that the consent on how to negotiate societal knowledge via journalism is weakened.

To discuss this thesis and the normative implications of the introduction of algorithmic monitoring for journalism and democracy, we start by discussing societies' organization of knowledge, the role of journalism, and how this process has changed in recent years due to a rebalancing of mutual expectations between journalism and its audiences. In that, we distinguish between two kinds of knowledge – knowledge about current events (news) and knowledge about audiences. In analyzing their relationship along journalism's changing connection to audiences, we hypothesize a knowledge paradox in that knowing more about audiences is paralleled by a decrease in societal knowledge about current events, because it has become harder to find consent on epistemic standards which leads to a pluralization and a growing number of contradictions between assumptions about reality. This idea is still partly speculative, but we try to make its validity plausible in this article. It could inspire further investigation into the weakening of professional standards through greater reciprocal visibility in the relationship between newsroom staff of journalistic outlets and its audiences in the digital context.

Notably, this paradox is further amplified through asymmetries in the knowledge about audiences. Driven by different resources, motifs, and algorithmic filters, assumptions about journalistic audiences and mutual observers are increasingly based on different observations and reflections rather than on standardized and intersubjectively agreed-upon measures. This further informs knowledge asymmetries which, in turn, are likely to affect societies' organization of knowledge where public discourse not only builds on fragmented but also on misperceived epistemic standards. This diagnose thereby questions the means rather than the end as it points to a more general insight where pluralization and constant adaptation on the one hand vis-à-vis institutionalization on the other are in tension.

Subsequently, this article sketches two potential future routes for the formation and empirical evaluation of epistemic standards on the internet. A negative scenario is built on the premise that pluralization and fragmentation of epistemic standards leads to the emergence of epistemic tribes where the lack of agreed-upon epistemic standards intensifies the identification with certain epistemic tribes to become a distinguishing characteristic. Conversely, a positive scenario builds on the notion of an experimental democracy, where discursive spaces are required to allow for an institutionalized negotiation between journalism and audiences to collectively discuss, agree upon, monitor, and update shared epistemic standards.

2. Knowledge, democracy and journalism

Knowledge has been defined traditionally as "justified true belief," where a mind-independent circumstance is objectively true, justified through epistemic validation, and subjectively believed to be sincere (Godler et al., 2020, pp. 215–217; Goldman, 1999, p. 5). This is not an individual process, though. Particularly within modern societies, people often lack the ability to validate circumstances for themselves. Thus, people likely acquire knowledge on the accounts of others, such as by means of journalism – a mode analyzed in the approach of social epistemology (Godler et al., 2020, p. 216). The social epistemology approach investigates the social conditions for satisfying claims to truth (Goldman, 1999).

Journalism as a knowledge profession has the functions of validating and creating a shared reality based on credibility and trust (Donsbach, 2014, pp. 664–666). By reducing the complexity from various contexts of society, news provides an overview of current affairs. It thus contributes to social participation in that it allows citizens to keep up with the world and make informed decisions. We refer to this kind of knowledge as *knowledge about current events*. Journalism has thereby undergone several phases of professionalization to optimize and standardize the selection and verification of such information to become news, adhering to the norm of objectivity to ultimately serve as knowledge (Schudson, 2001). Over time, this professionalization has yielded agreed-upon press codes, best practices, and textbook knowledge for journalistic education. The objectivity norm served to distinguish journalism from public relations and propaganda. In terms of methodology, journalism oriented itself toward science (Post, 2015). Taking on a neo-institutional perspective (DiMaggio & Powell, 1983), these steps of

professionalization have resulted in a set of news rules and largely predictable behavior by news organizations (Ryfe, 2006a, pp. 208–210), providing journalism with professional stability for its role and the demands it is facing, thereby allowing news organizations to constantly monitor each other and to hold each other accountable on these premises through forms of self-regulation (e.g., press councils).

These premises, however, are also the result of another kind of knowledge. That is, journalism requires knowledge about the surroundings in which it acts upon to estimate and fulfill societal expectations toward its profession, its position within the (media) market, and its acceptance in the public sphere. This kind of meta-knowledge about the social environment includes *knowledge about audiences* (Coddington et al., 2021; Litt, 2012). By being able to gauge what audiences presumably expect from the journalistic verification process and accept as valid knowledge, common grounds for debates can be laid and built upon. Knowledge about audiences has changed drastically for journalism in general and especially online journalism. Methods to observe and measure audiences have widened and thus paved the way for a more audience-oriented online journalism (Ferrer-Conill & Tandoc, 2018) – an aspect to be further addressed in the next chapter.

Journalism's role for knowledge as pursued in social epistemology also resembles a core principle of an epistemic and output-oriented understanding of democracy as whole. Broadly speaking, social epistemology refers to a collective mode of knowledge negotiation through public deliberation, to which actors from varying backgrounds contribute to (Wessler, 2018, pp. 51–68). Such an – usually only partly realized and therefore rather idealistic – "epistemic democracy" (Brennan, 2018), then, aims to produce valid knowledge as outcomes for evidence-based political decisions, which emerge from a collective mode of knowledge negotiation. While depicting a theoretical and, probably, academically naïve perspective, this collective mode "investigates the epistemic powers of institutions" (E. Anderson, 2006, p. 8) in democracy. It thus echoes a methodological understanding of the norms and rules a society has agreed upon to generate, verify, present, disseminate, acquire, and discuss knowledge and decisions.

Following the philosopher John Dewey, Elizabeth Anderson (2006) argues for an experimental, fallibilistic democracy, which combines "all three constitutive features of democracy, diversity, discussion, and dynamism (feedback)" (p. 14). In essence, democratic solutions should become just through a rational debate between opposing political views (Estlund, 2008, pp. 24–26). Epistemic democracy theorists thus share a strong belief in democratic institutions, such as the separation of power, checks and balances, technocratic bureaucracy, the party as well as the media system, and public debate. It remains a point of question, though, to what extent experts and politicians on the one hand ("elite") and the citizens on the other hand ("wisdom of crowds") shall participate and are being prepared for such epistemic discourses (Brennan, 2018; Rosenfeld, 2018). What is needed for democracy is at least "a loose consensus, always precarious, always subject to reconsideration and adjustment, but the closest to a set of shared convictions or useful facts that we

might hope to achieve as a platform for crafting government policy and for binding us all together in some minimal way" (Rosenfeld, 2018, p. 29).

The collective mode of knowledge negotiation within epistemic democracies, then, not only yields collectively acknowledged results but also justifies any involved democratic institutions and processes toward this end. Given that democracies are organizing knowledge through institutionalized – that is the formation and stabilization of shared expectations – processes of public discourse, then the knowledge compiled in public discourse gains legitimacy very much from its process of deliberation and negotiation through institutionalized means such as professional journalism, its agreed-upon practices of selection and verification, and its professionally shared norms of objectivity and transparency. Put differently, if modern epistemic democracies agree on a collective mode of knowledge negotiation then journalism as an institutionalized part of society can also be considered just and acknowledged for knowledge negotiation.

In that, the two kinds of knowledge journalism interacts with – knowledge about current events and knowledge about audiences – also gain justification. Institutionalized, for example, through the norm of objectivity and related practices of verification such as the two-source principle, knowledge about current events is generated through professionalized practices and paralleled by societal interest and expectations. Journalism's societal role has thus long been a crucial element for democratic opinion formation and decision-making. Conversely, institutionalized through norms of transparency and participation as well as practices of mutual monitoring and observation, knowledge about audiences has gradually emerged as an institutionalized routine of empirical estimation and justification, fueling a renegotiation of expectations between journalism and its surroundings. In that, however, it has become an essential prerequisite for both online audiences and online journalism to gauge societal interest and expectations as well as mutual acceptance and subsequent negotiation (Coddington et al., 2021; Vos & Thomas, 2018).

3. Journalism and audiences

In an effort to describe the process of societal knowledge negotiation, Neuberger and colleagues (2019) have characterized it as seminally consisting of mainly four phases. That is, after knowledge is created through information brokers (e.g., experts, spokespersons), it is being evaluated, verified, and distributed by journalism before being acquired by a largely passive audience. Traditionally, the authors argue, these phases can be aligned in subsequent order. In a public sphere driven by mass media, it had thus been journalism's role to act as intermediary transforming information from knowledge brokers into news as verified knowledge about current events distributed to a heterogeneous audience (Schudson, 2001). In this setting, journalism enjoyed high degrees of authority and credibility. Professional journalism also invested into boundary work to delineate itself through professional norms and practices from journalistic lookalikes (Carlson & Lewis, 2015). This boundary work as well as the linear process of societal knowledge negotiati-

on had long been established and institutionalized – manifested, for example, in co-orientation, codices, and curricula.

Both journalistic boundaries and the linear process of societal knowledge negotiation have largely been overthrown in today's societies, however, as digitization has severely changed journalism and the societal order of knowledge. The authors argue that dynamics of online journalism have resulted in meshed settings that are arguably better reflected in a circular model of knowledge processing (Neuberger et al., 2019, pp. 175–179). Therein, roles have become flexible attributions and journalism resembles an open, continuous, and interactive part of the negotiation process rather than the aforementioned closely controlled, periodical, and linear one. In addition to professional norms, participation and automation have added dynamics and interrelations to all four phases of the process while also eroding some of journalism's boundaries. That is, in spite of ongoing boundary work within journalism to signify its professional role, online modes of communication have increased the necessity for journalism to identify, communicate, and argue for their epistemic standards. This has undermined journalistic authority as well as standards of societal knowledge negotiation in that it allows speakers to reach audiences without the necessity of journalistic gatekeepers and their checking of quality, complicates the evaluation of knowledge through the sheer amount and plethora of available sources, makes distribution a key premise of algorithmic filtering, and blends different roles and motivations across the entire process (Neuberger et al., 2019).

In this, the importance of audience metrics for online journalism and public knowledge negotiation has increased vis-à-vis an increasingly institutionalized distinction between knowledge about current events and knowledge about audiences. Over the last years, these changes have gradually highlighted at least three arenas in which the relationship between journalism and audiences has also affected how journalism and audiences negotiate the premises on which their discourse is increasingly built. Driven by mutual expectations (Wilhelm et al., 2021), this negotiation has thus yielded a rebalancing of expectations between journalism and its surroundings in the arenas of the journalistic profession, the media market, and the public sphere as a whole.

4. Rebalancing expectations in the journalistic profession

First, changes in the journalism-audience relationship and the professional roles for societal knowledge negotiation have rebalanced mutual expectations in and for the journalistic profession. Within a traditional mass-media setting, knowledge about audiences mainly resembled information on sales and subscriptions, garnished with smaller amounts of oral or written feedback through letters to the editor (Gans, 1979, pp. 229–241). In other words, knowledge about audiences was sparse. Journalism in mass media was inevitably oriented towards a largely unknown, anonymous, unlimited, and therefore 'imagined audience' (C. W. Anderson, 2011, pp. 553–554; Coddington et al., 2021; Litt, 2012, pp. 331–332; Nelson, 2021).

To secure legitimacy and reduce uncertainty, then, journalism has long employed the formation of professional norms (normative isomorphism) along the mutual observation and imitation between competitors (mimetic isomorphism) (Di-Maggio & Powell, 1983, pp. 151–152, 154–155). "Over time, these routines generate identities, behaviors, roles, and values that are seen as appropriate. These norms may crowd out alternative ways of practicing journalism – even if those alternatives might respond more efficiently to exogenous pressures" (Ryfe, 2006b, p. 140). Put differently, the lack of knowledge about audiences can be seen as a unifying force that may lead to a homogenization of expectations toward professional practices. They are justified on the one hand by presumed audience expectations, and on the other hand by assumptions about journalism's social functions in a given society. In liberal democracies, journalism largely autonomously defines what its contribution to the common good is and expects the audience to accept this determination.

Online, however, journalism as a profession has lost this power of definition because audience members have become observable in every step they take, be it for news outlets on their websites, for social media in their apps, or for advertising networks across the internet. To audiences, mutual use becomes evident in quantified indications of clicks and comments, thus also allowing for estimating and publicly criticizing journalistic performance. Within journalism, software for audience analytics geared toward online news outlets are omnipresent (Belair-Gagnon et al., 2020). Newsrooms have installed particular roles for the observation and maintenance of audiences and audience metrics (Ferrer-Conill & Tandoc, 2018). As such, they have generated practices in daily newsroom routines, the fulfillment of which claims legitimacy through respective actions. In other words, job titles and task responsibilities calling for audience engagement or analytics optimization have journalism revisiting norms within the journalistic profession – weighting clicks against importance or balancing anticipated engagement with expected political impact (Haim, 2019). In addition, journalistic verification practices online are increasingly geared to strengthen the visibility (transparency) of the editorial process to the audience (Koliska & Chadha, 2018) and the audience's participation in it (Aitamurto, 2016), thereby more closely aligning expectations between both sides (Karlsson, 2011; Wilhelm et al., 2021).

5. Rebalancing expectations on the media market

Second, changes in the journalism-audience relationship and its role for societal knowledge negotiation have rebalanced mutual expectations on the media market. There are two basic ways to gain knowledge about the audience. They are related to the two sanction options – exit and voice – which are available to the audience if consumers or citizens are dissatisfied with the performance of companies or parties (Hirschman, 1970). Members of an audience can *exit*, that is withdraw their financial support (e.g., as a consumer of a specific good) or ideological support (e.g., as a follower of a political party). The exit option can be measured quantitatively, observing the binary decision between support or not support. In the case of media consumption, it is the decision between use or not use of a cer-

tain offer (e.g., brand, article). Wendelin and colleagues (2017, p. 137) have argued that the increasing importance of audiences to journalism has severely strengthened insights into the exit option. Similar to Loosen and Schmidt (2012), they claim that transparency between journalism and its audiences has increased, largely visible in prominently displayed popularity cues and today's widespread use of audience analytics. This use of audience analytics is thereby often driven by economic premises (Ferrucci & Tandoc, 2015) as an increasing competition among online news outlets allows audiences to more easily compare and switch between alternatives – audiences thus pertain influence on news outlets, which has forced news outlets to thoroughly monitor their audiences and adjust wherever and whenever they see fit (Strömbäck & Karlsson, 2011, p. 646).

Economic premises have also tightened as growing shares of online audiences consume news via intermediaries or "platforms," such as search engines, social media, or news aggregators (Newman et al., 2022). Competition on the media market is intensified by the fact that journalistic providers can monitor each other better, for example through news aggregators such as Google News. In that, news outlets have repeatedly expressed a perceived pressure to adhere to such platforms to be and remain visible also to platform audiences. This not only subsumes explicitly serving news to platforms but also to adhere to the platform's technological advances, such as the focus on mobile pages, video, or emotional content. Changes in norms have thus previously been termed both a shift from a so-called media logic toward a more "commercial logic" (Karidi, 2018) and a shift from a media logic toward a "technological adaption logic" (Haim, 2019).

Yet, not only journalists but also members of the audience make assumptions about the composition of news outlets' audiences. Audience members can make educated guesses about who the consumers of a certain news outlet are. Such assumptions inform guesses on mutual understanding and perception, such as by estimating an audience's attitude and belief. Moreover, such assumptions, for example about a newspaper sharing a rather young and liberal audience, help turn media use into an individually distinguishing feature to identify and stand out with (Iyengar & Hahn, 2009). A feature that highlights not only the audiences' perception of its mutual audience but also the audiences' perception of the news outlet as well as its reputation. It is also a feature that has also long been echoed by various news outlets themselves, for example through image campaigns that render audiences somewhat distinct (e.g., "Spiegel-Leser wissen mehr," transl.: readers of 'Der Spiegel' know more). These images about the co-audience can be substantiated in the digital age through increased transparency in who follows, shares, or comments certain news outlets on social media.

6. Rebalancing expectations in the public sphere

Third, changes in the journalism-audience relationship and its role for societal knowledge negotiation have rebalanced mutual expectations in the public sphere. As such and parallel to changes in the media market, audience members can also choose to *voice* as a response to underperformance by a provider, which is to vent one's displeasure by complaint, either publicly (e.g., via user comments) or priva-

tely (e.g., via email). User comments, for example, have been shown to serve as a corrective to publicly hold journalism up to its professional standards (Craft et al., 2016) as well as a breeding ground for incivility (Coe et al., 2014). These open-ended comments on satisfaction or dissatisfaction with journalistic performances are more information-rich than binary *exit* selections. As various tools and platforms allow to systematically collect and analyze this feedback, journalism can nowadays build on a rich array of audience reactions, displaying attitude and belief toward presented news.

Importantly, due to the internet's increasing transparency, information on *exit* and *voice* are also visible to the audiences themselves. Therefore, users can publicly discuss evaluations and expectations of journalism. Journalists can initiate such audience debates on social media or editorial blogs and can participate in them. Popularity cues and user comments are depicted around and below news on platforms and news outlets' own websites. Aside from actual knowledge about current events, such information serves as explicit knowledge about audiences as well as about the respective news outlets and their reputation, right in the moment of news consumption. Moreover, as platforms select and rank news, they also suggest certain levels of recency or popularity, thus providing implicit knowledge about audiences.

Yet, as news diffuse through the web, ready to be consumed in a broad variety of contexts, the consumption of news has become individualized. Varying levels of popularity cues lead to different perceptions of mutual audiences and public opinion (Haim et al., 2018; Zerback et al., 2015). In algorithmically curated environments such as search engines or social media, personalized feeds are optimized for proprietary standards to "maximize user traffic and advertising revenue" vis-à-vis "platform-native strateg[ies]" of news organizations (Nieborg & Poell, 2018, p. 4283). Hence, these optimizations may stand in stark contrast to the democratic ideals of well-informed citizens and a functioning public opinion formation (Helberger, 2019; van Aelst et al., 2017). What is more is that the epistemic division of labor (Herzog, 2020) also suffers from personalization. If it is known that other users see the same news, they can be relied upon as co-reviewers who will correct errors if necessary. In individualized offerings, however, this corrective no longer exists.

7. The paradox of knowing more and less

We understand knowledge about audiences as a complement to knowledge about current events. That is, one the one hand, knowledge about audiences may be manifested in professional co-orientation, in audience metrics about website usage (exit), and in users' verbal comments on news (voice). Knowledge about audiences thereby also aptly informs assumptions about audiences' perceptions of shared information. It thus helps to incrementally estimate how any shared knowledge about current events that was informed by knowledge about audiences actually resonated with the audience. In that, knowledge about audiences may influence how journalistic practices are implemented and adjusted over time and thus inform subsequent knowledge about current events. On the other hand, lear-

ning about current events suggests presumptions about mutual perception. In that, how current events are reported likely reveals prior assumptions about who was to be addressed, for example if certain terminology is (not) explained, if certain frames are served, or if a certain basic knowledge is presupposed. Subsequently, then, knowledge about current events also informs expectations about journalistic practices and professional norms.

Moreover, we understand gaining knowledge about audiences as a process in flux, not only to journalism but also to the audience itself. As we have seen, audience's voice and exit responses partly replace the professional standards as point of orientation in journalism. To journalism, while gaining knowledge about audiences previously meant to enumerate readers and consumers, it has gradually transitioned to entail clicks and subscriptions, diffusion and engagement, reading time and scrolling depth, discursivity and sentiment in user comments (e.g., Brosius et al., 2019; Coddington et al., 2021; Haim, 2019; Nelson, 2021; Zamith, 2018). To audiences, gaining knowledge about audiences previously meant to draw conclusions from common knowledge about ratings or circulation metrics whereas algorithms and big data strongly contribute to more transparency in the form of popularity cues and engagement metrics, ranking mechanisms and social-media recommendations, open-ended user feedback and public outlet reputation (e.g., Chen & Pain, 2019; Craft et al., 2016; Haim et al., 2018; Lee & Tandoc, 2017). Users are also better informed about journalism through greater transparency of editorial processes and expanded possibilities of audience participation in such processes (Karlsson, 2011; Wilhelm et al., 2021). As such, in today's online media environment, both audiences and journalism are increasingly capable of accumulating both more and more differentiated knowledge about the respective other side.

Importantly, this increase in knowledge about audiences also affects epistemic standards and societal knowledge organization as it arguably has rebalanced mutual expectations between journalism and its audiences. That is, participating in public negotiations of knowledge has always been associated with risks of criticism (voice) or rejection (exit). To reduce uncertainty about the expectations of a distant audience, we argue, speakers (e.g., journalists) followed a strategy of minimizing risk. In that, the lack of knowledge about audiences in the past has led journalism to a defensive mode of ensuring that news as knowledge about current events likely meets with the broadest possible acceptance. Subsequently, then, this mode of pursuing broadest possible acceptance has contributed to a unification of epistemic standards and its professional justification. A broadly accepted set of communicative behavior in the realm of societal knowledge negotiation had been established, which in turn informed a mode how knowledge is generated, negotiated, and agreed-upon. As part of epistemic democracies, such a functioning public sphere was thus considered just and acknowledged for knowledge negotiation, setting the grounds for modern society's epistemic standards.

For today's media setting, however, journalism's relationship with its audiences has changed gradually yet substantially. With audiences being analyzable and traceable in real time, newsrooms have increasingly adopted audience-oriented routines and embraced distribution-geared practices (Coddington, 2019; Haim,

2019; Lee & Tandoc, 2017; Nelson, 2021; Zamith, 2018). Rather than building on presumptions and the observation of mutual journalistic outlets, newsrooms compile knowledge about their audiences through audience metrics and popularity cues, driven by large datasets and algorithmic curation (Haim et al., 2018; Lee & Tandoc, 2017; Zamith, 2018). Distribution intentions, then, serve as an important a-priori determinant for journalistic production. That is, different practices and norms for the production of news have been established depending on whether a piece is planned, for example, to serve a loyal readership or a search engine. Distribution, to some newsrooms, has become a news value in itself (Fürst, 2013). The previous lack of knowledge about audiences, which presumably led journalism to mutually observe each other to align how knowledge about current events was compiled, has gradually been replaced by more audience-oriented practices (Ferrer-Conill & Tandoc, 2018).

Yet, overcoming the lack of knowledge about audiences can be expected to partially erode journalism's previous observation of mutual outlets as benchmarks and the professional negotiation of common norms and standards. These practices may no longer be needed since today's journalism can both ensure and monitor in great detail that knowledge about current events meets its pointedly specified audience's expectations. There is less risk of public criticism involved if audiences can be clearly specified a priori. Epistemic standards then build on a multitude of sets of communicative behavior, leading to a fragmentation in societal knowledge negotiation. The aforementioned increase in knowledge about audiences can thus be linked to diminished shared epistemic standards and thus an erosion of societal knowledge negotiation.

8.   Headed toward a negative outcome?

In liberal democracies, there is a need for shared epistemic principles across audiences, news outlets, and platforms as "a common currency to exchange reasons" (Lynch, 2016, p. 50). Consequently, if epistemic standards become more fragmented, that is, if the consent on how to verify news and knowledge about current events in a society is weakened due to news outlets tailoring their publications to their specific audiences, then the societal negotiation of knowledge is at risk. In contrast to previous discussions, we do not refer to issues and opinions as dimensions of fragmentation and polarization (Bruns, 2019), but to epistemic standards. After all, what some news outlets consider to be below the epistemic standards for some of their particular audiences might be another news outlet's unique selling proposition to parts of its specific audiences. Yet, if standards are tailored to specific expectations of an own audience, then the result is a "tribalization" (Lynch, 2016, p. 45; see also Rosenfeld, 2018, p. 9) which ends the possibility of a rational public discourse because these tribes "evaluate one another's reasons by completely different standards" (Lynch, 2016, p. 45).

There are a number of rationales for alternative truth claims in distinction to journalism and science as epistemic authorities. For example, Figenschou and Ihlebæk (2019, pp. 1231–1232) show for the case of far-right alternative online outlets that their audiences are presented with different streams of arguments to

identify with, all of which take their own critical stance against legacy news by building on personal experience or ordinary people's concerns. Conspiracy theorists mix various sources of epistemic authority like experience, tradition, futuristic imageries, science, and critical social theory, to give evidence to their assumptions (Harambam & Aupers, 2021). COVID-19 deniers refer to their gut feelings and personal experiences, but also on outsider positions in science (Pantenburg et al., 2021). In science-related populism, two alternative epistemologies can be distinguished, namely scientific counter-knowledge on the one hand vis-à-vis common sense, personal experiences, and emotional sentiments on the other (Mede & Schäfer, 2020, pp. 478–480). In addition to these alternative justifications, however, a cynical suspension of the truth claim has also often been diagnosed, especially in the case of Donald Trump, who uses lies as a common means of political fight (Kakutani, 2018, pp. 151–163), or in the "postmodern propaganda" of "spin dictators" (Guriev & Treisman, 2022, pp. 62–85), as exemplified in the Russian propaganda channel RT (Elswah & Howard, 2020). In academia, the assumption of objective truth has been rejected by postmodern philosophy, which Pluckrose and Lindsay (2020, pp. 30–42) argue has now led to a "reified postmodernism" outside universities, which is characterized by radical relativism and cultural constructivism. All of these aspects indicate how growing epistemic fragmentation and polarization are closely related to the digital transformation of the public sphere, the increasing importance of platforms and of journalism's loss of its gatekeeping monopoly.

Yet, in building on different epistemic standards (or their suspension), knowledge becomes merely an empty phrase where agreement on facts becomes impossible "and if you can't agree on the facts, you can hardly agree on what to do in the face of the facts, and that just increases tribalization, and so on and on in a recurring loop" (Lynch, 2016, p. 63). This has even prompted the proclamation of "[t]he age of post-truth politics" (Davies, 2016).

Vos and Thomas (2018) diagnosed a "crisis of journalistic authority" (p. 2001). Therein, "alternative media" have criticized legacy media as biased, partisan, deceitful, and distanced from ordinary people – part of a powerful elite and a conspiracy against the people (Figenschou & Ihlebæk, 2019, pp. 1228–1229). Conspiracy allegations and other harsh criticisms are directed against journalism and science as epistemic authorities (e.g. Butter, 2020, pp. 121–150; Koliska & Assmann, 2021). At the same time, journalistic authority has come under pressure from competition with pseudo- or "quasi-journalistic actors" (Vos & Thomas, 2018, p. 2004) – that is, corporate or political actors who mimic journalistic services without abiding by the same professional norms. This is not to render all "alternative media" in unprofessional light – for some at least, the opposite is presumably the case, is that increasing demand for alternatives implicitly highlights problems in the so-called "mainstream."

Similarly, today's media setting also allows audiences to draw seemingly evidence-driven conclusions about mutual perceptions. Respective cues about who other members of an audience are and how they feel about presented content are increasingly becoming an essential part of the depiction of news as knowledge about current events itself. Common to social media, indicators of popularity are

explicitly given, while search engines and news aggregators employ personalization and ranking mechanisms to implicitly suggest readability and popularity among an audience potentially similar to oneself in attitude and belief.

Mentioned asymmetries in knowledge about audiences further fuel the paradox of knowing more and less: When different actors gain different levels of knowledge about audiences, they also gain different perceptions of epistemic standards which then aptly inform the perception of risk toward public criticism. However, asymmetric levels of knowledge about audiences are thereby also apt to introduce a momentum of artificiality into public discourse, where a lack of shared epistemic standards to negotiate knowledge about current events are compensated not only by actually shared but also by seemingly shared knowledge about audiences. After all, the selection and context of news presented by algorithmic recommender systems, for example in search engines or social media, differ for different members of the audience, thus also suggesting different mutual audiences und different shared epistemic standards. The paradox of knowing more and less might become a paradox of thinking to know more while knowing less.

For example, Coddington and colleagues (2021) recently showed that U.S. journalists' perception of their audiences as rational and likeminded largely depends on the sources from which the journalists built their perceived image of an audience. In that, institutional information such as audience metrics played as much a role as did a "gut feeling" or the interactions with friends, families, and peers (Coddington et al., 2021, pp. 10–11). In similar vein, Chen and Pain (2019, pp. 11, 13) found that while audiences vary in their awareness and loyalty toward news brands, their interaction and engagement with other members of the audience is capable of explaining large shares of this variance. Again, this suggests audience fragmentation and tribalization as well as effects on subsequent actions.

Presumably, such subsequent actions could entail a decay of a common agenda. As asymmetries in the access to knowledge about audiences impede the comparability of audience metrics across organizations, platforms, and points in time, what generates attention and thus revenue might depend even more on how audience metrics are being measured. Such a decay of a common agenda further hollows out societal knowledge negotiation in that not only epistemic standards but also shared sets of topics erode. Then, tribalization along a lack of a common agenda can also be expected to diminish audiences' agreement on evaluated quality. If news outlets increasingly serve one's own audiences' expectations and epistemic standards while lacking a shared set of topics, it becomes more difficult for audiences to *exit*, thus inhibiting cross-media comparisons between versions coverage of current events. Instead, fragmented yet tribalized and loyal audiences might fall prey to journalistic lookalikes with potentially little-to-none professional standards as well as possibly little-to-none monitoring across and between outlets. These presumptions also find some support in recent empirical evidence from Germany. While findings from 2019 refer to a broad coherence between journalists' role perceptions and audiences' journalistic expectations (Loosen et al., 2020), data from 2020 suggests that for a smaller group of media skeptics, professional journalism lacks integrity and thus calls for alternatives (Prochazka

& Schweiger, 2020, pp. 201–205). Assignment of trust can also be used as a proxy to substantiate this change. System trust in professional journalism ("the press") has declined overall in many countries (Hanitzsch et al., 2018, pp. 11–13), while trust in alternative media has grown in part of the population, who at the same time distrust mainstream media (Fawzi et al., 2021, p. 163). This gap is widening over time (Andersen et al., 2021). Quandt (2012, p. 17) states that "networked trust" based on personal experience and authenticity is gaining importance in comparison to "institutionalized trust" which is founded on the application of professional rules. Ultimately, and given respective empirical findings, such a disintegration of societal knowledge negotiation via journalism and public discourse is likely apt to delegitimize also modern epistemic democracies' collective mode of knowledge negotiation.

While we drew our analysis on broad empirical insight, particularly the embracement of fragmented epistemic standards requires further research, for example through comparisons of epistemic standards across news outlets and between journalism and its audiences. Yet, as discussed, these developments have been paralleled by a degradation of some quality standards, particularly those peer-driven standards that have previously been observed and controlled between and across media organizations. Instead, these quality standards and the control thereof have become a distinguishing feature of and between news outlets and their audiences where justification for breaking with established norms and standards seemingly exists merely toward own audiences rather than the broader public. From this, it seems consequential that alternative versions of news and knowledge have emerged vis-à-vis a mainstream that is claimed to be "uncritical of the establishment" (Holt et al., 2019, p. 861). If the professional, peer-driven control of previously established epistemic standards about the mode of pursuing broadest possible acceptance has worn off, and if news outlets feel urged to justify their produce solely against their own audiences, then mis- and disinformation, conspiracy theories, reports embracing false balance, and epistemic tribalism only seem consequential (Lynch, 2016).

This epistemic pluralization and the emergence of particularistic standards in epistemic communities should be considered when examining why misinformation is believed (as an overview see Ecker et al., 2022). This is in spite of the impression that, at first glance, empirical findings on audience expectations of journalism contradict this assumption. Indeed, it turns out that the truth of reporting is the most widespread expectation in representative population surveys. However, the items are formulated so sweepingly ("inform citizens neutrally and precisely about events in politics and society," Fawzi & Mothes, 2020, p. 338; "report things as they are," Loosen et al., 2020, p. 1750; "get the facts right," Prochazka, 2020, p. 184) that they leave room for many different interpretations about what is meant by truth. The Worlds of Journalism Study of journalists from different media systems also shows a very high level of agreement on the monitorial role ("report things as they are," Hanitzsch et al., 2019, pp. 173–175). The epistemic crisis of the present should not be exaggerated because the social knowledge order is never fully integrated, but is composed of – more or less – "socially segregated sub-universes of meaning" (Berger & Luckmann, 1991, p. 102).

9. Headed toward a positive outcome?

At the same time, however, the perceived need of being accountable solely, yet thoroughly, to one's own audience might have easily increased the overall pressure to justify. More transparency in open-ended user feedback and public outlet reputation might have led to an environment where degradation of some quality standards yields a relocation of control instead of a lack of control. That is, today's intertwined media system between news outlets, audiences, and platforms (Chadwick, 2017), in the terminology of an epistemic understanding of democracies, requires a new mode for negotiating agreed-upon epistemic standards which is capable of justifying its outcomes simply because they emerged from this mode of negotiation. Yet, gaining legitimacy for a new knowledge verification process through a process that has seemingly lost some of its legitimate power is somewhat of a conundrum in itself. Inspiration in that regard could be drawn from Wikipedia which has been named a "fertile ground for applied epistemology" (Frost-Arnold, 2018, p. 37). The collaborative encyclopedia has equally been claimed to largely draw on process-driven legitimization where "the reason why people trust the content of Wikipedia is that they trust the processes of Wikipedia" (Simon, 2010, p. 348). Emerging challenges to Wikipedia's epistemic process (e.g., lack of diversity; Frost-Arnold, 2018), once they become apparent, are then usually negotiated at respective conferences to yield improved guidelines and foster future institutionalization.

Similar processes of institutionalizing standards had also been visible in journalism, manifested, for example, in co-orientation, codices, and curricula. Building on our analysis in this paper, though, new demands have emerged for the formation of institutions. That is, co-orientation, while traditionally arising from between-outlet observation, suffers from an increasing focus of news outlets on themselves, thus highlighting the need for more research on the mechanisms and dynamics on and across platforms (Buschow, 2020; Neuberger, 2022). Here, a meta-discourse on the preconditions of discursive clarification of divergent truth claims is necessary. Knowledge about epistemic standards resembles "second-order knowledge," which is usually taken for granted and "rarely becomes the subject of conscious reflection by its participants" (Renn, 2020, p. 152; see also Berger & Luckmann, 1991, pp. 110–115). As agreed-upon epistemic standards require a trusted process of negotiation, adequate places must be created and curated where mutual expectations between journalism and audiences can be rebalanced and formed. Journalism might thus take on a more active role in public discourse as a designer and moderator of such places. Emerging codices for the journalistic profession, then, need to take into consideration the changing dynamics of platforms, platform diffusion, and the emotional turn, that has arguably gained lots of traction from the audience's voice and the reciprocal dynamism between journalism and its audiences (Brosius et al., 2019; Lecheler, 2020; Wahl-Jorgensen, 2020). Subsequently, journalistic curricula will have to pay tribute to the changing circumstances and particularly the necessity to engage in the discourse toward a shared understanding of epistemic standards.

Put more broadly, while previous news environments have yielded institutions such as the norm of objectivity as a byproduct of its manageable landscape of competitors and the seemingly uniform relationship between journalism and an anonymous audience (Schudson, 2001), today's hybrid media system requires incentives to provoke a more explicit formation of institutions "that encourage the use of critical thinking and the civil exchange of reasons" (Lynch, 2016, pp. 60–61). Therefore, a more experimental approach seems fruitful, for example following John Dewey's (1927/2016) concept of 'experimental democracy' which resonates with a practical process of small steps to test new paths in building democratic institutions. As democracy requires both a basic consensus on institutional procedures and an openness to the diversity of views, at least four pathways seem suitable for today's trifold meshed setting of journalism, audiences, and platforms.

First, the discourse may profit from a more generative journalism research to build on. Therefore, however, adequate insights into the hybrid media system entail both methodological and theoretical challenges. Methodologically, computational approaches as well as more transparent data access into diffusion patterns, digital traces on platforms, and contextualized contents are necessary. Theoretically, then, incremental research must be integrated into larger explanatory contexts more frequently.

Second, the discourse may profit from a unification and standardization of audience metrics. Similar to ratings or circulation metrics, comparable units and measures may benefit between-outlet as well as cross-platform comparison. In thereby including not only media organizations and platforms but also the advertising industry, small steps in that direction would be equipped with the necessary assertiveness (Hwang, 2020).

Third, the discourse may profit from literacy, particularly on platforms and platform economics but also on algorithmic decision-making, on news as knowledge, and on media economics. Especially to audiences, an understanding of the communicative logics underlying modern societies' organization of knowledge seems inevitable to allow for modern and adequate means to contribute to journalism's quality estimation as well as societal knowledge negotiation. This includes that the audience knows journalistic epistemic standards and applies them themselves in individual acts of authentication (Schwarzenegger, 2020; Tandoc et al., 2018) or collectively in the form of online civic intervention (Porten-Cheé et al., 2020).

Fourth and finally, the discourse may profit from transparent norm monitoring and sanctioning. As traditional mutual observation among and between news outlets, such as media journalism, suffers from fragmentation in media use and the methodological shortcomings addressed above, independently and transparently monitoring how journalism keeps up with its professional norms and epistemic standards certainly depicts a gap in today's media ecosystem. Such monitoring institutions should also initiate and moderate the meta-discourse on creating and adapting epistemic standards for the digital public sphere.

Ultimately, these pathways are geared to strengthen the discourse on the institutional process of societal knowledge negotiation. By establishing mutual as well

as independent monitoring through transparent empirical data and by leveraging literacy among a wider public, proxies are served to re-install and/or re-justify social epistemology – the collective mode of knowledge negotiation and a core principle of an epistemic and output-oriented understanding of democracy.

References

Aitamurto, T. (2016). Crowdsourcing as a knowledge-search method in digital journalism. *Digital Journalism*, *4*(2), 280–297. https://doi.org/10.1080/21670811.2015.1034807

Andersen, K., Shehata, A., & Andersson, D. (2021). Alternative news orientation and trust in mainstream media: A longitudinal audience perspective. *Digital Journalism*. https://doi.org/10.1080/21670811.2021.1986412

Anderson, C. W. (2011). Between creative and quantified audiences: Web metrics and changing patterns of newswork in local US newsrooms. *Journalism*, *12*(5), 550–566. https://doi.org/10.1177/1464884911402451

Anderson, E. (2006). The epistemology of democracy. *Episteme: A Journal of Social Epistemology*, *3*(1), 8–22. https://doi.org/10.1353/epi.0.0000

Belair-Gagnon, V., Zamith, R., & Holton, A. E. (2020). Role orientations and audience metrics in newsrooms: An examination of journalistic perceptions and their drivers. *Digital Journalism*, *8*(3), 347–366. https://doi.org/10.1080/21670811.2019.1709521

Berger, P. L., & Luckmann, T. (1991). *The social construction of reality: A treatise in the sociology of knowledge* (Original work published 1966). Doubleday.

Brennan, J. (2018). Epistemic democracy. In D. Coady & J. Chase (Eds.), *The Routledge Handbook of Applied Epistemology* (pp. 88–100). Routledge. https://doi.org/10.4324/9781315679099-7

Brosius, H., Haim, M., & Weimann, G. (2019). Diffusion as a future perspective of agenda setting. *The Agenda Setting Journal*, *3*(2), 175–190. https://doi.org/10.1075/asj.18022.hai

Bruns, A. (2019). *Are filter bubbles real?* Polity.

Buschow, C. (2020). Practice-driven journalism research: Impulses for a dynamic understanding of journalism in the context of its reorganization. *Studies in Communication Sciences*, *20*(2), 227–241. https://doi.org/10.24434/j.scoms.2020.02.006

Butter, M. (2020). *The nature of conspiracy theories*. Polity.

Carlson, M., & Lewis, S. C. (Eds.). (2015). *Boundaries of journalism: Professionalism, practices and participation*. Routledge.

Chadwick, A. (2017). *The hybrid media system: Politics and power* (2nd ed.). University Press.

Chen, V. Y., & Pain, P. (2019). News on Facebook: How Facebook and newspapers build mutual brand loyalty through audience engagement. *Journalism & Mass Communication Quarterly, 98*(2), 366–386. https://doi.org/10.1177/1077699019876634

Coddington, M. (2019). *Aggregating the news: Secondhand knowledge and the erosion of journalistic authority*. Columbia University Press.

Coddington, M., Lewis, S. C., & Belair-Gagnon, V. (2021). The imagined audience for news: Where does a journalist's perception of the audience come from? *Journalism Studies, 22*(8), 1028–1046. https://doi.org/10.1080/1461670X.2021.1914709

Coe, K., Kenski, K., & Rains, S. A. (2014). Online and uncivil? Patterns and determinants of incivility in newspaper website comments. *Journal of Communication*, *64*(4), 658–679. https://doi.org/10.1111/jcom.12104

Craft, S., Vos, T. P., & Wolfgang, J. D. (2016). Reader comments as press criticism: Implications for the journalistic field. *Journalism*, *17*(6), 677–693. https://doi.org/10.1177/1464884915579332

Davies, W. (2016, August 24). The age of post-truth politics. *The New York Times*. https://www.nytimes.com/2016/08/24/opinion/campaign-stops/the-age-of-post-truth-politics.html

Dewey, J. (2016). *The public and its problems: An essay in political inquiry* (Original work published 1927). Swallow Press.

DiMaggio, P. J., & Powell, W. W. (1983). The iron cage revisited: Institutional isomorphism and collective rationality in organizational fields. *American Sociological Review*, *48*(2), 147–160. https://doi.org/10.2307/2095101

Donsbach, W. (2014). Journalism as the new knowledge profession and consequences for journalism education. *Journalism*, *15*(6), 661–677. https://doi.org/10.1177/1464884913491347

Ecker, U. K. H., Lewandowsky, S., Cook, J., Schmid, P., Fazio, L. K., Brashier, N., Kendeou, P., Vraga, E. K., & Amazeen, M. A. (2022). The psychological drivers of misinformation belief and its resistance to correction. *Nature Reviews Psychology*, *1*(1), 13–29. https://doi.org/10.1038/s44159-021-00006-y

Elswah, M., & Howard, P. N. (2020). "Anything that causes chaos": The organizational behavior of Russia Today (RT). *Journal of Communication*, *70*(5), 623–645. https://doi.org/10.1093/joc/jqaa027

Estlund, D. M. (2008). *Democratic authority: A philosophical framework*. Princeton University Press.

Fawzi, N., & Mothes, C. (2020). Perceptions of media performance: Expectation-evaluation discrepancies and their relationship with media-related and populist attitudes. *Media and Communication*, *8*(3), 335–347. https://doi.org/10.17645/mac.v8i3.3142

Fawzi, N., Steindl, N., Obermaier, M., Prochazka, F., Arlt, D., Blöbaum, B., Dohle, M., Engelke, K. M., Hanitzsch, T., Jackob, N., Jakobs, I., Klawier, T., Post, S., Reinemann, C., Schweiger, W., & Ziegele, M. (2021). Concepts, causes and consequences of trust in news media – a literature review and framework. *Annals of the International Communication Association*, *45*(2), 154–174. https://doi.org/10.1080/23808985.2021.1960181

Ferrer-Conill, R., & Tandoc, E. C. Jr. (2018). The audience-oriented editor. Making sense of the audience in the newsroom. *Digital Journalism*, *6*(4), 436–453. https://doi.org/10.1080/21670811.2018.1440972

Ferrucci, P., & Tandoc, E. C. Jr. (2015). A tale of two newsrooms: How market orientation influences web analytics use. In W. J. Gibbs & J. McKendrick (Eds.), *Contemporary Research Methods and Data Analytics in the News Industry* (pp. 58–76). IGI Global.

Figenschou, T. U., & Ihlebæk, K. A. (2019). Challenging journalistic authority. Media criticism in far-right alternative media. *Journalism Studies*, *20*(9), 1221–1237. https://doi.org/10.1080/1461670X.2018.1500868

Frost-Arnold, K. (2018). Wikipedia. In D. Coady & J. Chase (Eds.), *The Routledge Handbook of Applied Epistemology* (pp. 28–40). Routledge. https://doi.org/10.4324/9781315679099-7

Fürst, S. (2013). Öffentlichkeitsresonanz als Nachrichtenfaktor [Public resonance as a news factor]. *Medien-Journal*, *37*(2), 4–15.

Gans, H. J. (1979). *Deciding what's news: A study of CBS evening news, NBC nightly news, Newsweek, and Time*. Random House.

Godler, Y., & Reich, Z. (2017). News cultures or "epistemic cultures"? Theoretical considerations and empirical data from 62 countries. *Journalism Studies*, *18*(5), 666–681.

Godler, Y., Reich, Z., & Miller, B. (2020). Social epistemology as a new paradigm for journalism and media studies. *New Media & Society*, 22(2), 213–229. https://doi.org/10.1177/1461444819856922

Goldman, A. I. (1999). *Knowledge in a social world*. University Press.

Guriev, S., & Treisman, D. (2022). *Spin dictators: The changing face of tyranny in the 21st century*. University Press.

Haim, M. (2019). *Die Orientierung von Online-Journalismus an seinen Publika: Anforderung, Antizipation, Anspruch* [The orientation of online journalism toward its audiences: Demand, anticipation, claim]. Springer VS.

Haim, M., Kümpel, A. S., & Brosius, H.-B. (2018). Popularity cues in online media: A review of conceptualizations, operationalizations, and general effects. *Studies in Communication and Media*, 7(2), 186–207. https://doi.org/10.5771/2192-4007-2018-2-58

Hanitzsch, T., van Dalen, A., & Steindl, N. (2018). Caught in the nexus: A comparative and longitudinal analysis of public trust in the press. *The International Journal of Press/Politics*, *23*(1), 3–23. https://doi.org/10.1177/1940161217740695

Hanitzsch, T., Vos, T. P., Standaert, O., Hanusch, F., Hovden, J. F., Hermans, L., & Ramaprasad, J. (2019). Role orientations. Journalists' views on their place in society. In T. Hanitzsch, F. Hanusch, J. Ramaprasad, & A. S. De Beer (Eds.), *Worlds of journalism: Journalistic cultures around the globe* (pp. 161–197). Columbia University Press.

Harambam, J., & Aupers, S. (2021). From the unbelievable to the undeniable: Epistemological pluralism, or how conspiracy theorists legitimate their extraordinary truth claims. *European Journal of Cultural Studies*, *24*(4), 990–1008. https://doi.org/10.1177/1367549419886045

Helberger, N. (2019). On the democratic role of news recommenders. *Digital Journalism*, 7(8), 993–1012. https://doi.org/10.1080/21670811.2019.1623700

Herzog, L. (2020). The epistemic division of labour in markets: Knowledge, global trade and the preconditions of morally responsible agency. *Economics & Philosophy*, *36*(2), 266–286. https://doi.org/10.1017/S0266267119000130

Hirschman, A. O. (1970). *Exit, voice, and loyalty: Responses to decline in firms, organizations, and states*. Harvard University Press.

Holt, K., Figenschou, T. U., & Frischlich, L. (2019). Key dimensions of alternative news media. *Digital Journalism*, 7(7), 860–869. https://doi.org/10.1080/21670811.2019.1625715

Hwang, T. (2020). *Subprime attention crisis: Advertising and the time bomb at the heart of the internet*. Macmillan.

Iyengar, S., & Hahn, K. S. (2009). Red media, blue media: Evidence of ideological selectivity in media use. *Journal of Communication*, *59*(1), 19–39. https://doi.org/10.1111/j.1460-2466.2008.01402.x

Kakutani, M. (2018). *The death of truth*. Harper Collins Publ. UK.

Karidi, M. (2018). News media logic on the move? In search of commercial media logic in German news. *Journalism Studies*, *19*(9), 1237–1256. https://doi.org/10.1080/1461670X.2016.1266281

Karlsson, M. (2011). The immediacy of online news, the visibility of journalistic processes and a restructuring of journalistic authority. *Journalism*, *12*(3), 279–295. https://doi.org/10.1177/1464884910388223

Koliska, M., & Assmann, K. (2021). Lügenpresse: The lying press and German journalists' responses to a stigma. *Journalism*, *22*(11), 2729–2746. https://doi.org/10.1177/1464884919894088

Koliska, M., & Chadha, K. (2018). Transparency in German newsrooms: Diffusion of a new journalistic norm? *Journalism Studies*, *19*(16), 2400–2416. https://doi.org/10.1080/1461670X.2017.1349549

Kovach, B., & Rosenstiel, T. (2021). *The elements of journalism: What newspeople should know and the public should expect*. Crown.

Lecheler, S. (2020). The emotional turn in journalism needs to be about audience perceptions. *Digital Journalism*, 8(2), 287–291. https://doi.org/10.1080/21670811.2019.170 8766

Lee, E.-J., & Tandoc, E. C. Jr. (2017). When news meets the audience: How audience feedback online affects news production and consumption. *Human Communication Research*, 43(4), 436–449. https://doi.org/10.1111/hcre.12123

Litt, E. (2012). Knock, knock. Who's there? The imagined audience. *Journal of Broadcasting & Electronic Media*, 56(3), 330–345. https://doi.org/10.1080/08838151.2012.705195

Loosen, W., Reimer, J., & Hölig, S. (2020). What journalists want and what they ought to do. (In)congruences between journalists' role conceptions and audiences' expectations. *Journalism Studies*, 21(12), 1744–1774. https://doi.org/10.1080/1461670X.2020.1790026

Loosen, W., & Schmidt, J.-H. (2012). (Re-)Discovering the audience. *Information, Communication & Society*, 15(6), 867–887. https://doi.org/10.1080/1369118X.2012.665467

Lynch, M. P. (2016). *The internet of us: Knowing more and understanding less in the age of big data*. Liveright.

Mede, N. G., & Schäfer, M. S. (2020). Science-related populism: Conceptualizing populist demands toward science. *Public Understanding of Science*, 29(5), 473–491. https://doi.org/10.1177/0963662520924259

Nelson, J. L. (2021). *Imagined audiences: How journalists perceive and pursue the public*. Oxford University Press.

Neuberger, C. (2017). Journalistische Objektivität. Vorschlag für einen pragmatischen Theorierahmen [Journalistic objectivity. Proposal for a pragmatic theoretical framework]. *Medien & Kommunikationswissenschaft*, 65(2), 406–431. https://doi.org/10.5771/1615-634X-2017-2-406

Neuberger, C. (2022). Journalismus und Plattformen als vermittelnde Dritte in der digitalen Öffentlichkeit [Journalism and platforms as mediating third parties in the digital public sphere]. *Kölner Zeitschrift für Soziologie und Sozialpsychologie*, 74(Special Issue 62), 159–181. https://doi.org/10.1007/s11577-022-00832-9

Neuberger, C., Bartsch, A., Reinemann, C., Fröhlich, R., Hanitzsch, T., & Schindler, J. (2019). Der digitale Wandel der Wissensordnung. Theorierahmen für die Analyse von Wahrheit, Wissen und Rationalität in der öffentlichen Kommunikation [The digital transformation of the knowledge order. Theoretical framework for the analysis of truth, knowledge, and rationality in public communication]. *Medien & Kommunikationswissenschaft*, 67(2), 167–186. https://doi.org/10.5771/1615-634X-2019-2-167

Newman, N., Fletcher, R., Craig T., R., Eddy, K., & Nielsen, R. K. (2022). *Digital news report 2022*. Reuters Institute. https://reutersinstitute.politics.ox.ac.uk/sites/default/files/2022-06/Digital_News-Report_2022.pdf

Nieborg, D. B., & Poell, T. (2018). The platformization of cultural production: Theorizing the contingent cultural commodity. *New Media & Society*, 20(11), 4275–4292. https://doi.org/10.1177/1461444818769694

Pantenburg, J., Reichardt, S., & Sepp, B. (2021). Wissensparallelwelten der Querdenker [Parallel knowledge worlds of COVID-19 deniers]. In S. Reichardt (Ed.), *Die Misstrauensgemeinschaft der Querdenker. Die Corona-Proteste aus kultur- und sozialwissenschaftlicher Perspektive* (pp. 29–65). Campus.

Pluckrose, H., & Lindsay, J. (2020). *Cynical theories: How activist scholarship made everything about race, gender, and identity--and why this harms everybody*. Pitchstone.

Porten-Cheé, P., Kunst, M., & Emmer, M. (2020). Online civic intervention: A new form of political participation under conditions of a disruptive online discourse. *International Journal of Communication*, 14, 514-534.

Post, S. (2015). Scientific objectivity in journalism? How journalists and academics define objectivity, assess its attainability, and rate its desirability. *Journalism*, *16*(6), 730–749. https://doi.org/10.1177/1464884914541067

Prochazka, F. (2020). *Vertrauen in Journalismus unter Online-Bedingungen: Zum Einfluss von Personenmerkmalen, Qualitätswahrnehmungen und Nachrichtennutzung* [Trust in journalism under online conditions: On the influence of person characteristics, perceptions of quality, and news use]. Springer VS.

Prochazka, F., & Schweiger, W. (2020). Vertrauen in Journalismus in Deutschland: Eine Typologie der Skeptiker. [Trust into journalism in Germany: A typology of skeptics.] *Media Perspektiven*, *4*, 196–206.

Quandt, T. (2012). What's left of trust in a network society? An evolutionary model and critical discussion of trust and societal communication. *European Journal of Communication*, *27*(1), 7–21. https://doi.org/10.1177/0267323111434452

Renn, J. (2020). *The evolution of knowledge: Rethinking science for the anthropocene*. University Press.

Rosenfeld, S. (2018). *Democracy and truth: A short history*. University of Pennsylvania Press.

Ryfe, D. M. (2006a). The nature of news rules. *Political Communication*, *23*(2), 203–214. https://doi.org/10.1080/10584600600629810

Ryfe, D. M. (2006b). Guest editor's introduction: New institutionalism and the news. *Political Communication*, *23*(2), 135–144. https://doi.org/10.1080/10584600600728109

Schudson, M. (2001). The objectivity norm in American journalism. *Journalism*, *2*(2), 149–170. https://doi.org/10.1177/146488490100200201

Schwarzenegger, C. (2020). Personal epistemologies of the media: Selective criticality, pragmatic trust, and competence–confidence in navigating media repertoires in the digital age. *New Media & Society*, *22*(2), 361–377. https://doi.org/10.1177/1461444819856919

Simon, J. (2010). The entanglement of trust and knowledge on the Web. *Ethics and Information Technology*, *12*(4), 343–355. https://doi.org/10.1007/s10676-010-9243-5

Strömbäck, J., & Karlsson, M. (2011). Who's got the power? Journalists' perceptions of changing influences over the news. *Journalism Practice*, *5*(6), 643–656. https://doi.org/10.1080/17512786.2011.592348

Tandoc, E. C., Ling, R., Westlund, O., Duffy, A., Goh, D., & Zheng Wei, L. (2018). Audiences' acts of authentication in the age of fake news: A conceptual framework. *New Media & Society*, *20*(8), 2745–2763. https://doi.org/10.1177/1461444817731756

van Aelst, P., Strömbäck, J., Aalberg, T., Esser, F., de Vreese, C. H., Matthes, J., Hopmann, D., Salgado, S., Hubé, N., Stępińska, A., Papathanassopoulos, S., Berganza, R., Legnante, G., Reinemann, C., Sheafer, T., & Stanyer, J. (2017). Political communication in a high-choice media environment: A challenge for democracy? *Annals of the International Communication Association*, *41*(1), 3–27. https://doi.org/10.1080/23808985.2017.1288551

Vos, T. P., & Thomas, R. J. (2018). The discursive construction of journalistic authority in a post-truth age. *Journalism Studies*, *19*(13), 2001–2010. https://doi.org/10.1080/1461670X.2018.1492879

Wahl-Jorgensen, K. (2020). An emotional turn in journalism studies? *Digital Journalism*, *8*(2), 175–194. https://doi.org/10.1080/21670811.2019.1697626

Wendelin, M., Engelmann, I., & Neubarth, J. (2017). User rankings and journalistic news selection. Comparing news values and topics. *Journalism Studies*, *18*(2), 135–153. https://doi.org/10.1080/1461670X.2015.1040892

Wessler, H. (2018). *Habermas and the Media*. Polity.

Wilhelm, C., Stehle, H., & Detel, H. (2021). Digital visibility and the role of mutual interaction expectations: Reframing the journalist–audience relationship through the lens of interpersonal communication. *New Media & Society*, *23*(5), 1004–1021. https://doi.org/10.1177/1461444820907023

Zamith, R. (2018). Quantified audiences in news production. A synthesis and research agenda. *Digital Journalism*, *6*(4), 418–435. https://doi.org/10.1080/21670811.2018.1444999

Zerback, T., Koch, T., & Krämer, B. (2015). Thinking of others: Effects of implicit and explicit media cues on climate of opinion perceptions. *Journalism & Mass Communication Quarterly*, *92*(2), 421-443. https://doi.org/10.1177/1077699015574481