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EDITORIAL

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This special issue examines user comments as a specific type of interpersonal public online communication in which people are allowed to post comments below the content from professional communicators, such as journalists, politicians, companies, and service providers. Numerous studies have tracked the development of these "below the line" comments (Graham & Wright, 2015). However, due to diverse research foci, these studies are scattered across various disciplines and their subfields, and there is a danger that the discourse about user comments becomes fragmented – losing sight of the "big picture." This special issue therefore aims at both synthesizing and pushing forward the boundaries of interdisciplinary research on online user comments. To do this, the special issue contains articles from across different fields in communication research, each applying the theories and methods advanced in their research traditions. They are assembled here to provide not only solid literature reviews of these fields, but also a timely reading of empirical showcases. Bridges to other disciplines will be sketched over the course of this special issue. That said, this issue would not have been possible without the wide ranging, high-quality contributions of several authors researching in broad terms on the quality of comments, their effects, and their moderation. Likewise, we owe 18 national and international scholars who volunteered to serve as reviewers a tremendous "thank you;" they provided incredibly valuable thoughts and constructive feedback on the 10 submissions we received from all over the world. Finally, this special issue would not have been possible without the engagement of the many participants at our ICA preconference in San Diego (2016). We hope that both for national and international audiences, the results of many months of work was worth the wait.

In the following, we will give a brief – and certainly not comprehensive – summary overview of user comments research in the various subfields of the discipline; based on this review, we will discuss recent challenges to illustrate the diversity (and disparity) of the research on user comments, and present new avenues to introduce interdisciplinary perspectives and by that, the manifold topics addressed in the articles that will follow.

Challenge #1: Still there is much we do not know. Gaps in research on user comments

Commenting on online news articles is considered (one of) the most popular form(s) of public online participation (Graham & Wright, 2015; Reich, 2011; Springer, 2014; Weber, 2014; Ziegele, 2016). Thus, it is unsurprising that the field of *journalism studies* has produced numerous studies of how news organizations and journalists handle user comments. Scholars have explored the impact of user comments on journalists and news outlets, such as their work routines (e.g., Singer, 2010). Furthermore, recent studies investigated how journalists perceive, evaluate, manage, and moderate this feedback, such as the appreciation of helpful comments, and the regulation of detrimental, uncivil comments and hate speech (Domingo, 2008; Stroud, Scacco, Muddiman, & Curry, 2015; Ziegele & Jost, 2016). The essential volume by Jane Singer and colleagues (2011) provides an excellent (qualitative) overview of these issues. Still, there are areas requiring further research, particularly to understand the effects of uncivil comments, hate speech, and threats for the well-being and work motivation of journalists and community managers. Scholars have just recently started to dig into this area (Löfgren Nilsson & Örnebring, 2016; Preuß, Tetzlaff, & Zick 2016), highlighting that uncivil comments are a threat to the voices of, for example, women and minorities (Chen et al., forthcoming; Edström 2016; Gardiner et al. 2016). It might further be assumed that (especially continuous) threats impact the creativity and productivity of journalists and community managers, and the wish for minorities to get publicly engaged in the journalistic workforce. Research in these areas would not only contribute to the body of knowledge in journalism studies or to race, gender, and LGBT studies, but also to (social) psychology – e.g., by applying concepts of coping strategies as an analytical framework. Such a research endeavor would also be solution-oriented, making relevant knowledge readily available for the implementation into the curricula of academic journalism programs (Chen et al., forthcoming).

An equally important challenge for journalism studies, but also for research on user comments in other contexts, is to assess how (media) organizations can leverage comments to their economic and journalistic advantage. Some media effects research has shown that comments might damage readers' perceptions of core competencies of (media) organizations and their products (e.g., Prochazka, Weber, & Schweiger, 2016; Ziegele, 2016), and that many editors see only little journalistic value in comments (Domingo, 2008). However, more "constructive" approaches are needed, such as how comments can increase reader or consumer loyalty; how (media) organizations can use their commenting community as a competitive advantage; and how constructive comments can be identified and implemented in news reporting. In short, suggesting ways how to make "sense of user comments," as suggested by *Wiebke Loosen*, *Marlo Häring*, *Zijad Kurtanović*, *Lisa Merten*, *Julius Reimer*, *Lies van Roessel*, and *Walid Maalej* in this special issue, is a crucial task for research.

Political communication scholars often conceptualize user comments as civic engagement, political participation, and/or as acts of deliberation (Friess & Eilders,

2015; Manosevitch & Walker, 2009; Ruiz et al., 2011; Stroud et al., 2015). By exploring boundary conditions for such deliberative exchanges on a macro-level (i.e., the social and legal frame), meso-level (i.e., platform designs and registration requirements), and micro-level (i.e., skills, traits, characteristics, and motives of individual users), they found several important predictors for the quantity/number and quality/content of user comments per news article (e.g., Friess & Eilders, 2015; Ksiazek, 2016; Springer, 2014; Weber, 2014; Ziegele, 2016). Studies also aimed to understand the contributions of user comments to viewpoint diversity in online news or public discourses (Baden & Springer, 2014; Toepfl & Piwoni, 2014). In this context, user comments have recently been understood as a tool to create "counterpublics" (Toepfl & Piwoni, 2014), which attempt to "level off" journalistic slants, advocating partisan views that oppose perceived "mainstream" or "biased" news reporting. Still, we know little about the politics-related outcomes of writing and reading user comments: Do political leaders, for example, receive viewpoints or issues voiced in user comments, and do they take these into account? When and why does the "public opinion" aggregated from comment sections differ from the results of traditional public opinion polls? Can user commentary enhance the knowledge, tolerance, or the "offline" political engagement of readers and writers (for qualitative assessments, see Springer, 2014; Ziegele, 2016)?

Further, research on the dynamics of user comments is still underdeveloped: Do we see strategic, and concerted (protest-like) action "below the line?" How widespread and how influential are so-called social bots in user discussions? How do civil discussions evolve and when and why do they digress into uncivil and heated verbal exchanges? Besides additional empirical research, there is also a great need for theory building in this realm: Stemming from the constantly echoed and rather pessimistic findings regarding the deliberative quality of user comments (see, for an overview, the article by *Lara Brückner* and *Wolfgang Schweiger* in this special issue), new theoretical approaches regarding user participation via comments are necessary that go beyond the "demanding" conceptualizations of deliberation, and take the often sloppy style of these swift feedbacks into account. Recent conceptualizations of user discussions as everyday conversations or from a liberal individualist and communitarian perspective take a step forward here (e.g., Freelon, 2010; Wright, 2012). Useful ideas could, however, not only be borrowed from political science, but also from cultural and language studies: Following Hall's conceptualization of reception modes, user comments can be understood as 'oppositional reading' (Hall, 2006, p. 173); based on this theoretical thinking, qualitative content analyses could investigate the audience's discursive appropriation of media content and how articles and comment characteristics interact over the course of a discussion. Further, such a study could disclose the commenters' (social) identity and value construction in their everyday language, along with the creative language codes commenters apply (e.g., to signal attachment to the community or to avoid detection by automated moderation tools). Yet, our knowledge of discussion structures and dynamics, for example, in terms of thread analyses, is still rare. In this realm, (relational) content analyses applying social network analyses could help to understand strategic (inter-)action over time.

Relatedly, too few research has been conducted on the dynamics of commenting communities. Why do some communities evolve into civil and discursive "communities of debate" (Ruiz et al., 2011) while others conduct a unilateral and often uncivil "dialogue of the deaf" (Ruiz et al., 2011)? Different audiences, different news presentation styles, and different "discourse architectures" certainly play a role (see *Brückner & Schweiger*, this issue), but comment research could also profit from considering sociological or psychological conceptions of "community building" to learn about the processes that shape homogeneity or heterogeneity among users, and the degree of respectfulness of their communication (Wright et al., 2016). This also includes research on how users respond when commenters violate communicative policies. In this realm, *Anja Kalch's* and *Teresa Naab's* study in this special issue undertakes important efforts to enhance our understanding of norm enforcements and conflict management strategies, an area we still know relatively little about.

Finally, on a macro level, the study of commenting cultures is still underdeveloped. International comparisons, in particular, are still scarce (Ruiz et al., 2011) but highly relevant, since literature reviews often implicitly assume that commenting behavior or outcomes are somehow culture-independent. However, it is highly plausible that this is not the case, and to assume that different understandings of freedom of speech, different journalistic cultures, or varying degrees of technological affinity, and privacy concerns among internet users will result in different community structures or comment qualities.

Media effects researchers are concerned with the impact of comments on users' perceptions, attitudes, emotions, and behavior. In the marketing context, researchers have investigated the effects of user-generated product reviews on perceived information usefulness, attitudes towards the products and services reviewed, review credibility, and purchase intention (Cheung & Thadani, 2012). In the domain of user comments on journalistic news, recent studies have concentrated on the harmful effects of rude and uncivil comments. According to these studies, such comments can undermine democratic values and lead to attitude polarization (Anderson et al., 2014). Moreover, they increase aggressive cognitions and stereotypical attitudes among their readers, and have a negative impact on the perceived news quality of established news media (Hsueh, Yogeeswaran, & Malinen, 2015; Prochazka, Weber, & Schweiger, 2016). Winter (2013) additionally showed that user comments disagreeing with a news article decreased the persuasiveness of the article when the comments contained relevant arguments. Further, user comments can affect the perceived public opinion (Lee & Jang, 2010), and, as a consequence, silence other users due to their fear of isolation (Soffer & Gordoni, 2017). In the long run, uncivil discussions can prevent users from writing comments and lead news organizations shut down their comment sections (Stroud et al., 2016, Ziegele, 2016). Other studies, in contrast, have shown that incivility in single user discussions can also stimulate participation of subsequent users (Borah, 2014; Ziegele, Breiner, & Quiring, 2014). Based on this assessment, there are at least five current challenges for media effects research: 1) Disentangling the construct of incivility in online discussions, 2) long term studies of the effects of user comments, 3) investigating "positive" effects of comments, 4) ana-

lyzing interactions between professionally produced content, user-produced comments, and the design of platforms, 5) analyzing when and how journalists and other elite actors participate in comment spaces, and how this impacts both their work, and the debates themselves.

Regarding the first challenge, incivility is a "notoriously difficult term to define" (Coe, Kenski, & Rains, 2014, p. 660) because what is civil and uncivil lies very much "in the eye of the beholder" (Herbst, 2010, p. 3). In general, uncivil behavior is seen as the expression of disagreement by denying and disrespecting the justice of the opposing views (Hwang, Kim, & Kim, 2016). Examples from user comments include the use of derogatory language, prejudices against social groups, and verbal aggression and harassment (Blom, Carpenter, Bowe, & Lange, 2014; Coe et al., 2014; Gervais, 2014). Research has also acknowledged that there are different severities of incivility that may have different effects on their audiences. Some forms have been described as relatively 'mild,' such as rudeness or name-calling (Coe et al., 2014). Other forms, such as racist language, stereotypes, and hate speech, are more harmful (Papacharissi, 2004). Some scholars also distinguish between impoliteness on the one hand and incivility on the other hand (Papacharissi, 2004). However, much media effects research does not sufficiently consider these different degrees of incivility. *Teresa Naab* and *Anja Kalch* address this research gap in this special issue. The findings of their experiment show that users respond differently depending on whether they encounter impolite or uncivil comments. Future theory building should address the underlying mechanisms of these different responses.

Second, most effects of user comments are measured immediately after exposing recipients to the communication. To attest user comments a lasting (detrimental) impact on peoples' perceptions, attitudes, and behavior, longitudinal studies are necessary. Here, we also need new or additional theoretical approaches to predict these longitudinal effects. A recent study takes a first step in this direction (Heinbach, Ziegele, & Quiring, 2017): Based on the sleeper effect hypothesis, it shows that the negative effects of user comments on recipients' attitudes are quite volatile and ephemeral compared to the longer-lasting persuasive impact of a journalistic article. While these results suggest that the journalistic and social concern regarding the detrimental effects of user comments might be overrated sometimes, more research is needed to corroborate this assumption.

Third, few studies have investigated "positive" effects of user comments on readers' knowledge, attitudes, and behaviors. It is still largely unknown what users expect from "good" comments – and from good journalistic moderation/participation in comment sections as well – and how these comments and moderation could contribute to an increase in users' knowledge or democratic participation, for example. Here, media effects research could profit from looking at traditional research on interpersonal conversations about the news (e.g., Weaver, Zhu, & Willnat, 1992) and at research on electronic-word-of-mouth, which has identified factors that increase the helpfulness of user-generated reviews (e.g., Willemsen, Neijens, Bronner, & de Ridder, 2011).

Fourth, we know little about the relative influences of user-generated content, professionally-generated content, and the design of the platforms on which the

user-generated content is posted, as well as about the interactions between these factors. A recent study showed that some user comments have a stronger impact on users' willingness to join the discussions than the corresponding news articles, and that constructive comments increase users' involvement with the corresponding news article (Ziegele, Weber, Quiring, & Breiner, 2017). The investigation by *Anne Reinhardt*, *Winja Weber*, and *Constanze Rossmann* in this special issue demonstrates that users' evaluation of a doctor is statistically moderated by the design of aggregated user reviews (base-rate information) and the valence of this base-rate information. Another study showed that user comments on a prestigious article source have a stronger impact on the article's persuasiveness compared to a source with a lower reputation (Winter, 2013). Yet, overall, research comparing various types of influences on readers' cognitions, affects, and behavior is still scarce. To gain a comprehensive picture of possible interactions and to derive hypotheses, such complex investigations might profit from using a combination of both qualitative and quantitative approaches.

Finally, little is known about the extent to which journalists participate in comment spaces, and how this impacts both participants' behavior and their own journalistic practice. Research has suggested that such journalistic participation could positively impact debates (Stroud et al., 2015). Similarly, little is known about how audiences perceive journalists' participation in comment spaces. The general view has seen interactivity as a myth (Domingo, 2008) or at least limited (Singer et al., 2011), though some journalists do actively participate (Santana, 2010; Graham & Wright, 2015).

Regarding *methods for investigating user comments,* we received manuscripts for this special issue that investigated comments using qualitative, quantitative, and computational methods. We would have loved to include all of these different methodological approaches into this issue, but due to space restrictions, some submissions had to be passed on to the next issues of the journal. Notwithstanding the above, methodological diversity is urgently needed in the field of user comment research because different methods are differently suitable to answer particular research questions. For example, an analysis of the dynamics of discussion threads can certainly profit from applying a qualitative content analysis, while an investigation of social interaction networks between commenters might better use computational methods. With the rise of the latter, communication scholars should also work together with computer scientists to leverage the benefits of automated content analysis and machine learning. Computer scientists, in contrast, might profit from communication scholars' experience with manual content analysis and from the diversity of theoretical approaches that are available for the analysis of these online discussions. In any case, a combination of qualitative, quantitative, and computational methods can help overcoming the restrictions of current investigations such as, for example, small sample sizes, limitation to few media outlets, and snapshots of the first few user comments per thread. The research by *Wiebke Loosen and colleagues* in this special issue is an excellent example of such interdisciplinary and multi-methodological research.

Equally important are meta-analyses of user comments. In the realm of marketing research, such analyses exist for the impact of electronic-word-of-mouth

(e.g., Cheung & Thadani, 2012), but with the continuously growing media effects studies, research on user comments on news would profit from such an analysis as well. Finally, we need to think about establishing standard measures for concepts related to user comments. This is particularly important for comparative studies on the frequency of comment writing and reading (see also the following section), on the uses and gratifications of these activities, and for political communication research on the (deliberative) quality of user comments. Regarding the latter, current studies vary heavily regarding their measurement of central deliberative concepts, such as interactivity, inclusiveness, equality, and the number and character of quality criteria used to evaluate user comments (Ziegele, 2016).

Challenge #2: Even if we know things, it's tough to compare them. About the application of manifold terms, concepts, and measurements

Although research on user comments has grown significantly over the past decade, searching for the appropriate academic literature can still be quite painful. This is partly because researchers use different terms when writing about user comments, depending on the subfields and thus the discourses they are part of. For instance, the terms "user-generated-content" (Bergström & Wadbring, 2014; Ruiz et al., 2011) and "human interactivity" (Boczkowski & Mitchelstein, 2012) represent rather generic, analytical terms to describe the unit of analysis or the process under investigation; these find application in many contexts of digital communication studies. Journalism studies scholars would typically refer to concepts such as "participatory journalism" (Bowman & Willis, 2003; Domingo, 2008; Reich, 2011), "citizen journalism" (Goode, 2009), or "annotative reporting" (Springer, Engelmann, & Pfaffinger, 2015) to contextualize comments. Political communication scholars in particular embed user commentary in the concepts of "public discussions" (Coe et al., 2014), "online deliberation" (Rowe, 2015), "online debates" (Graham & Wright, 2015), "user participation" (Weber, 2014), or "public opinion" (Lee & Jang, 2010). In these fields, and this is certainly because scholars often travel between these three, an increasing number of researchers defines comments on journalistic coverage as "media-stimulated interpersonal communication" (Ziegele et al., 2014) or "conversations among the users" (Hermida, 2011; Marchionni, 2014) because in many respects, they resemble informal "offline" conversations about the news (e.g., Ziegele, 2016). This particularly applies to comments on social network sites (Rowe, 2015). Additionally, in the realm of marketing research, user commentary in general is conceptualized as "electronic Word-of-Mouth" (eWoM), and we frequently find the term "review" used to define the specific unit of analysis (Cheung & Thadani, 2012; Willemsen et al., 2011). This term is also well-established in health communication (see *Reinhardt, Weber, & Rossmann*, this issue).

Additionally, we find different conceptualizations for the meaning of "interactivity," since this term can either refer to media interactivity, human-to-media interactivity or human-to-human-interactivity (Quiring & Schweiger, 2008). In the course of the study of user comment threads, dynamics, and user motivations, the

term became quite a synonym for human-to-human interactivity, that is, for users referring to other users. However, from the perspectives of cultural studies scholars (who emphasize that meaning emerges from the interaction between a message and its reader), content analysts, computer scientists, and political or marketing communication scholars, "interactivity" can likewise refer to the two other types of interactivity. Thus, it remains important to clearly define and conceptualize the way in which the term "interactivity" is applied in a specific context of study.

Another challenge for comparative research is to assess the share and frequency users would comment on news. For example, the 2017 Reuters Institute Digital News Report (Newman, Fletcher, Kalogeropoulos, Levy, & Nielsen, 2017) provides international and comprehensive data on online news participation and commenting. The share of online users writing comments at least once a week varies between 6 percent in Japan and 28 percent in Spain. According to this report, 10 percent of German online users and 22 percent of U.S. online users write comments at least once a week. However, it is usually tough to compare shares reported in one publication with the shares reported in another one (e.g., Bergström, 2008; Schultz, Jackob, Ziegele, Quiring, & Schemer, 2017; Stroud, van Duyn, & Peacock, 2016), since the measurements of frequencies but also the scopes of these studies differ: Some researchers ask for commenting on news in general and include both commenting on the news sites and on the news outlets' Facebook pages, whereas other studies only refer to one of these two types. The Reuters data, for instance, only cover frequent commenters (at least once a week) and users who write comments via social media. Thus, the report cannot answer how many users write comments less frequently, how many users comment on the websites of news media organizations, and whether these users differ from the Facebook commenters in regards to central characteristics such as gender, age, or attitudes. Ultimately, the report does not cover the "listeners" (or "lurkers"), i.e., users who read but do not write comments. In Germany, we conducted a representative online survey, which can fill these gaps on a national level (Ziegele, Weber, & Köhler, forthcoming). It shows the following:

- On the websites of established news media, 23 percent of German online users write comments at least once a month (12 percent at least once a week). 25 percent post comments to the Facebook sites of such established media outlets at least once a month (13 percent at least once a week).[1]
- 42 percent (41 percent) of German online users read comments of other users on the websites (Facebook sites) of established news media at least once a week.

Interestingly, regression analyses on these data show that the same factors predict users' commenting behavior both on Facebook and on the websites of established news media: lower education, frequent internet use, political interest, and a sym-

1 These percentages are quite similar to the findings of a recent and representative CATI-survey in fall 2016, which was conducted by a team of researchers from Mainz. This study revealed that 19 percent (20 percent) of German online users write comments at least seldom on the websites (Facebook sites) of established news media (Schultz, Jackob, Ziegele, Quiring, & Schemer 2017).

pathy for the right-wing populist party "Alternative für Deutschland" are the drivers of frequent comment-writing (Table 1). Such comparisons should also be conducted on an international level, because they can help researchers using content analyses to compare the qualities of user discussions on Facebook and on the websites of established media (Rowe, 2015; Esau, Friess, & Eilders, 2017; *Brückner & Schweiger*, this issue) to assess whether different platform designs or different audiences are responsible for different discussion qualites.

Table 1. Regression of commenting frequencies on sociodemographics and political attitudes of users

	Commenting frequency on the websites of established media	Commenting frequency on the Facebook sites of established media
	β	β
Gender	-.03	-.06
Age	-.02	.06
Education	-.09*	-.13**
Satisfaction with democracy	-.06	.01
Political interest	.20***	.25***
Party affiliation: CDU/CSU	.07	.01
Party affiliation: SPD	.02	-.04
Party affiliation: Grüne	-.04	.05
Party affiliation: FDP	-.01	.02
Party affiliation: Die Linke	.06	.05
Party affiliation: AfD	.14***	.12**
Frequency of internet use	.10**	.09*
R^2	.09	.11
n	914	704

Besides the individual characteristics and attitudes of comment-writing users, research has also investigated the uses and gratifications of comment reading and writing – both in a news media context (Springer 2014; Springer et al., 2015; Diakopoulos & Naaman, 2011; Stroud et al., 2016) as well as for comments on products and services (e.g., Hennig-Thurau, Gwinner, Walsh, & Gremler, 2004). While some of the main motivations for commenting on the news are expressing emotions or opinions, correcting errors, taking part in the debate, and sharing experiences (Springer et al., 2015; Stroud et al., 2016), product-related commenting behavior is particularly driven by self-enhancement, social or economic benefits, and advice seeking (Hennig-Thurau et al., 2004). Still, as the two research directions tend to use different scales to measure user motivations, we do not know whether there are some basic motivations that thrive opinion articulation in general. Here, research could definitely profit from an interdisciplinary exchange.

These challenges also apply when comparing the different studies from the domains of journalism, political communication, and media effects research described in the previous section. Most of these studies use their specific scales, terms, and

methods. In the end, we certainly do not want to propose unifying terms or definitional contexts for comments or measurements here, because each of the discussed concepts, terms, and measurements focuses on specific aspects of comments (as a unit of analysis) or commentary (as a phenomenon) that justify their use. This is also the reason why the authors of the articles in this special issue use various terms and concepts when writing about comments as well. As social scientists, we often find ourselves in between the wish to unify and standardize and the appreciation of diversity as a desirable state of mutual respect and a driving force behind creativity and development. Thus, the key is, as always, to raise awareness of the multifaceted theoretical and conceptual approaches that can help scholars conduct more comprehensive literature reviews or meta-analyses of user comments.

Challenge #3: Commenting is a social phenomenon. Thus, we have to accept that things can change

User comments are, like all social phenomena, shaped by manifold contextual factors on the micro, meso, and macro level, which can change over time. Regarding the micro level and based on the latest dataset reported above, we make a bold assumption: Despite their ambivalent image, user participation in comment sections has become more frequent and diverse in (western) societies over the last years. We are concluding this since neither gender nor age were significant predictors of commenting frequency in the regression analyses reported above. Earlier research on user comments on news (usually excluding Facebook as a channel) tended to conclude that commenters are either younger (Bergström, 2008) or older (Ziegele et al., 2013) than the average internet user and that males would write comments significantly more often than females (Stroud et al., 2016; Ziegele et al., 2013). Additionally, our data shows that 37 percent of the German internet users now participate in either commenting on websites or on Facebook sites at least occasionally, which we perceive as a quite high share compared to earlier studies. Still, these developments do not necessarily mean that comment sections have become inclusive and equal spaces; on the one hand, we now see an "education gap" in our data, suggesting that higher educated individuals are less likely to join the online debates. Earlier research, in contrast, reported that particularly higher educated individuals would be more likely to discuss in comment sections (Bergström, 2008; Ziegele et al., 2013). This apparent change may be due to the often uncivil and hostile discussion atmosphere reported in many studies (e.g., Coe et al., 2014). Alternatively, this development could be the result of the wider access to broadband Internet services over the last years, which could have empowered people from lower social strata to raise their voice in online discussions. On the other hand, even in our data, we still have a small core of "heavy users" who write comments each day (4.6 percent on Facebook and 3.8 percent on the websites). From a deliberative perspective, these users can threaten discursive equality and discourage "new" users from participating, although research has also outlined the positive roles of such "super participants" (Graham & Wright, 2014). In any case, it appears important to monitor these changes in participation

structures carefully to unveil whether the public spheres on news media sites really become more inclusive and equal over time.

On a meso level, we see changes as well: Due to limited capacities or general disappointment with comments, some news organizations recently shut down their comment sections or limited the possibility to write comments to selected topics (Thurman, Cornia, & Kunert, 2016; Reich, 2011). Facebook started as a platform for maintaining existing and establishing social relationships but – along with Twitter for some audiences – quickly developed into one of the most popular platforms for public discussions. As a consequence, research slowly moves from analyzing public discussions on the websites of news media organizations to social media platforms, and finds significant differences regarding the structure and processes of the discussions between the two (e.g., Rowe, 2015). Additionally, platforms such as Facebook constantly roll out new features (such as the recent Reactions buttons), which likely affect how users (inter-)act in discussions. Finally, instructed writers as well as new "technological" players such as social bots have begun to shift the balance of power in online discussions. All these developments are relevant for the scientific study of user discussions. Certainly, in the future, new platforms for public discussion will arise as well, which is why it is even more important for research to identify the basic social phenomena behind these discussions and theorize the complex role of technology in this process.

On a macro level, user discussions and user participation in general will likely continue to develop dynamically due to political action and social/technological change. For example, online hate speech has intensified the public debates about the limits of free speech online worldwide. While authors such as Timothy Garton Ash demand a maximum of free speech, self-regulation, and "robust civility" (Garton Ash, 2016), the German government prefers legislative action and has adopted the Network Enforcement Act ("Netzwerkdurchsetzungsgesetz"), which requires providers of social network sites to delete potentially harmful user contributions within a determined time frame. Regarding technological changes, we see global players such as Google or Mozilla developing new algorithms to automatically detect and remove offensive language and "toxic" comments (e.g., https://www.perspectiveapi.com). Finally, social issues such as misinformation in comment sections and so-called "astroturfing" (i.e., simulation of a grassroots movement) are underexplored issues. We cannot yet predict how such transformations will change user commentary. Still, we can be quite certain that the comment sections we will analyze in a few years will likely not be the same as today.

The special issue

This review of existing studies aimed to spark new research initiatives by identifying gaps in knowledge, and new potential research directions. This is only possible because we build on a rich body of knowledge provided by many scholars in different fields from all over the world. User comments research came a long way, and it will certainly move on from here in many different directions, hopefully helping to understand how to foster thoughtful, creative, and helpful environments in various facets. As we already have described in the previous sections, the

contributions in this special issue are a step forward in pursuing this larger research agenda carved out above. They represent, broadly speaking, the fields of journalism studies (*Wiebke Loosen and colleagues*), political communication and deliberation (*Lara Brückner & Wolfgang Schweiger*), media effects research (*Anja Kalch & Teresa Naab*), as well as health communication (*Anne Reinhardt and colleagues*). Collected in this very issue, these studies exhibit the state of the art in these fields, and make present the diversity of the field of user comments research.

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