

EMPIRICAL RESEARCH ON HUMILITY IN NEWS COMMENTS

A literature review for the Scholio project

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This literature review summarises empirical findings in social science research on user participation on commenting sections on news websites. In particular, it addresses the question: to what extent do interactive online media environments realise humility in democratic discourse. To provide an understanding of the phenomenon, it begins by summarising descriptive research on discussion quality and humble democratic engagement on digital news platforms. It thus answers the question: How civil or uncivil are discussions on news comment sections? To further elaborate the issue, it then moves on to investigate discussion quality as independent variable and asks how humility or a lack thereof affects the perception of media quality and the willingness of users to participate. In the next step, research on discussion quality as dependent variable is summarised to understand how civility in online discussions is affected by factors like anonymity, moderation, and other structural settings of news commenting sites. The significance of these design features draws attention to the importance of the visual discourse architecture. Thus, the last step of this literature review summarises findings on the effects of visual discourse representation through online mapping tools and their potential for increasing humility in democratic discourse.

Empirical research on humility in democratic discourse uses different terms such as *discussion quality*, *deliberativeness*, *politeness*, *respect*, and *civility* as positive and *incivility*, *hostility*, *impoliteness*, and *flaming* as negative concepts. While each term has somewhat different implications, there is nevertheless a significant overlap. Operationalisations of these terms diverge to a certain degree, but mostly focus on reason giving, sharing opinions and information, citing facts and sources, staying on topic, interactivity (responsiveness), and length and number of contributions as indicators of high discussion quality and use of swear words, personal insults, verbal attacks, all capital letters (indicating shouting), typos, and poor punctuation as indicators of poor discussion quality. Quantitative studies consistently show that a vast majority of users' online comments are civil and polite. Studies are consistent in reporting higher levels of civility compared to incivility: Collins and Nerlich (2015) report that 3.1 percent of comments were removed by moderators due to incivility on a news site; Wilcox & Lutton (2015) find only 5% of comments to be uncivil; Ksiazek et al. (2015) find 2.07% of

comments to be hostile; Papacharissi (2004) finds 14% of comments to be uncivil and 22% to be impolite; Rowe (2015a) finds 2.7% of comments to be uncivil and 32.4% impolite; Strandberg and Berg (2013) find 1.3% uncivil and 14.7% impolite comments; and Coe et al. (2014) find 22% of comments to be uncivil. Vulgar language is rather scarce: less than 1% of comments contain “dirty language” (Ruiz et al. 2011), 5% are vulgar (Papacharissi 2004), 9% express insult or disdain (Diaz Noci et al. 2012), 14% include name-calling (Coe et al. 2014), and 10% attack politicians and the media (Ruiz et al. 2011). Consistent findings report that a high proportion of comments stay on topic: 81.8% (Diaz Noci et al. 2012), 84.6% (Ruiz et al. 2011), 86.3% (Strandberg & Berg 2013), 87.4% (Collins & Nerlich 2015), and 96% (Graham & Wright 2015). Graham and Wright (2015) find that 47% of comments are reasoned and provide clear arguments, 25% cite external sources to support their argument, while 20% consist of mere assertion. In comparison Strandberg and Berg (2013) find 70% of comments to be reasoned and 12% cite external sources. Findings regarding interactivity vary greatly. Different studies report 0% (Diaz Noci et al. 2012), 11.4% (Ruiz et al. 2011), 23.59% (Wilcox & Lutton 2015), 37.6% (Strandberg & Berg 2013), 47% (Graham & Wright 2015), and 70.3% (Collins & Nerlich 2015) of comments reacting to other comments. This large variance can be explained by different coding schemes and different case specific factors like platform design and type of newspaper.

From a quantitative perspective incivility and low discussion quality is, thus, a rather small problem. The qualitative perception of this problem by both users on the one hand and journalists and editors on the other is different, however. On a scale from 1 to 7 users gave an average of 5.19 to the statement that some of the comments on a news site are offensive and 12 out of 15 reporters voice fundamental concern about discussion quality (Diakopoulos & Naaman 2011). Other studies suggest that even if the quantitative share of incivility is low the high qualitative perception of incivility leads to a depreciation of overall discussion quality. Studies show that uncivil user comments decrease other participants’ open mindedness and increase issue certainty, thus making it less likely for them to change their opinion (Borah 2014, also cf. Anderson et al. 2014). Uncivil discussants are perceived as dominant and not credible (Graf et al. 2017; Ng & Detenber 2004). And in some cases, users do not differentiate between the news article and the following user comments: articles followed by a partisan user discussion are perceived as more partisan and biased (Houston et al. 2011). And articles followed by comments opposing the opinion of the reader are perceived as more biased (Lee 2012). On the other hand, however, hostility and incivility appears to have positive effects as well: most studies show that uncivil or hostile comments spark more interest and lead to more interactivity and willingness to participate (Borah 2014; Ksiazek et al. 2015; Ziegele et al. 2014). Other studies show that perception of journalistic quality does not decrease through uncivil comments (Prochazka et al. 2016). Moreover, users do not emulate uncivil behaviour in discussions and the quality of their comments does not decrease after being exposed to uncivil comments (Han & Brazeal 2015).

To solve problems of incivility, several studies explore how levels of civility are affected by other factors, such as structural settings on news comments sites (Zamith & Lewis 2014). Most journalists asked for the reason for incivility point to anonymity (Erjavec & Poler Kovačič 2013). This perception is also reflected in a high number of studies addressing anonymity. These studies find that anonymity, indeed, significantly harms discussion

quality and civility (Cho & Acquisti 2013; Cho & Kwon 2015; Ksiazek 2015). The study of Santana (2014) for example finds that 53% of anonymous comments are civil, while this is only the case for 28.7% of non-anonymous comments. Simultaneously, however, willingness to participate decreases severely (90%) with the introduction of clear name regulations (Fredheim et al. 2015). Moreover, interviews with users show high support for anonymity: 39.3% of users would not be willing to post under a clear name requirement (Diakopoulos & Naaman 2011). In terms of solutions, evidently prohibiting anonymity can lead to improved discussion quality. Some studies show, however, that registration via social media like Facebook – an option practiced by many online news sites – appears to be not an ideal solution as news discussions on Facebook under (mostly) real names exhibit less discussion quality compared with discussions on newspaper homepages that allow for anonymity (Hille & Bakker 2014; Rowe 2015). The best solution appears to be on-site registration on news comment sites. Clear results indicate discussion quality to improve under moderation – which mostly consists in deleting uncivil comments – and reputation management systems that award badges to frequent civil contributors and allow users to like and rank each others' comments (Ksiazek 2015; Lampe 2014). However, both moderation and reputation management have their downsides as well. Studies show that uncivil behaviour of individual posters worsens over time in reaction to moderation, down-voting of comments, and negative responses by other users (Cheng et al. 2015). Unlike the approaches discouraging uncivil behaviour through required identification, moderation, and peer ranking, other studies focus on encouraging civil behaviour. Stroud et al. (2015) find a positive effect on civility by the engagement of news organisation representatives with the posters. Moreover, cognitive cues seem to have a crucial effect: In an experiment, discussions in an online forum with banners promoting diversity of opinion and staying true to oneself exhibit higher levels of deliberativeness than discussions in forums without such banners (Manosevitch et al. 2014). This study appears particularly insightful as it draws attention to the effects of the visual interface of online news commenting platform on humble discourse.

The crucial role of the visual arrangement of discussions – or the discourse architecture (Jones & Rafaeli 2000) – is at the core of a new strand of research exploring online discussion mapping tools. These tools allow for arranging discourse in maps relating arguments visually in relation to their content, rather than in chronological lists. Problems of information overload in online discussion forums and suggestions for solving this problem, for example by ranking messages according to their value for the debate, were identified already when popular internet use was quite new (cf. Losee 1989). Klein (2007, 2012), more recently, investigates problems with common time-centric and topic-centric online discussions: they produce scattered, high volume, repetitive content and echo chambers. Instead Klein suggests argument-centric mapping tools, which organise issues, ideas and arguments visually. Algorithms personalise suggestions for participants and thus draw their attention to what is most likely of interest to them.

Research exploring online mapping tools mostly focuses on teaching and learning (Buckingham Shum & Okada 2008). Cho and Jonassen (2002) analyse students' discussions using an argumentation mapping software that scaffolds conversation. Participants need to predetermine the nature of their contributions as *hypothesis*, *data*, *principle* or *unspecified* and the relations between these contributions as *for*, *against*, and *and*. Results of

an experiment show that small groups using this software have higher problem-resolving abilities compared to groups using common online discussion boards. Bell (1997) observes how the use of an argument mapping software called SenseMaker helps middle school science students structure, clarify, and discriminate between intricate lines of argument. A study by Suthers (2001) finds that use of an online mapping tool to solve a science challenge problem leads to more evidence-based discussions than those using common platforms. Engelmann and Hesse (2010) conduct an experiment with small groups of students using an online information mapping software to solve science problems. While their own individual map in which they arrange information to solve a given problem is visible to half of the groups, the other half additionally has access to the information maps of other members of their groups. Under the latter condition problems are solved quicker and more effectively. Moreover, surveys conducted by Karacapilidis and Papadias (2001) among doctors and medical students trying to achieve a consensus on how to treat a patient with the help of the online mapping tool Hermes find that users perceive the platform as easy and enjoyable to use and helpful in organising arguments.

These studies reveal clear advantages as students lead more rational, well-structured, and evidence-based discussions focused on efficient problem-solving. Applying the findings from online learning to news comments, two limitations become evident, however: First, online discussions in these studies are always conducted in small, closed groups compared to open large-scale communication on news sites; second, discussions in online learning are focused on well-structured problems with correct answers rather than the messy reality of political debates. The problem of scale is explored in the work of Klein, Spada, and Calabretta (2012) and Spada et al. (2016). In a field experiment with the Deliberatorium used by the Italian Democratic Party, the authors show that the advantages of reason-based and effectively structured discourse does also come into effect in deliberative setting with large numbers of participants. Another study – again on the Deliberatorium – confirms these results: Gürkan et al. (2010) observe successful mass deliberation with the online mapping tool generating a clear overview of arguments and knowledge on a given subject. This study also addresses the second limitation of the use of online mapping for ill-structured problems requiring substantive, normative deliberation. While helpful for structuring knowledge, the Deliberatorium proves less useful for facilitating dialogue and debate. Moreover, the rather complicated use and the categorisation of contributions as issues, ideas, and arguments heavily relies on moderators and thus proves less efficient. Iandoli et al. (2014, 2016) pursue possible solutions to this problem by augmenting the online mapping tool Cohere with features of social networking sites. The rationale behind this is that normative debate needs to be socially contextualised. They show that adding user profiles with pictures and personal information, showing users' social connections to each other, and the like, leads to mutual understanding and improved quality of collaboration, and quality of the decision. Similarly, Faridani et al. (2010) compare political online discussions on a list-based forum with those on the online-mapping tool Opinion Space, which locates users as nodes in a network according to their distance of opinion to each other. They find that users of Opinion Space are more engaged and exhibit higher levels of agreement and respect for each other's comments.

In sum, online mapping tools appear to be useful in visually structuring online discussions and promote coherent, clear, and reason-based deliberation even on the large scale. They struggle, however, to transmit social cues and provide the social context for political, normative debate of ill-structured problems. The application of such tools to discussions on news commenting sites appears as a promising but challenging undertaking.

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