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COLLECTIVE INTELLIGENCE IN JOURNALISM: THE CONFLICT AND THE INTERPLAY OF THE LOGIC OF THE CROWD AND THE LOGIC OF JOURNALISM

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Introduction

Professional journalists are increasingly using crowdsourcing as a knowledge search method, thus aiming to channel the crowd's collective intelligence into their news articles and feature stories (Aitamurto, 2013, Vehkoo 2013). By so doing, they hope to discover useful knowledge, which can improve the quality and relevance of their stories (Afuah and Tucci, 2012, Brabham, 2013, Aitamurto, 2015). Thus they rely on the twin virtues of collective intelligence, those virtues being the large number of participants and the cognitive diversity of the participant crowd (Levy, 1997, Landemore, 2013; Page, 2008). This paper shows that when collective intelligence is harnessed to professional journalism, it can lead to a more efficient knowledge search. However, the large number of submissions from a diverse crowd cause also complexities, turning the virtues of collective intelligence to perils, as is shown in this paper.

Case profiles, methods and data

Case profiles. The data in this study are drawn from five cases of crowdsourced journalism in Finland and Sweden. The cases include several instances, in which professional journalists crowdsourced knowledge for articles in established publications. The readers were asked to share their knowledge, experience, and expertise as bases for stories, which were then written by professional journalists. The readers participated voluntarily online to the investigations. The cases are described in the following:

CASE A. Schoolbook investigation, quality in services, and gender differences in math and science education. Three story processes were opened up for online participation on two established magazines' blogs, on social media, and on a specific platform (Huuhkaja.fi) for crowdsourcing information and co-creation with readers in 2011 to 2012. The stories examined incorrect information in physics schoolbooks, quality problems in Finnish products and services and gender inequalities in math and science education. The journalists crowdsourced several parts of the story process by asking the readers to identify incorrect information in schoolbooks and asking for sources that could be interviewed. They received hundreds of submissions from the crowd. The stories were published in the leading science magazine in Finland and in the largest

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women's magazine in Finland. These three stories are grouped together because the stories were accredited to the same journalists and the story processes were similar.

CASE B. Home loan interest map. In 2012, Svenska Dagbladet, the leading daily newspaper in Sweden, crowdsourced a mortgage interest rate investigation. The participants submitted their mortgage interest rates by filling out a digital form. By July 2014, about 50,000 interest-rate submissions were placed on the crowd map. Users could compare rates employing several variables, such as zip code, bank, and the length of the loan. The interest-rate map resulted in dozens of articles about mortgage interest rates, provoking a nationwide discussion.

CASE C. Development aid story and senior care story. Svenska Dagbladet crowdsourced two story processes to the public in 2009 and 2010. The stories covered the efficiency of development aid allocations by the Swedish government and the quality of senior care. The investigations attracted hundreds of submissions, led to several stories in print and online, exposed problems in the systems, and provoked discussion in Sweden.

CASE D. Stock short-selling investigation. In 2011, the leading daily newspaper in Finland crowdsourced investigations about stock short-selling. The newspaper published stock trade reports online with instructions for readers about what to look for in the documents. The readers were asked to report their findings on an online form to the journalist. Based on the crowdsourced information, several unethical or questionable trading activities were identified. The reporter received also an unexpected tip leading to the discovery of a tax evasion scheme within the largest co-operative bank in Finland. The story led to the firing of a bank executive in early 2012.

Case E. My Own Olivia. An established lifestyle magazine in Finland, called Olivia Magazine, crowdsourced a magazine on an online platform My Own Olivia (www.omaolivia.fi). The process attracted about 600 participants and resulted to thousands of submissions. Altogether 15 stories were crowdsourced for a magazine issue.

Methods and data

For this research, I conducted 42 in-depth interviews with 20 journalists leading the crowdsourced investigations. In some cases, the interviewees were interviewed several times during the story process. The interviewees are referred to numbers 1-20 in the Findings section. The interview data were analyzed following Strauss and Corbin's (1998) analytical coding system, resulting into the following main categories: i) manifestations of the journalistic and crowd's logic ii) impact of collective intelligence on journalistic norms, practices, and ideals.

Findings

The crowd as a useful knowledge source

Crowdsourcing resulted into efficient knowledge search and discovery in all the cases. In several cases the crowd provided leads and tips that the journalists wouldn't most likely have discovered otherwise. Moreover, the input from a diverse participant crowd helped the journalists see multiple perspectives in the story, as is illuminated in the

following excerpt from a journalist, who worked on the story about gender differences in math and science education:

You learn much more, because you need to examine a matter related to the topic you maybe didn't think if examining yourself. You'll get a more holistic and a more full picture about the matter, because, of course, you'll always just take a more narrow angle to explain the matter, based on what you are interested in, but when you see and address the others' interest, it widens the scope (20).

The crowd as a complexity

Working with the crowd came also with complexities. The more active the crowd, the more input there was for the journalists to synthesize. Similar challenge appears in other realms in which crowdsourcing is applied, like in crowdsourced policymaking (Aitamurto and Landemore, 2015). Therefore, organizing and synthesizing the crowd's input was laborious, particularly in cases in which the submissions were qualitative. The crowdsourced material served only as a raw-material in the stories — the journalists had to process it further so that it could be weaved into the stories.

Furthermore, the journalists had to adjust to the uncontrolled behavior of the crowd, which slowed down the process, as described in the following excerpt from a journalist:

The unpredictability, you have to throw yourself into that and give the process some time, because you can't prepare the story too much. Or you can prepare the story, but the story can turn out to be something totally different than you thought. You don't know, where the train is going when you jump on it. (21)

Moreover, the more submissions there were, the harder it was for the journalists to verify the facts. In the home loan interest case the number of submissions was 50,000, and the journalists couldn't crosscheck the crowd's input, but they still used the data in their stories, reminding the readers in the article that the data have not been verified. To this end, the twin virtues of collective intelligence challenge traditional journalistic practices, norms and ideals. Table 1 summarizes the differences and commonalities in the logic of the crowd and the logic of journalism.

Table 1. Comparison of the logic of the crowd and the logic of professional journalism.

Element in crowdsourcing	The logic of the crowd	The logic of professional journalism
The nature of participants	Unknown, undefined, anonymous	Often known experts and verifiable sources
Size of the crowd	Large	Small number of sources
Number of input	Large, up to tens of thousands	Small, typically a couple of sources
Format of input	Varies from short to long, from quantitative to qualitative submissions	Short interviews

Need for synthesis/aggregation	Needs to be developed for every case	No need to synthesize large numbers
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Conclusions

The two fundamental elements of collective intelligence, large number of participants and their cognitive diversity, lead to efficient knowledge search in professional journalism. However, when the logics of the crowd and the logics of journalism collide, the virtues of collective intelligence turn into challenges. The larger the crowd, the more time and effort the journalists have to invest in processing and synthesizing the crowd's input. That makes crowdsourced journalism laborious. Moreover, due to the lack of an efficient data verification mechanism, the journalists can not verify all the crowdsourced information they use in their stories, and they end up compromising the journalistic norm of data verification and accuracy. That creates a serious vulnerability to professional journalism, and can, over time, undermine the credibility of journalism. To mitigate the harm caused by the conflict between these two logics, crowdsourced journalism needs better mechanisms for synthesizing and verifying the crowd input. Those mechanisms will enable scaling up crowdsourced journalistic processes, otherwise the conflict of the logics will prevent an efficient use of crowdsourcing in professional journalism.

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