
HCI for Accurate, Impartial and Transparent Journalism: Challenges and Solutions

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ABSTRACT

While new media technologies hold the potential to serve journalism's dual goals of informing and engaging the public, these technologies also challenge the journalistic norms of accuracy, impartiality and transparency. The key question in this workshop is: How can HCI support accurate, impartial and transparent journalism? This question is ever more timely as the need for accurate and credible journalism is growing amid the proliferation of disinformation and opinion manipulation.

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CCS CONCEPTS

- Human-centered computing~Human computer interaction (HCI)
- Human-centered computing~Collaborative and social computing

KEYWORDS

HCI; design; journalism; media; user experience; user interface; news; accuracy; impartiality; transparency

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In this workshop, we will identify challenges and solutions in the design of user interfaces, user experiences and production processes in journalism. We bring together researchers and practitioners designing, deploying and studying new technologies in journalism. The goal of the workshop is to harness the potential of HCI for supporting accurate, impartial and transparent journalism.

Background***The paradox of new technologies in journalism***

New media technologies have the potential to support the dual goals of journalism to inform and engage people. Virtual and augmented reality, for example, can serve journalistic storytelling by relaying more information in a more emotionally engaging way than traditional media [1]. In a similar vein, interactive data visualizations can help users understand complex issues in the news at a glance [15,16,17]. Algorithmic news production and curation create possibilities for a more efficient and customized news production and delivery [11,18,19]. Large-scale online collaboration methods such as crowdsourcing enable journalists to conduct knowledge searches more efficiently than with traditional sourcing mechanisms [3]. News organizations are drawn to deploying new technological tools and methods at an increasing pace, yet they are restricted by the decreasing resources resulting from the decline of traditional funding mechanisms in journalism [6]. Paradoxically, the very same technological advances challenge the journalistic norms of accuracy, transparency and impartiality. These norms form the foundation of professional journalism and they legitimize journalism as a truth-telling discipline, differentiating it from other professional communication practices such as advertising and propaganda, which operate without such normative restrictions [3,9, 10,14]. These norms establish the credibility of journalism and are operationalized as acceptable practices in journalists' everyday work. For example, journalists pursue the accuracy and impartiality norms by following established sourcing and data verification practices. The accuracy norm assumes that journalism shows the world as is, as authentically and realistically as possible. The impartiality, or objectivity, norm posits that journalism should report about the world as neutrally as possible. The transparency norm advises journalists to communicate ethical choices to the public and to identify deviations from accepted practices, such as image manipulation or staging in visual journalism. [1,3,7,10,].

In practice, journalism can never fully reach the idealistic norms, and the normative boundaries of journalism are constantly renegotiated [5,7,9]. This continuous struggle reflects the pressure on journalism to redefine its normative boundaries. Introducing new technologies in established journalistic processes intensifies this pressure, leading often to either momentary or permanent changes in journalistic norms, and thus, alterations in what can be considered as proper journalism. For example, advanced image manipulation in VR and AR, can lead to compromising the journalistic norm of accuracy, which is based on the idea of showing the world as is [1]. Automated, algorithm-based news production can compromise the transparency norm in journalism, if the curation mechanisms are not exposed to the public [4,9,12].

Crowdsourced input in journalism is based on self-selected sample, and can lead to biased reporting, thus risking to compromise the impartiality norm [3].

Designing for accurate, transparent and impartial journalism

Amid these challenges, professional journalism has an ever more important role in society. In the current era of raging misinformation and opinion manipulation, often served in the name of journalism, journalism's informational and engagement functions play a key role in creating an informed citizenry. The society needs accurate, impartial and transparent journalism, and HCI has the potential to support these key norms of journalism. Deliberate deployment and evaluation of design principles and practices can bolster journalism's core functions by creating informative, engaging and informative user interfaces and user experiences. The design and application of new technologies should, however, follow the normative boundaries in journalism, and as the empirical evidence shows, that is often not the case [1,9,12].

To address this challenge, this workshop identifies practices, methods and research avenues for harnessing the power of HCI to support accurate, impartial and transparent journalism. Bringing together scholars from HCI and digital journalism, and practitioners from journalism and technology industry, will help in bridging the gap between journalism and HCI research and practice. This workshop will map the way towards a more informed and integrated research agenda for HCI supporting accurate, transparent and impartial journalism.

Motivation and timeliness

This workshop is based on the need to bridge the gap between HCI and digital journalism scholars and practitioners. On the one hand, designers and engineers often lack knowledge about journalistic norms and practices, which form the framework for professional journalism. On the other hand, journalists face continuous challenges in leveraging the affordances of new technologies. Moreover, journalists and designers increasingly work in joint teams, and the lack of shared knowledge about HCI and journalistic norms and practices create friction in this boundary-spanning work.

Now is the time to intensify the efforts in bridging this gap over academic and industry silos. Creating shared knowledge about HCI and journalism will support journalism's goals to foster informed citizenry by providing accurate, impartial and transparent reporting.

Workshop topics

We welcome diverse submissions with making links across practitioner and academic perspectives, technologies, empirical contexts, theories and methods. Submissions should cover issues related to HCI's role in enabling accurate, impartial and transparent journalism, including, but not limited to, the following:

- The design of user interfaces and user experiences for supporting accuracy, impartiality and transparency in journalism.
- The role of design in mitigating misinformation and establishing and maintaining credibility in journalism
- The design and development of workflows that blend journalists and algorithms in the production and/or curation of news information

- Application of design methodologies, such as value-sensitive design, in development of tools to support journalistic activity
- Identification of methods and theories for effectively examining HCI's role in supporting journalistic goals
- The design of interactive news media applications, platforms, services, tools, or content
- Social computing and intersections with journalism: commenting, discussion, community engagement

Workshop goals and outcomes

- Connecting academic and industry researchers and practitioners in HCI and digital journalism
- Identifying ways how HCI can support accurate, impartial and transparent journalism
- Developing a shared roadmap for HCI's supportive role in journalism, both for academia and industry avenues
- Collaboratively writing a position paper outlining the challenges in HCI and journalism and presenting solutions to these challenges

Organizers

Tanja Aitamurto, PhD, is a Visiting Assistant Professor at the Medill School of Journalism at Northwestern University. Tanja studies, designs and deploys new media technologies for informing, empowering, and connecting people, with a focus on digital journalism and democratic processes. The empirical contexts include crowdsourcing, AR and VR. Prior to returning to academia, Tanja worked as a journalist, reporting from such countries as Afghanistan and Angola. Tanja has co-organized several workshops at CHI and CSCW.

Mike Ananny, PhD, is an Associate Professor of Communication and Journalism at the University of Southern California's Annenberg School for Communication and Journalism, an Affiliated Faculty with USC's Science, Technology and Society research cluster, and a Berggruen Fellow at the Center for Advanced Study in the Behavioral Sciences at Stanford University. He studies the intersection of journalism practice and technology design, the public significance of networked news infrastructures, and the ethics of algorithmic systems.

Chris W. Anderson, PhD, is a Professor of Media and Communication at the University of Leeds and member of the board of advisors at the Tow Center, Columbia University Graduate School of Journalism. Chris studies journalism, politics, and how the production of public knowledge is being transformed in the digital age. He is most recently the author of *Apostles of Certainty: Data Journalism and the Politics of Doubt* (Oxford University Press).

Larry Birnbaum, PhD, is a Professor of Computer Science and Electrical Engineering and Computer Science at Northwestern. Larry's focus is on applied Artificial Intelligence, natural language processing (NLP), social media analytics, and contextual search, with applications to media and journalism. His work focuses on automating and supporting all aspects of the "content pipeline," including research, content generation, content distribution, and user interaction with content. Larry is a co-founder of *Narrative Science*, a company providing advanced natural language generation services in content production.

Nicholas Diakopoulos, PhD, is an Assistant Professor in the School of Communication at Northwestern University where he is Director of the Computational Journalism Lab. He is also a Tow Fellow at Columbia University School of Journalism and Associate Professor II at the University of Bergen Department of Information Science and Media Studies. His research is in computational and data journalism, including algorithmic accountability and transparency, automation and algorithms in news production, and social media in news contexts. Nick is the Program Chair for the *Computation + Journalism Symposium* in 2019.

Matilda Hanson is a journalist, editor and the Head of Storytelling in *Dagens Nyheter*, the leading daily newspaper in Sweden. She oversees the production of VR stories at DN.VR, a joint venture between Google and Dagens Nyheter. The productions have received several awards in Sweden and abroad. Matilda works in multidisciplinary teams for designing user-experience for VR stories and application interfaces.

Jessica Hullman, PhD, is an Assistant Professor in Computer Science and Journalism at Northwestern. The goal of her research is to develop computational tools that improve how people reason with data. Her work has provided automated tools and empirical findings around the use of visualizations to support communication and reasoning, with a particular interest in how science and data are presented to non-expert audiences in data and science journalism. Jessica has received numerous paper awards from top Visualization and HCI venues.

Nick Ritchie is a Senior User Experience Designer at the BBC in the UK. He is currently working in the BBC's 'VR Hub' exploring user experience and design challenges in virtual and augmented reality. He has previously worked across the BBC's digital portfolio (iPlayer, BBC News) in particular leading design for the BBC Radio & Music team.

Workshop Website

The website *HCIandJournalism.com* contains the call for papers and information about the workshop. The position papers will be published on the website, and the website will be kept up-to-date after the workshop with news and advances about HCI in journalism.

Pre-Workshop Plans

Recruitment

Participants will be recruited from the CHI and digital journalism studies communities and from the HCI and digital journalism practitioner communities, using the organizers' extended networks. The workshop organizers will work actively to ensure a balanced mix of participants from academia, design practice and industry. We will advertise the workshop on relevant listservs, through social media and journalists' professional associations such as the Online News Association and WAN-IFRA.

Interactions and preparation before the workshop

Before the workshop, the participants will share their ideas on a collaborative online platform for important topics for the workshop. This input will be used as a basis for the workshop activities. The attendees will also read other participants' position papers and prepare short responses, which will be shared online prior to the workshop as conversation starters.

Workshop Structure and Activities

We propose a one-day workshop with up to 40 participants from academia and industry on Sunday May 5. There will not be traditional paper presentations; instead we will focus on collaborative ideation and problem-solving using design thinking methodology [13]. The workshop structure will be roughly as follows:

Key dates

- Call out: 17 December 2018
- Position paper submission deadline: 12 February 2019
- Notification of acceptance: 1 March 2019
- Workshop day: Sunday 5 May 2019

- **Setting the agenda and lighting talks** (60 minutes) The organizers will set out the workshop's agenda and goals. They will moderate a round of short lightning talks introducing participants, positions, and thoughts stemming from position papers and online pre-workshop discussions. During these talks, the participants will practice needfinding by identifying needs in the intersection of HCI and journalism that surface in the talks. The group discussions will follow rapid brainstorming and clustering process based on design thinking. The groups are formed to be multidisciplinary. They include a mix of participants from HCI background and digital journalism as well as design and journalism practitioners.
- **Small Group Discussion: New media technologies and HCI challenging accurate, impartial and transparent journalism** (45 minutes) Participants will discuss the challenges that the design of new technologies pose to the journalistic norms of accuracy, impartiality and transparency. At the end, they will cluster the results into thematic areas.
- **Break** (15 minutes)
- **Large Group Discussion:** (45 minutes) Discussing and converging the outcomes of the small group discussion.
- **Lunch** (60 minutes)
- **Small Group Discussion: Designing for accurate, impartial and transparent journalism** (45 minutes) Using the challenges identified in the morning session as the basis, participants will discuss and brainstorm about HCI's role in supporting accurate, impartial and transparent journalism. The participants will cluster the results into broader thematic areas.
- **Large Group Discussion:** (45 minutes) Discussing and converging the outcomes of the small group discussion.
- **Break** (10 minutes)
- **Synthesize and solve** (30 minutes) In pairs, the participants will design a roadmap for examining and developing solutions for HCI's support for journalistic goals.
- **Report and feedback** (45 minutes) Presenting the roadmaps and receiving feedback.
- **Next steps and adjourn** (30 minutes) The workshop will conclude by a discussion about the next steps in weaving an engaged and inspired community around HCI and journalism in academia and industry. The organizers and participants will brainstorm ideas and decide about the next steps.

250-word Call for Participation

We invite position papers and project descriptions for the CHI 2019 workshop “HCI for Accurate, Impartial and Transparent Journalism: Challenges and Solutions”. This one-day workshop is a multidisciplinary forum of problem-solving and collaboration for academics and practitioners in the intersection of HCI and journalism. The key question is: How can HCI support accurate, impartial and transparent journalism? In this interactive, collaborative workshop, participants will actively engage in identifying ways for HCI to support journalistic goals and developing a shared roadmap for HCI for accurate, transparent and impartial journalism.

HCI and journalism researchers and practitioners from both academia and industry are invited to submit a position paper or a project description in the CHI Extended Abstract format (max. 4 pages). The paper should discuss the challenges in design, implementation and evaluation of technologies in journalism and present solutions how HCI can address these challenges. If the submission is a project description, it should describe the project objectives and discuss the challenges in the project execution in the framework of the workshop goals.

The submissions will be reviewed by the organizers and evaluated based on the contribution quality and the applicants’ diversity. To ensure cross-pollination across disciplinary and practice boundaries, we will compose a diverse group of participants with different backgrounds.

At least one author of each accepted paper must attend the workshop and register for both the workshop and one day of the conference. Please submit your paper to HCIAndJournalism@gmail.com by February 12, 2019.

Post-Workshop Plans

After the workshop, we will continue to collaborate with the participants to develop a vibrant community for the intersection of HCI and journalism spanning across academia and industry. Based on the workshop outcomes, we will foster plans for a special issue for HCI in journalism in a premiere venue, e.g. *ACM Interactions*, *Digital Journalism* and *New Media & Society*. We also plan to organize a Special Interest Group (SIG) on HCI in journalism at CHI ‘19.

The workshop outcomes will be submitted as a summary report to *ACM Interactions* to reach out to a broader community of academics and practitioners interested in the intersection of HCI and journalism. The workshop submissions and deliverables, including the roadmap for the future of HCI in journalism, will be published on the workshop website. The workshop website will be kept up-to-date after the workshop to provide an interactive platform and information hub for research and practice in HCI in journalism.

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