Workshop on Societal Effects of AI in Mobile Social Media

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Abstract

Social media platforms constitute an essential part of many people's mobile device usage. Their contents have adapted to the mobile form factor, e.g., through an increase of short-form video and content recommendation instead of navigation and active selection. Social media systems thereby have a strong influence on individuals and society, for example, concerning public discourse and opinion-making. The rise of AI-generated content and LLM-backed autonomous agents even pushes such developments. This workshop discusses social media's recent developments and yielding positive and negative effects on our society. Participants will share their perspectives of HCI research on social media systems and the research aims they are pursuing. In this workshop, we outline opportunities in joining insights from social sciences with the potential of recent developments in Human-Computer Interaction approaches. Interface design ideas will be explored and discussed with the research community, synthesizing collective challenges, promising future directions, and strategies for research that mitigate the negative effects of AI in social media systems on our society.

CCS Concepts

• **Human-centered computing → Human computer interaction (HCI)**.

Keywords

LLM, empathy, wellbeing, internal feedback

ACM Reference Format:
Florian Bemmann, Matthias Schmidmaier, Viktorija Paneva, Doruntina Murtezaj, Alexander Wiethoff, and Sven Mayer. 2025. Workshop on Societal Effects of AI in Mobile Social Media. In *Adjunct Proceedings of the 27th International Conference on Mobile Human-Computer Interaction (MobileHCI '25 Adjunct), September 22–25, 2025, Sharm El-Sheikh, Egypt.* ACM, New York, NY, USA, 3 pages. https://doi.org/10.1145/3737821.3743750

MobileHCI '25 Adjunct, Sharm El-Sheikh, Egypt

ACM ISBN 979-8-4007-1970-7/25/09
https://doi.org/10.1145/3737821.3743750

1 Background and Motivation

In recent years, social media has fundamentally transformed public information consumption and opinion-making. Platforms such as X, Facebook, and TikTok offer fast, tailored, and always available content that has changed how people engage with news and information. These systems have democratized content creation, allowing not only established institutions but also small organizations and individuals to publish their views, reaching large audiences and influencing our society. This transformation has been accelerated by two key shifts. First, social media usage has moved predominantly to mobile devices, with 99% of engagement now occurring on tablets or smartphones[1]. This transition has driven content formats toward shorter forms that better suit mobile usage scenarios and recommendation-based content selection, reducing the need for navigation-heavy interfaces. Second, AI content generation tools have dramatically lowered the barriers to creating and distributing high-quality content, making sophisticated publishing capabilities accessible to virtually anyone. Further, AI-based conversational interfaces potentially allow us to reach and discuss with many people at scale. While these developments offer unprecedented opportunities for information sharing and public discourse, they also present significant challenges, such as the following:

Information Filtering. Modern news and social media portals leverage people's desire for simple and emotional messages, showing them contents that capture their attention especially well, increasing their platform usage [12, 16]. This approach often leads to a distorted perception of reality and reinforces opinion filter bubbles [13], where users become trapped in echo chambers that primarily expose them to information confirming their existing beliefs [1, 2], contributing to polarization and distorted public opinion making. This triggers the question of whether users are still able to digest and reflect on their individual choices or if the user interface (UI) design is intended to (a) push users in a certain direction on purpose and keep them in the aforementioned bubbles [8] or (b) simply increase time-on platform.

Information Overload. Over the last decades, the increased speed, availability, and especially the plethora of information have made it increasingly difficult for users to draw personal conclusions and form well-founded opinions. Partially contradictory, misleading, or

[1] https://www.forbes.com/advisor/business/social-media-statistics, last accessed 19th of March 2025

one-sided presentations of facts further complicate distinguishing truth from falsehood.

AI-Generated Content. Advancements in AI enable the creation of content that is virtually indistinguishable from human-created content. This applies to static shared content such as images or videos as well as real-time communication, for example, through LLM-based chatbots. This development intensifies existing challenges through two central mechanisms: 1) enabling the creation of misinformation at scale while making truth identification more difficult, and 2 empowering anyone to create professional-looking multimedia content, further contributing to information overload.

Interaction with AI Agents. Another potential challenge is the integration of AI-based agents into social media ecosystems. To ensure authentic interaction and user trust, future systems could, for example, integrate verification approaches to identify AI agents, or enhance the social behavior of the agent by implementing supportive personalities [18] or empathic interaction [14, 15].

These challenges showed negative effects on the societal discourse and public opinion-making [19], processes that are essential to maintain a vivid democratic society [4]. To address these issues and steer our systems towards more positive social and societal implications, the HCI community has to rethink the design of how we present, select, consume, and interact with content on social media. Therefore, it is essential to work interdisciplinary and accommodate findings from the communication sciences and sociology, which study the human psychological perspective of these aspects. While HCI has actively studied the effects of social media on individuals' wellbeing and proposed a variety of interventions [5, 6, 9, 11, 17], research on a larger scale, i.e., society, is yet rare. HCI is strong in designing and implementing fake-, mis-, and disinformation detection approaches (see the systematic review of Hartwig et al. [10]), questions on their ecologically valid effects remain.

Research from social sciences suggests that interfaces flagging dubious information may produce backfire effects [3], and warnings, particularly for politically charged topics where fake news is increasingly prevalent, provide only a temporary effect, as bias tends to re-emerge over time [7]. This indicates that more attention should be paid to interaction dynamics and long-term impacts. In our workshop, we will discuss the societal effects of mobile social media (MSM) systems in light of advancing AI technologies in three steps. First, we will explore current and future applications of AI in that context. Then, we will identify and structure emerging societal effects. Finally, we will discuss how interface designers and system providers can address these challenges and how we can mitigate rising negative effects.

2 Workshop Activities

We start with a keynote speaker, addressing the overall topic of mobile social media and society. Our workshop is organized around three consecutive collaborative sessions, see Table 1.

Session I. First, we will discuss **how mobile social media and AI in it have evolved** in recent years. This encompasses but is not limited to the development of recommendation algorithms, engagement strategies, and emerging content formats such as short-form videos. We especially regard how AI fuels these developments, with the proliferation of AI-generated content and artificial actors such as bots.

Table 1: Proposed workshop schedule, focusing on our three collaborative sessions on the effects of applied AI in mobile social media (MSM).

9:00	**Welcome**: Introductions & icebreaker activity.
9:15	**Keynote**: Social Media, the Society, and HCI
10:00	*Coffee Break*
10:30	**Session I** Current and future applications of AI in MSM
12:00	*Lunch Break*
13:30	**Session II** Identify and structure effects of AI in MSM
15:00	*Coffee Break*
15:30	**Session III** Mitigating or utilizing effects of AI in MSM
17:00	**Closing:** Wrap up, Conclusions, and Feedback
17:30	**End**
-	**Social Event**

Session II. Second, we discuss **which negative and positive effects yield from recent AI developments** in mobile social media. We will outline how AI in MSM affects people individually, and societies on a larger scale. Further, we plan to map design aspects of MSM systems and AI to their effects, to explore cause-effect relationships, and to analyze which effects the design decisions that were made so far have on our society.

Session III. In a final hands-on session, we plan to dive into specific topics to investigate **how we can tackle identified negative or utilize potential positive effects** of AI in MSM. Thereby, we plan to particularly focus on the afore-identified negative effects of AI from an HCI perspective to find design solutions and guidelines that can mitigate negative societal and social impacts while leveraging the benefits of AI.

Closing. We will close the workshop with a wrap-up session, drafting conclusions, collecting feedback, providing an outlook on possible future collaborations, and a potential publication based on the workshop findings. In the evening, we plan to organize a non-mandatory social event to foster networking and connection between participants further.

3 Post-Workshop and Proceedings Plans

We will make accepted papers available on the workshop website and publish them on a ceur-ws.org/ proceedings. To consolidate and disseminate the discussions and outcomes of the workshop, we will invite the workshop participants to co-author a conceptual paper that presents a comprehensive collection of AI-fueled developments in social media, thereby yielding effects on our societies, and future research directions that we identified from there. This encourages future collaboration among participants on the consolidated research agenda. We envision bringing together people who share interests related to AI and its societal implications and want to develop a community on research in that area.

4 Call for Participation

We explore the social and societal implications of AI in mobile social media, such as the current and future effects of perceived authenticity or the increasing amount of generated content. We welcome contributions from various backgrounds that relate to generative AI, social media, conversational user interfaces, conversational agents (CAs), and researchers working on the social sciences perspective. Participants are requested to submit a position paper, which, upon acceptance, will be published on the website. In their submission, we encourage the authors to reflect on one or multiple of the following points without being limited to these:

- How has the development of social media systems shaped society, discourse, and the media landscape in the past years?
- Which role do the recent AI capabilities play in social media?
- Which effects arise from the current social media platform design?
- How do specific design features of social media interfaces foster or mitigate positive and negative developments?
- Which challenges are fostered or mitigated through the proliferation of AI?
- What (societal) issue(s) yielding from AI in social media systems is your research tackling?
- Which difficulties and systemic limitations are you facing when conducting research on the effects of social media?
- Which directions for future research should we pursue?

Submissions should be in the ceur-ws.org template and no more than four pages long, excluding references. The workshop will take place on-site only. Pleas see, https://www.hcilab.org/aiandsociety25 for further information.

5 Organizers

The organizers comprise both junior and senior researchers from academia and industry.

Florian Bemmann. is a post-doctoral researcher at LMU Munich, studying the social and societal implications of HCI. He utilizes findings from social sciences through HCI technologies to reduce the negative societal impacts of information systems.

Matthias Schmidmaier. is a Ph.D. candidate at LMU Munich and is working on industry solutions for affective systems and human behavior analysis. He researches empathic behavior in human-AI interaction, e.g., in mobile applications for wellbeing.

Viktorija Paneva. is a postdoctoral researcher at LMU Munich. Her work focuses on the intersection of usable privacy and security, and human-computer interaction, particularly in the context of new and emerging technologies and interfaces.

Doruntina Murtezaj. is a Ph.D. candidate at the University of the Bundeswehr Munich and LMU Munich. Her research focuses on Human-Centered Security, particularly user behavior in security-critical contexts and the design of security-enhancing interfaces.

Alexander Wiethoff. is an associate professor at LMU Munich. His research lies at the intersection of AI and flexible interfaces, robotics, and media architecture, aiming to pioneer new ways of interactive and immersive experiences.

Sven Mayer. is a professor of computer science at TU Dortmund University. His research sits at the intersection between HCI and AI, focusing on the next generation of computing systems. He uses AI to design, build, and evaluate future human-centered interfaces.

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