Bridging Methodological Divides: Collaborative Synergies Between Qualitative and Quantitative CSS Computational Social Science Research

Danica Radovanović[1], Lynda Sifer Riviere[2], Arnim Bleier[1] and Felix Soldner[1]

[1]*GESIS – Leibniz Institute for the Social Sciences, Dept. Computational Social Science*
[2]*UR EST (Étude sur les Sciences et les Techniques, Université Paris Saclay*

This participatory panel explored how qualitative and quantitative approaches in computational social science (CSS) can be meaningfully integrated to advance research on digital society, with particular attention to collaboration, ethics, and methodological innovation. The session was designed around the premise that no single methodological lens is sufficient for understanding complex socio-digital phenomena, and that mixed-methods CSS can move beyond "numbers without context" and "stories without scale" toward richer and more actionable forms of knowledge Creswell and Clark (2007); Floridi (2008); Lazer et al. (2009); Salganik (2019).

The panel combined conceptual framing, empirical case studies, and collaborative discussion. In the introductory part, the speakers presented mixed methods in CSS as the purposeful integration of computational approaches, such as natural language processing, network analysis, and large-scale data mining, with qualitative approaches such as digital ethnography, interviews, focus groups, and interpretive readings. This framing emphasized that quantitative analysis can identify patterns, scale, and structure, while qualitative inquiry brings attention to meaning, lived experience, and social context; together, these approaches also raise broader ethical and societal questions that must be addressed explicitly.

The session was organized in three parts. First, the panelists introduced key concepts and presented brief examples from their own research. Second, participants worked in breakout groups to discuss the benefits of mixed CSS methods, the practical and ethical challenges of combining them, and future prospects for collaboration across methodological divides. Third, the group shared their reflections in plenary, highlighting common themes and differences across research contexts. This participatory format was intended to generate collective knowledge from shared experiences and to identify practical strategies for integrating qualitative and quantitative work in CSS.

Case study 1

The first case study presented a multilingual comparative analysis of LLM-based fact-checking reliability Saju et al. (2025). Using a large-scale dataset across multiple languages and topics, the study combined quantitative benchmarking of several LLMs with qualitative error analysis to show that models systematically struggle more with factual claims than with opinions, and exhibit substantial performance variation across linguistic contexts. The findings highlight how aggregate accuracy metrics obscure refusal behavior and systematic misclassification, demonstrating the need for mixed-method approaches to uncover context-specific weaknesses and biases in automated fact-checking systems.

Case study 2

A second case study examined German court protocols, comparing close readings with topic modelling. Based on approximately 300 protocols from hearings on low-level offences, the study investigated

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Danica.Radovanovic@gesis.org (D. Radovanović[1])

whether topic modelling can complement qualitative analyses of how issues such as racism are articulated in legal settings and how they inform assessments of social prognosis. Specifically, topics identified through close reading were compared with those generated automatically using keyword-assisted topic modelling. Because close reading is labour-intensive, the aim was to assess whether automated approaches could accelerate the identification of relevant cases (i.e., court hearings). However, the project also revealed the limitations of such methods in capturing concepts identified through qualitative analysis and highlighted the interpretive and communicative challenges involved in linking computational outputs to qualitative insights.

Case study 3

A third case study drew on ethnographic research conducted within WhatsApp groups that provide legal assistance to asylum seekers in France. Through a combination of online and offline observations, interviews and document analysis, the study documented how digital infrastructures reshaped support practices, emphasising the importance of trust, care and informal coordination. However, it also raised important ethical concerns regarding data security, surveillance, and dependency on digital tools in sensitive contexts Riviere (2026).

Case study 4

The final case study addressed youth digital culture through an ongoing analysis of the Netflix series Adolescence and related discussions on Reddit, especially in the r/teenagers community. Using a dataset of 1,099,933 posts and comments collected between January 2024 and June 2025, the project combined keyword-based filtering, language models trained on cyberbullying and hate speech data, social network analysis, content analysis, narrative analysis, and digital ethnography. This study demonstrated how mixed CSS methods can connect large-scale platform data with interpretive analysis in order to examine youth identity, gender discourse, online safety and the cultural meanings embedded in everyday digital communication Radovanović (2026). This case study speaks to a particularly urgent and evolving issue, as 2026 marks the beginning of a broader global turn toward social media restrictions for youth.

Conclusion

A central takeaway from the session was that CSS mixed-methods collaboration is not simply a technical exercise of combining tools, but a relational and epistemic process that requires communication across disciplinary languages, agreement on research design, and reflexive negotiation of evidence. Across the case studies, speakers showed that methodological integration can strengthen research by enabling triangulation, opening new analytical perspectives, and making findings more socially grounded. At the same time, the panel underscored recurring challenges, including difficulties in communicating across methodological traditions, uneven understanding of different methods, and tensions in how results are interpreted and presented.

Ethics emerged as a cross-cutting concern throughout the panel. Participants reflected on issues such as AI bias, representation, consent, trust, data security, and the risks of digital dependence, especially in vulnerable or sensitive contexts. The discussion suggested that the responsible use of AI and digital tools in mixed-methods CSS depends not only on analytical performance, but also on preserving autonomy, contextual sensitivity, and the integrity of relationships with research participants and communities.

Overall, the session demonstrated that bridging qualitative and quantitative divides in CSS is both necessary and productive. Meaningful collaboration requires more than adding one method to another; it depends on shared vocabularies, iterative co-design, and openness to methodological pluralism. The panel concluded that future work in mixed-methods CSS should focus on building collaborative infrastructures, improving interdisciplinary communication, and developing ethically grounded approaches to AI and digital methods that remain attentive to lived experience as well as large-scale patterns.

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