

## An information framework for semiotic research on difficult heritage, memory and identity practices on social network sites

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### **Aim:**

In this presentation, we aim to present the theoretical framework and conceptual representations underpinning the design of a research infrastructure for semiotic research on difficult heritage, memory and identity practices on social network sites, developed in the context of the Connective Digital Memory in the Borderlands research project. We also illustrate its use, and that of the underlying conceptual model of semiotic activity on social network sites, to serve actual examples of computer-assisted qualitative research on the mnemonic work of communities and institutions related to the Lithuanian difficult past and heritage. Based on this, we offer insights on the significant properties of research data related to social media semiotic practices, and discuss implications on the affordances of research infrastructures capable of supporting the pragmatic curation and fruitful analysis of heritage-related social media data.

### **Value:**

Our presentation is relevant to information professionals, social scientists and digital humanists interested in designing processes and functionalities for data infrastructures intended to support scholarly research. It starts from the realization that the specification, design and functionalities of information systems intended to capture, represent, analyze and provide access to research data at a time of increasing use of digital methods is a major challenge for researchers in the social sciences, as well as information scientists tasked to support such research. Ensuring that research infrastructures represent adequately data from social media interactions so that they become “fit for purpose” as evidence for scholarly research presents additional challenges, especially when they involve communication and meaning-making related to difficult heritage, memory and identity practices. Based on serving the practical needs of an actual research project, the data infrastructure presented here is unique, firstly, in adhering to established data curation principles of separating submission, archival and dissemination information ‘packages’ to ensure research data integrity and

authenticity. Secondly, in drawing explicitly from the ‘significant properties’ of social media research data to develop actionable knowledge graph representations of social media messages as well as their (historical, referential) semiotic content, provenancial context, and digital preservation metadata, to enable flexible and powerful support adequate research access and data analysis.

### **Research outline:**

Social media networks have become an increasingly important domain for community interactions and institutional interventions entangling heritage with the formation of contemporary identities and attitudes, addressing issues as diverse as difficult and contested memory (Kelpšiene et al., 2022), Holocaust commemoration (Manca, 2020; Wight, 2020), the ‘memory wars’ of Eastern and Central Europe (Rutten et al., 2013), as well as archaeological (Kelpšiene and Dallas, 2023) and museum communication (Kidd, 2011). Such practices are distinct in their simultaneous dependence on the ‘logic’ of social media platforms (van Dijck et al., 2018), and on a process of translation across different – historical vs. contemporary, scholarly and institutional vs. grassroots – semiospheres (Lotman, 2005).

In the context of CONNECTIVE Digital Memory in the Borderlands research project, we have been working with digital data to reveal how memory practices on Lithuanian Social Network Sites (SNS) mediated by contested heritage shape cultural identities. Based on identifying ‘a tentative proposed set of relationships, which can then be tested for validity [and] can often help in working through one’s thinking about a subject of interest’ (Bates 2009, 3), we drew from activity theory (Engeström, 1999) and cultural semiotics (Lotman, 2005) to establish an event-centric ontology (Guarino et al., 2009) of SNS semiotic activity on heritage, memory and identity (Kirtiklis et al., forthcoming), viewed as a practice of digital curation ‘in the wild’ (Dallas, 2016). This was the basis for our interviewing protocol, and for an extensible code system taxonomy used for qualitative data analysis. It also informed the property graph schema of a Neo4j database which we employed to establish a curation-oriented research repository incorporating the typology of information ‘packages’ specified by the OAIS model (CCSDS, 2007; cf. Gavrilis et al., 2013), composed of: (a) serialized data streams and digital facsimiles of SNS conversations (Submission Information Packages), (b) graph nodes and relationships of deposits, agents, threads, and messages involved in SNS conversations, enriched with research-driven classifications (Archival Information Packages), and, (c) export files, reports and summarizations suitable for researcher-driven qualitative coding and analysis using MaxQDA and other analytical tools (as Dissemination Information Packages).

Aiming to operate as a social media counter-archive (Ben-David, 2020), this repository offers flexibility to experiment with semantic structure and to visualize patterns involving conversations, users and communities they belong to, as well as posts or comments they authored, commented on or reacted to, and the historical events, actors, places, and other entities these messages refer to. It is used to analyze social network site conversations on Lithuanian heritage, memory and identity as semiotic practices, supporting mixed methods research on topics as diverse as the Soviet monuments war in Lithuania, the cultural memory of Lithuanian independence in the 1990s, post-World War II memories of resistance, the memory of the Holocaust, metaphor use by SNS mnemonic actors, and contemporary memory wars around Soviet monuments. This study identifies the promises as well as the limitations and complexities of designing a data infrastructure suitable for supporting evidence-based research on social digital memory, and draws broader insights on the questions of evidence, memory, representation, and access to research data in the humanities and social sciences.

## References

- Bates, M.J. (2005). An Introduction to Metatheories, Theories, and Models. In Theories of Information Behavior, edited by Karen E. Fisher, Sanda Erdelez, and Lynne EF McKechnie, 1–24. Medford, NJ: Information Today, Inc.
- Ben-David, A. (2020). Counter-archiving Facebook. *European Journal of Communication*, 35(3), 249–264. <https://doi.org/10.1177/0267323120922069>
- CCSDS (2007). *Reference Model for an Open Archival Information System (OAIS)*. Consultative Committee for Space Data Systems, NASA; Google Scholar. <http://public.ccsds.org/publications/archive/650x0b1.pdf>
- Dallas, C. (2016). Digital curation beyond the “wild frontier”: A pragmatic approach. *Archival Science*, 16(4), 421–457. <https://doi.org/10.1007/s10502-015-9252-6>
- Engeström, Y. (1999). Activity theory and individual and social transformation. In Y. Engeström, R. Miettinen, & R.-L. Punamäki-Gitai (Eds.), *Perspectives on activity theory* (pp. 19–37). Cambridge University Press.
- Gavrilis, D., Dallas, C., & Angelis S. (2013). A curation-oriented thematic aggregator. In T. Aalberg, C. Papatheodorou, M. Dobрева, G. Tsakonas, & C. J. Farrugia (Eds.), *Research and Advanced Technology for Digital Libraries* (pp. 132–137). Springer Berlin Heidelberg. [https://doi.org/10.1007/978-3-642-40501-3\\_13](https://doi.org/10.1007/978-3-642-40501-3_13)
- Guarino, N., Oberle, D., & Staab, S. (2009). What is an ontology? In *Handbook on ontologies* (pp. 1–17). Springer. [http://link.springer.com/chapter/10.1007/978-3-540-92673-3\\_0](http://link.springer.com/chapter/10.1007/978-3-540-92673-3_0)
- Hood, C., & Reid, P. (2018). Social media as a vehicle for user engagement with local history: A case study in the North East of Scotland. *Journal of Documentation*, 74(4), 741–762. <https://doi.org/10.1108/JD-12-2017-0167>
- Kelpšienė, I., Armakauskaitė, D., Denisenko, V., Kirtiklis, K., Laužikas, R., Stonytė, R., Murinienė, L., & Dallas, C. (2022). Difficult heritage on social network sites: An integrative review. *New Media & Society*, 1-28. <https://doi.org/10.1177/14614448221122186>
- Kelpšienė, I., & Dallas, C. (2023). Battle or ballet? Metaphors archaeological Facebook administrators live by. *Journal of Community Archaeology & Heritage*, 1–21. <https://doi.org/10.1080/20518196.2022.2157566>
- Kidd, J. (2011). Enacting engagement online: Framing social media use for the museum. *Information Technology & People*, 24(1), 64–77.
- Kirtiklis, K., Laužikas, R., Kelpšienė, I., & Dallas, C. (forthcoming). An ontology of semiotic activity of heritage and memory practices on social network sites. *SAGE Open*, accepted for publication.
- Lotman, J. (2005). On the semiosphere (W. Clark, Trans.). *Σημειωτική-Sign Systems Studies*, 1, 205–229.
- Manca, S. (2020). Bridging cultural studies and learning science: An investigation of social media use for Holocaust memory and education in the digital age. *Review of Education, Pedagogy, and Cultural Studies*. <https://www.tandfonline.com/doi/abs/10.1080/10714413.2020.1862582>
- Rutten, E., Fedor, J., & Zvereva, V. (Eds.). (2013). *Memory, conflict and new media: Web wars in post-socialist states*. Routledge. <https://doi.org/10.4324/9780203083635>
- van Dijck, J., Poell, T., & De Waal, M. (2018). *The platform society: Public values in a connective world*. Oxford University Press.
- Wight, A. C. (2020). Visitor perceptions of European Holocaust Heritage: A social media analysis. *Tourism Management*, 81, 104142.