Displays of Conception
Representing Historiographical Models Through Multimodal Publications

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Introduction

Modeling counts as a critical task in the digital humanities. DH researchers formalize data and metadata to enable humanistic investigations. On a more generic level, establishing modeling standards has been a prevalent concern of the DH. James E. Dobson warns about unquestioned assumptions at any research stage when using computational methods in his appeal for critical digital humanities.[1] His focus on quantitative techniques might narrow Dobson's perspective, and he largely omits theoretical research conducted outside North America. He nevertheless is correct in warning about black boxes and fuzzy research results when researchers do not thoroughly reflect on computational analysis approaches and the composition of data sets. He also convincingly stresses that the historicity of research data must be considered. This affects the question of modeling significantly when scholars are to investigate the data.

Beyond these aspects, theorists have emphasized that traditional humanistic research operations should also be considered modeling activities in DH research. The modeling of interpretation,[2] uncertainty,[3] or argumentation when historians reason about historical phenomena[4] has been debated. Here, we can speak more broadly of conceptual models.

1 Towards an analytical framework for multimodal publication formats

The positions mentioned above emphasize the need for theoretical reflection, a thorough explanation of concepts, also visualization of models. Taking up the aspect of visualizing, this paper focuses on tools and historiographical publication formats designed to enhance conceptual model explication.

Here, visualizations do not primarily serve as data representations (implicitly displaying conceptual frameworks). Instead, conceptual models themselves are visualized (explicit display) alongside a narrative demonstration of the models. A knowledge graph, for instance, may map a specific historical discourse with its nodes representing the properties of the discourse: topoi, argumentation figures, and connections to other discourses/topics. Such a visual representation depicts what the scientists of multimodality Gunther Kress and Theo van Leeuwen define as "analytical structures," by which they mean visualized structures that present elements of the display in relation to the overall configuration ("meronymical relations").[5] Once published, users might explore all the nodes through an interactive user interface. The narrative part of the publication then complements the visualization. It might not go into every detail of the graph's nodes, but it discursively explains the design of the visualized concept.

Stephen Robertson and Lincoln A. Mullen have similarly pleaded for more scholarship and publication of "patterns of argumentation." They argue that digital historians seldomly focus on answering historical research questions and presenting their argumentation through innovative publication formats. Instead, they would rather highlight data features or patterns or discuss methodological issues.[6]

[1] Dobson. 2019. *Critical Digital Humanities*.
[2] Piotrowski and Neuwirth. 2020. *Prospects for Computational Hermeneutics*.
[3] Piotrowski. 2019. *Accepting and Modeling Uncertainty*.
[4] Britt et al. 2010. *Learning From History Texts*.
[5] Kress and van Leeuwen. 2021. *Reading Images*, p. 76.
[6] Robertson and Mullen. 2021. *Arguing with Digital History*.

A multimodal analytical framework, as addressed in this paper, is apt to understand better how interactive visual and narrative publication formats support conceptual model representation in the DH.

2 Discussion of multimodal publications

I intend to apply this theoretical perspective by discussing a selection of existing publication formats and tools. Articles of the *Journal of Digital History* (JDH)[7], for example, facilitate multimodal publishing by different layers of demonstration: (1) A "hermeneutic layer" provides space for multimodal methodological discussion, (2) a "data layer" provides research data, and (3) a "narrative layer" is dedicated to the historiographical explanation. In addition, the online publishing tool *Scalar*[8] offers a set of interesting multimodal elements. The relatively new feature "lenses" allows authors to visualize pages or other parts of their *Scalar* publication under predefined parameters. For instance, such visualization may display all pages and media files tagged to specific political discourse strands. Authors can incorporate these visualizations into the interlinked pages of their *Scalar* publication, therefore combining hypertextual and visual qualities.[9] Users may explore and manipulate the visualizations and even create their own "lenses."

3 Outlook

By discussing examples like these, I intend to open up a perspective on strategies of multimodal demonstrations of conceptual models. In doing so, I plan to examine how different multimodal publication formats support the explication of different model types. For instance, *Scalar*'s lenses are apt to highlight the intricacy of discursive networks. The layer model of the *JDH*, in contrast, is better suited to differentiate between planes of scholarly demonstration when discussing methodological and data-related issues.

Despite particularly addressing historiographical modeling, I consider the analytical approach towards multimodal publication formats transferable to the broader DH. In this way, I want to contribute to theory formation in the DH.

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[7] https://journalofdigitalhistory.org/en

[8] https://scalar.me/anvc/scalar/

[9] Cf. Christian Wachter. 2021. *Geschichte digital schreiben.*; Christian Wachter. 2021. *Publishing Complexity in the Digital Humanities*.