## The big challenge of data! Managing digital resources and infrastructures for digital humanities researchers

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## Abstract

Digital humanities research is dependent on the development and seizing of appropriate digital methods and technologies, collection and digitisation of data, and development of relevant and practicable research questions. In the long run, the potential of the field to sustain as a significant social intellectual movement (or in Kuhnian terms, paradigm) is, however, conditional to the sustainability of the scholarly practices in the field. Digital humanities research has already moved from early methodological experiments to the systematic development of research infrastructures. These efforts are based both on the explicit needs to develop new resources for digital humanities research and on the strategic initiatives of the keepers of relevant existing collections and datasets to open up their holdings for users. Harmonisation and interoperability of the evolving infrastructures are in different stages of developments both nationally and internationally but in spite of the large number of practical difficulties, the various national, European (e.g. DARIAH, CLARIN and ARIADNE) and international initiatives are making progress in this respect. The sustainability of digital infrastructures is another issue that has been scrutinised and addressed both in theory and practice under the auspices of national data archives, specialist organisations like the British Digital Curation Centre and international discussions, for instance, within the iPRES conference community. However, an aspect of the management of the infrastructures that has received relatively little attention so far, is management for use. We are lacking a comprehensive understanding of how the emerging digital data and infrastructures are used, could be used and consequently, how the emanating resources should be managed to be useful for digital humanities research not only in the context within which they were developed but also for other researchers and many cases users outside of the academia.

This paper discusses the processes and competences for the management of digital humanities resources and infrastructures for maximising their current and future usefulness for the purposes of research. On the basis of empirical work on archaeological research data in the context of the Swedish Archaeological Information in the Digital Society (ARKDIS) research project (Huvila, 2014) and a comparative study with selected digital infrastructures in other branches of humanities research, a theoretical model of use-oriented management of research

data with central processes and competences is presented. The suggested approach complements existing digital curation and management models by opening up for the consideration of the user side processes of digital humanities data resources and their implications for the functioning, development and management of appropriate research infrastructures. Theoretically the approach draws from the records continuum theory (as formulated by Upward and colleagues (e.g. Upward, 1996, 1997, 2000; McKemmish, 2001)) and Pickering's notion of the mangle of practice (Pickering, 1995) developed in the context of the social studies of science. The model demonstrates the significance of being sensitive to explicit wants and needs of the researchers (users) but also the implicit, often tacit requirements that emerge from their practical research work. Simultaneously, the findings emphasise the need of a meta-competence to manage the data and provide appropriate services for its users.

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