

Humanities, Digital Humanities,
Media Studies, Internet
Studies: An inaugural lecture

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Humanities, Digital Humanities, Media studies, Internet studies: An inaugural lecture*

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Abstract: Today's expanding digital landscape constitutes an important research object as well as the research environment for the Humanities at the beginning of the 21st century. Taking this state of affairs as a starting point this inaugural lecture presents a vision for how the digital affects the interplay between four areas which until now to a certain extent have been separated: Traditional Humanities, Digital Humanities, Media studies, and Internet studies. The vision is followed by an outline of how it can be unfolded in concrete activities, in the form of research projects, research infrastructure, and research organisation.

Keywords: Humanities, Digital Humanities, Media Studies, Internet Studies, Web

WELCOME

Ladies and gentlemen, dear members of the Faculty and Department management, dear colleagues, dear friends and family.

1 June 2015 I was appointed Professor with special responsibilities (MSO) in internet research and the digital humanities at ARTS, Aarhus University. Today I would like to draw the big picture of what I intend to do in the professorship.

* The inaugural lecture is scheduled for 28 August 2015. The spoken language of the lecture has to a large extent been kept.

FIGURES

Let us start with some figures. And let us start by looking at nothing less than all stored data in the world. 15 years ago, in 2000, 75% of this data was stored in analog form (paper, film, photographic prints, vinyl, magnetic cassette tapes, etc.), but in 2007 this had shrunk to 7%, and in 2012 only 2% of all stored data was stored in analog form. At the same time, big international social media start to produce huge amounts of data: Google processes more than 24PB of data per day, thousands of times the quantity of all printed material in the Library of Congress, Facebook gets more than 10 million photos uploaded every hour, and over an hour of video is uploaded on YouTube every second. To sum up these figures, let us look at doubling speed. In the first 50 years after the introduction of the printing press, from 1453 to 1503, eight million books were printed, which is approximately the same as the number of existing books before the printing press was invented, thus doubling the amount of stored written material in the world in 50 years. Today digital data doubles a little more than every third year, whereas analog data hardly grows at all (all figures are from V. Mayer-Schönberger & K. Cukier: *Big Data: A revolution that will transform how we live, work, and think*. Houghton Mifflin Harcourt Publishing Company, New York, 2013, pp. 8-9).

These figures may be contested, but the tendency is undoubtedly clear: Within the last decade we have been witnessing a major and irreversible shift from analog to digital material. Either previously analog materials such as parchment, paper, audio, video, and artefacts have been digitised, or cultural, social, political and other forms of human activities that were previously taking place in the analog world are now supplemented or replaced by born-digital activities, stored in digital form only; or the born-digital material is continuously being collected and preserved in research projects or as part of our cultural heritage, thus doubling the born-digital world *ad infinitum* with what can be termed reborn-digital materials. And to this we can add phenomena such as activity trackers, cars and buildings that are not digital themselves, but that come with build-in sensors, scanners or RFIDs and constant online access which creates a flood of digital real-time data, thus enabling the so-called ‘internet of

things'. The result is clear: All in all digital material is growing rapidly, and we have probably only seen the beginning of this.

This growing and expanding digital landscape constitutes the research objects as well as the research environment for the Humanities at the beginning of the 21st century, and we must ask ourselves how this co-existence of an analog and a digital environment where the balance will probably continuously be pushed towards the digital should be conceptualized, how it will affect the Humanities, and to what degree the Humanities will become digital.

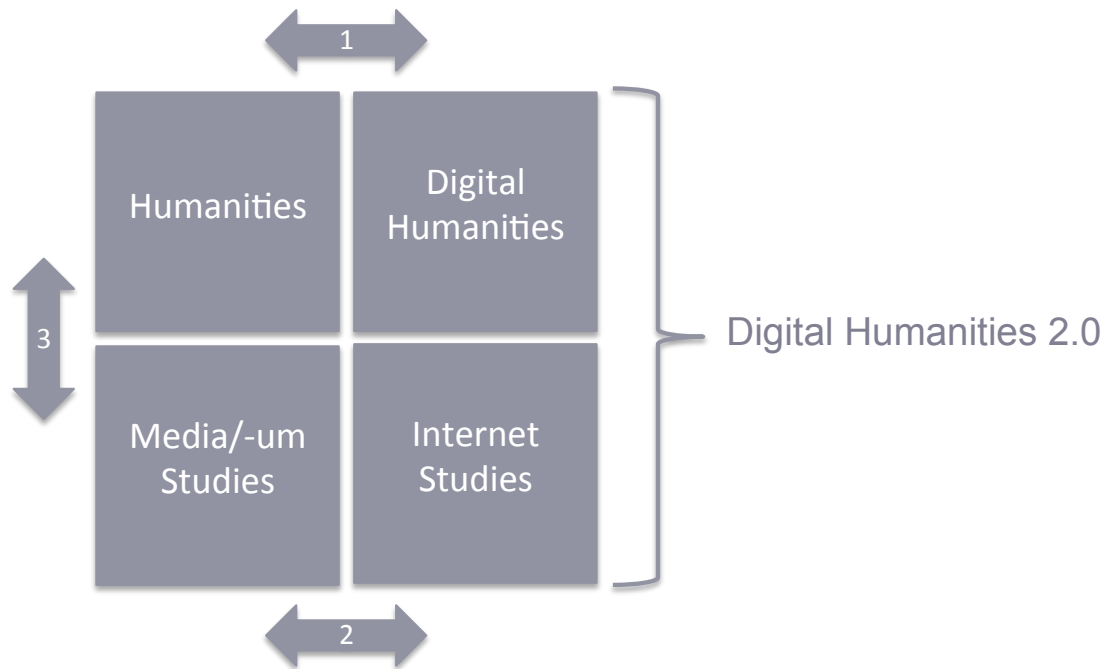
VISION

With the figures above in the back of my head it is my vision to contribute to answering these questions by bridging research areas which until now to a certain extent have been separated: Traditional Humanities, Digital Humanities, Media studies, and Internet studies.

Humanities, Digital Humanities, Media studies, and Internet studies

My argument for bringing these areas closer to each other is that they are all affected by the digital, and they will all benefit from a better mutual understanding of how the increasing 'becoming digital' of our culture, and thereby of our scholarly activities affects the objects of study, the theories, the methods and the analytical tools, as well as the ways of collaborating and of disseminating the scholarly results.

I intend to foster the dialogue between the four areas with the following model as a point of departure. The model revolves around how the nexuses between the four entities can be understood, thus paving the way for what can be termed Digital Humanities 2.0.



Nexus one: Humanities—Digital Humanities

The first nexus is between the Humanities and the Digital Humanities, and there is a reciprocal relationship between the two in two respects.

On the one hand the Humanities tend to become more and more 'digital'. The reason for this is a fundamental change at the very heart of the Humanities during the last decade. As illustrated above the material to be studied in many of the humanistic disciplines has changed from analog to digital—be that digitised, born-digital, or reborn-digital material—, and digitally supported methods have been made possible, and in more and more cases also necessary. Thus, this spread of the digital will probably push the Humanities closer to becoming Digital Humanities.

On the other hand the Digital Humanities must by and large remain the Humanities. The fundamental questions, theories, and methods of the Humanities largely remain unchanged, despite the widespread digitality and the challenges that this raises for the Humanities. The Digital Humanities do not in themselves constitute an entirely new paradigm, but rather they open up an array of possibilities either for doing what was previously done, but now in new ways, or for rethinking well-known practices of the Humanities, for instance by

integrating software supported methods.

What is needed is a well-balanced Digital Humanities which take into account that the foundation of the scholarly activities of the Humanities is fundamentally changed, but which also acknowledge that this fact does not necessarily change the Humanities fundamentally. All Humanities need not become Digital Humanities, but most Humanities will not remain unchanged since they are challenged by the digitality of the object of study in itself or of the digitally supported methods and tools to be used within the Humanities—or both. Therefore, the difference between the Humanities and the Digital Humanities is more quantitative than qualitative, it is a matter of more/less digitality, than of digital/not-digital.

Nexus two: Media/Medium studies—Internet studies

The second nexus is between Media studies and Internet studies, and here there is also a reciprocal relationship between the two in two respects.

On the one hand Internet studies can benefit from including Media studies in a more systematic manner. The internet is a medium, i.e. organised material used for communication, and therefore Internet studies are related to media studies in a very fundamental way, or rather: To 'medium studies', understood as studies of the internet's materiality and its specific characteristics as medium, what I have termed 'mediacy', as opposed to 'media studies' understood as studies of media as institutions, content, and the like. However, this does not imply that Internet studies must become 'medium studies', it rather means that any kind of study of the internet, be that a study of social interaction, content, institutions, etc. must include an understanding of the internet as a medium, since the medium frames the social interaction, for instance, in specific ways.

On the other hand, it will become more and more imperative for Media studies to include elements of Internet studies. The media types traditionally studied by Media studies such as newspapers, radio, or television to a certain extent still exist in analogue form, but within the last decade either these media have been digitised or new media types have emerged in born-digital form only. A large portion of the digitised media uses the internet as a platform for

distribution and interaction (wholly or partly). Therefore, Media studies tend to become more and more entangled with Internet studies; however, this does not imply that Media studies become Internet studies, but rather that the two are becoming closer and closer integrated in such a way that Media studies must reflect the internet as a medium, even when studying other types of media.

The second nexus implies that Internet studies must recognise a strong interdependence with Medium studies, because the mediacy of the internet frames its use, whereas Media studies must recognise a strong interdependence with Internet studies if they want to keep pace with the actual development of the media of our culture.

Nexus 3: Digital humanities and Internet studies

The third nexus is between Digital Humanities (and indirectly the Humanities), and Internet studies (and indirectly Media studies) since they share a common ground in 'being digital' by default. There exist a reciprocal relationship between the two in two respects.

On the one hand, Digital Humanities should include Internet studies. The reason for this is double, first, because the internet is an important tool for analysis, collaboration and dissemination of sources and of results within the Digital Humanities, second, and most importantly, because the internet will gradually become one of the most important types of material to study within the Digital Humanities, either in its online form, or in the growing number of collections of archived internet, especially the web. Thus, scholarly knowledge about the internet will become more and more important within Digital Humanities.

On the other hand, Internet studies will benefit from being closer related to Digital humanities. The reason for this is that Internet studies can broaden their horizon when embedded in a larger humanistic tradition with the digital as an important part of its foundation, and that the many digitally supported tools and methods developed within Digital humanities may help develop Internet studies.

The third nexus entails that Digital Humanities, which until now by and

large have been focused on digitised analogue material can benefit from turning towards born-digital and reborn-digital material (e.g. online or archived internet), whereas Internet studies can be nourished by the insights of the Digital Humanities, be that with regard to fundamental questions, theories, methods, and analytical tools. This interaction of Digital Humanities and Internet studies can be referred to as Digital Humanities 2.0.

From *if* to *how*

In summary, there is a need to rethink the traditional Humanities, the Digital Humanities, Media studies, and Internet studies and their interrelations, and to a large extent this need does not emerge from within the four areas themselves, as something scholars can opt in/out of, but rather it appears to be imposed from the outside, since more and more of the source materials, methods, and tools become digital or digitally supported.

My vision can thus be boiled down to a bold claim: The question is not *if* scholarly studies within the Humanities want to 'go digital', but rather *how*. I consider it my main responsibility as a Professor MSO to reflect upon this *how*: How does the digital affect our theories? Which methods and tools have to be developed? And which empirical analyses can be made? These reflexions will be guided and framed by the model presented above.

RESEARCH

In the following I shall briefly elaborate how I intend to unfold this vision in concrete activities within the coming five-eight years. The activities are planned in such a way that there will be a high degree of synergy between research projects, research infrastructure, and research organisation.

Research projects

The priorities of my research activity will be focused on two interrelated clusters of research projects: Digital Humanities, and Internet studies, in particular internet and web history.

Digital Humanities

Regarding Digital Humanities the aim is to initiate research projects that contribute to the existing Humanities and Digital Humanities traditions by rethinking the history of the digital within the humanities, as well as by investigating some of the fundamental conceptualisations of the Humanities in the light of the challenges produced by the increased 'becoming digital'. I intend to initiate two research projects.

Mapping Digital Humanities in Denmark. This project will investigate how the digital has been conceptualized and transformed to research practices within the Humanities and the Digital Humanities in Denmark from the early 1960s until today, and which role the advent of the internet and the web has played.

Humanities concepts in a digital age. An investigation of how the digital affects core humanities concepts such as 'interpretation', 'source', 'human', 'text', etc. on a general level and within selected disciplines.

Web historiography and Digital Humanities

This project will link the above mentioned projects about Digital Humanities to the following projects about Internet Studies by systematically addressing the theoretical and methodological issues involved in relating Digital Humanities to web historiography, that is the writing of the history of the web and the use of the web as historical source.

Internet studies, internet and web history

Regarding Internet studies, focus will primarily be on internet and web history, but studies of present day web will also be on the agenda. Internationally the field of web historiography is quite new, and my aim is to initiate research projects that contribute to its development with theoretical and methodological reflections as well as with a number of substantial empirical analyses. I intend to initiate a number of empirical projects focused on the history of the web, and a project focused on the collecting of online materials.

Franco Moretti, Director of the Literary Lab at Stanford University, distinguishes between close and distant reading, that is the close reading of individual texts as opposed to the distant reading of a system of texts that transcends the

individual text ("Conjectures on world literature", *New left review*, 1, Jan.-Feb. 2000, pp. 56-58). Although Moretti in the main uses the distant reading approach to the study of large amounts of digital data, I will argue that none of these two approaches are *per se* inscribed or inherent in the digital material. By this I mean that simply because collections of digital material are in many cases big data, which opens the possibility of asking and answering new types of research questions, this does not necessarily mean that they have to be approached as Big Data. The digital format itself does not prescribe a specific reading approach. Thus, I intend to formulate research projects at both ends of this continuum, that is close as well as distant readings of the history of the web.

The History of the Danish web. This project aims at writing the history of the Danish web, from 1994 to 2019, that is the first 25 years. The analytical foci are not decided in detail, but the project will incorporate elements from the following two projects. The project is intended to be the stepping stone for a transnational European project of histories of national web domains.

The history of dr.dk 1996-2006. The aim of this project is to write the history of the national Danish public service broadcaster DR's website from 1996 to 2006, that is the first ten years of existence. This project will include an institutional analysis as well as studies of the website itself (structure, hyperlinks, etc.).

The development of the Danish web domain 2005-2015. The aim of this project is to analyse the historical development of the entire Danish web domain .dk from 2005 to 2015, based on the archived web in the national Danish web archive Netarkivet, and partly by the use of Big Data methods. The project will be conducted in close collaboration with staff from Netarkivet, including researchers, curators and IT developers. In addition, scholars from other disciplines will be involved (for instance linguistics, literature, history). The project will develop an analytical design to be replicated every year, and comprehensive historical analyses are to be undertaken every third year (first time in 2018). In addition to traditional publications results are to be published as a 'Danish Webtrend Index'. It is the intention to collaborate with scholars and national web archives in other countries through the RESAW network (cf. below) with a

view to establishing a 'European Webtrend Index'.

Temporalities of the news on the web. This project aims at making a detailed historical analysis of the semantic elements on news websites with a view to examining which temporalities are inscribed in international news websites, and how this correlates with the widespread assumption that the web accelerates the news. The project is initiated by an idea from my colleague Henrik Bødker, and it will be conducted in close collaboration with him.

Preserving web events—developing a contingency plan. This project is not an empirical project, rather it is about the collecting of a specific type of material, namely online material related to an unforeseen event. The objective is to develop, test and use a contingency plan with a view to collecting, handling and analysing materials in relation to an unplanned event involving the web. The unplanned event constitutes a challenge for archiving institutions as for scholars because much of the material disappear at an unprecedented pace if not archived. Thus, it is crucial to have a contingency plan to help collect the material while still online. The contingency plan will be developed in a close collaboration between Netarkivet, NetLab, and the scholarly communities interested in the event.

Research infrastructure

The Humanities have always depended on research infrastructures such as libraries, museums, and other collections with their buildings, shelving units, catalogues, and the like. But with the advent of the digital existing research infrastructures will probably have to change, and new ones have to be established, in many cases because the material cannot be approached without a digital research infrastructure. In particular, it is important to establish and develop research infrastructures for archived digital sources since they are going to be important sources in the future, and they continue to accumulate.

It is my aim to develop further the existing research infrastructures related to archived digital sources that are already located at the Faculty of Arts, within the framework of the national Danish Digital Humanities Lab DIGHUMLAB, and to facilitate the establishing, integration and development of other digital research

infrastructures. In addition, an important aim is to ensure the embeddedness in national and international research infrastructure projects and to extend already existing close collaborations with the national cultural heritage institutions the State Library and the Royal Library.

It is an overarching goal that the development of research infrastructures is, on the one hand, research driven, that is closely related to the needs formulated by existing and active research communities, and, on the other hand interdisciplinary, since it involves more disciplines as well as IT developers, librarians, and curators.

Within DIGHUMLAB I intend to continue developing the internet research infrastructure NetLab, and investigating the possibilities of integrating NetLab's research infrastructure with IARM.fm, the research infrastructure for the study of radio and audio (later to be expanded to also include television), and possibly later with a research infrastructure to be established for the study of digitised newspapers with a view to establishing a national multimedia research infrastructure, enabling cross-media search.

However, the main activity regarding research infrastructure will be the establishing of a transnational European research infrastructure for the study of archived web materials. The core framework for this will be the group RESAW, 'A Research infrastructure for the Study of Archived Web materials', established in 2012 and initiated by NetLab. The RESAW group is composed of the leading European national web archives, the ALEXANDRIA ERC-project (developing models, tools and techniques necessary to explore and analyze web archives), and research groups using the web archives.

With a view to ensuring that the development of the research infrastructures is research driven, NetLab's activities will continue to be closely related to actual ongoing research projects and active research communities, on an organisational level supported by the NetLab Forum. A similar structure is planned within RESAW.

Research organisation

Regarding research organisation my first aim is to maintain—and to continue to develop further—the well-established international position of the existing organisational units in which my research activities are embedded, that is the Centre for Internet Studies, and NetLab.

A second aim regarding research organisation is to initiate discussions at Faculty level about the establishing of a strong international research environment and organisational unit to attract and unite the competences and initiatives related to Digital Humanities at ARTS, Aarhus University, as well as to initiate new initiatives. I suggest that an interdisciplinary and internationally oriented Digital Humanities Centre is created. With a view to getting the necessary international weight and impact regarding research and funding the creation of a centre is imperative (in contrast to weaker organisational units such as a network). However, it is often seen that existing Digital Humanities research centres tend to be disconnected from the rest of the Humanities, thus creating a demarcation line between the two—if not even an opposition. To square the circle of integrating the digital in the Humanities, and the Humanities in the Digital Humanities, and to do this in a flexible way, I suggest the creation of a Digital Humanities Centre based on double affiliation. Members of the centre must be partly employed at one of the disciplines of the Faculty of Arts, partly employed at the Digital Humanities Centre. This form of organisation will ensure the coherence of the centre over time thus making it more stable than a network, as well as it will ensure an ongoing feedback to the disciplines. The centre is to be a research centre in its own right, including initiating collaborative research projects, being a forum for making cross-disciplinary research applications, hosting international guest scholars, as well as being the hub of existing digital infrastructures. The latter includes being a much needed forum for humanities IT developers.

CONCLUDING REMARKS

As mentioned in the beginning one of the major transformative factors of the Humanities in the 21st century is probably the expanding digital landscape that

constitutes a research object as well as a research environment for many disciplines within the Humanities. This massive growth of the digital does not necessarily mean that analog sources and methods will disappear in the future, but it indicates that although the analog and the digital environments may co-exist the balance is continuously pushed towards a hegemony of the digital.

Before the year 2000, when analog material was still widely used and digitised material was the only form of digital material available, the use of digitised collections, tools and dissemination platforms was an additional choice for the Humanities scholar, who could decide to become a 'digital humanist' or not. This may not be the case in the future. Since more and more of the source material comes in digital form—and in more and more cases in digital form only—opting out of the digital becomes more and more difficult, and the use of digitally supported methods that were previously just a possibility tend to become a necessity when interacting with digital objects of study.

In this sense the future of the Digital Humanities may be that they will simply become the Humanities.

The Centre for Internet Research

The Centre for Internet Research was established in September 2000 with the aim of encouraging research in the social and cultural implications and functions of the internet. More information about the centre and its activities can be obtained from www.cfi.au.dk.

The papers from the Centre for Internet Research

All papers from the Centre for Internet Research can be found on the centres website. As long as in print, copies of the papers may be obtained by contacting cfi@imv.au.dk. Please specify complete address (for the purpose of citation please note that the printed and electronic versions are identical).



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