EDITORIAL SPECIAL ISSUE AUDIOVISUAL DATA IN DIGITAL HUMANITIES

This issue of VIEW provides a critical survey of new digital humanities (DH) methods and tools directed toward audiovisual (AV) media. DH as a field is still dominated by a focus on textual studies (studies of word culture) that are largely "deaf and blind" in their capacity to search, discover, and study AV materials. The mandate to improve these capacities is clear and unquestioned, though the pathways are fecund and numerous. New and emergent tools related to deep learning algorithms are reasonably expected to change this methodological landscape within the digitally accelerated near-future.

Such a welcome promise imposes new demands upon the fields of media studies and media history: we must recognize and develop new pedagogical strengths in areas such as quantitative analysis in relation to "digital hermeneutics".[1] This requires multimodal literacy and new skills that may vary across algorithmic criticism, data criticism, tool criticism, interface criticism, simulation criticism, etc.[2] But artists, humanists, and social scientists will bring their own resonant critical thinking and essential information to the formation of new 21st century research questions within the Audio Visual Digital Humanities (AVDH).

Indeed, AVDH re-articulates the essential dialectic of digital humanities between the close-reading methodologies of the arts and humanities and the distant reading of the computational sciences. Visual and audio culture are inherently complex in different ways from the culture of words on a page. The inter-discipline of media studies is essential to addressing these key differences and their related 21st century research opportunities.

Building commitment toward a future in which computer vision and machine learning will make image and speech recognition ubiquitous is an achievable goal. Media studies and the study of media history will not only contribute a wide range of necessary methodologies, but can contribute via networked scholarship and even seasoned crowd-sourcing (such as access to the wisdom of generations who are not always-already hard-wired) considerable quantities of curated manual annotations to help train and evaluate the machine-learning algorithms in an iterative cycle: such a procedural workflow has been demonstrated by use of the Semantic Annotation Tool (SAT) of The Media Ecology Project, for example.[3]

Students, scholars, archivists, librarians, and other 21st century researchers should be encouraged to develop new skills in both close and distant reading techniques: new artful practices of "scalable reading", critical combinations of "explorative" distant listening and viewing, conjoined with "interpretative modes" of close inspection, and so forth. These adaptive skills to zoom in and out between big data and distinctive expressive nuance will serve as an unquestionably challenging yet copiously generative mandate for many years of rigorous research to come.

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1 We define "digital hermeneutics" as the critical and self-reflexive use of digital tools and technologies for the development of new research questions, the testing of analytical assumptions and the production of sophisticated scientific interpretations. For more information on this approach see: **https://dhh.uni.lu/**

2 On multimodal literacy and hybrid practitioners see Tara McPherson, 'U.S. Operating Systems at Mid-Century: The Intertwining of Race and UNIX', L. Nakamura and P. Chow-White, eds, *Race after the Internet*, Routledge, 2012, p. 21-37.

3 See for example 'Networking Moving Image History: Archives, Scholars, and the Media Ecology Project', *The Arclight Guidebook to Media History and the Digital Humanities*, Charles R. Acland and Eric Hoyt, eds, REFRAME Books, 2016 and Mark Williams and Bret Vukoder, 'The Great Wat at Scale: New Opportunities for Provenance in World War I Collections at the National Archives (NARA)', *Provenance and Early Cinema Preservation, Circulation, and Repurposing*, Paolo Cherchi Usai, Joanne Bernardi, Tami Williams, and Joshua Yumibe, eds, Indiana University Press, forthcoming.

Binary differences in gender are the provisional topic of the article, *Describing Gender Equality in French Audiovisual Streams with a Deep Learning Approach*, co-written by David Doukhan, Géraldine Poels, Zohra Rezgui and Jean Carrive. Based on the analysis of some 700,000 hours of French audiovisual content (television and radio), the article focuses on the amount of time that men and women speak on air, so called *speaking-time*. Via the usage of a specific software, the authors have measured a certain, Women Speaking Time Percentage (WSTP), a statistical estimation that uses automatic speaker gender detection algorithms based on acoustic machine learning models. The article presents a variety of WSTP statistics, presented across channels, years, hours, and regions. Results show that men speak twice as much as women on French TV and on the radio (in 2018). In order to further monitor gender equality in audiovisual media, the authors have accordingly released their tool in open-source.

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B i o g r a p h i e s

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Pelle Snickars is Professor of Media and Communication Studies at Umeå University, (in Sweden), where he is also affiliated with the digital humanities centre, Humlab. His research is situated at the intersection between media studies, media history and the digital humanities, and recent publications include the co-authored book, *Spotify Teardown* (MIT Press 2019). Snickars is currently involved in the EU-funded research project, "European History Reloaded: Curation and Appropriation of Digital Audiovisual Heritage"—**https://www.cadeah.eu/**—and he is also in charge of a new, major research project, "Welfare State Analytics. Text Mining and Modeling Swedish Politics, Media & Culture, 1945-1989"—**https://www.westac.se/en/**—funded by the Swedish Research Council.

Mark Williams is Associate Professor of Film and Media Studies at Dartmouth College and director of **The Media Ecology Project (MEP)**, which is developing a virtuous cycle of new interdisciplinary scholarship about archival media that adds value back to participating archives. He has published widely on media history and historiography, for example in *The Routledge Companion to Media Studies and The Digital Humanities*; *The Arclight Guidebook to Media History and The Digital Humanities*; *Télévision: le moment expérimental (1935-1955)*; *Convergence Media History*; *New Media: Theories and Practices of Digitextuality*; *Collecting Visible Evidence*; *No Laughing Matter: Visual Humor in Ideas of Race, Nationality and Ethnicity*; *Dietrich Icon*; *Television, History, and American Culture: Feminist Critical Essays*; and *Living Color: Race, Feminism, and Television*. He is a co-editor and contributor to *Rediscovering U.S. Newsfilm: Cinema, Television, Archive* (AFI Series, Routledge, 2018).