Challenging Methods for Digital Media History and Artistic Reuse: Feature Extraction in the Sensory Moving Image Archive (SEMIA) project

Christian Gosvig Olesen (UvA), Eef Masson (UvA), Giovanna Fossati (UvA)

The proposed (short) paper reports on ongoing research in the NWO-funded project The Sensory Moving Image Archive (SEMIA), which aims to facilitate the exploration and creative repurposing of two heritage collections: the EYE Film Institute's Jean Desmet silent film collection and the Netherlands Institute for Sound and Vision's NOS news broadcasts. The project will involve the use of software tools for analyzing and visualizing sensory (and more specifically, visual) features and relations.

Our paper will tie in with the conference theme of "Integrating Digital Humanities" by elaborating on the project's objective of nurturing creative and artistic reuse of digitised collections to yield critical, reflexive perspectives on both scholarly research and archival and presentation practice. One of the SEMIA project's key tenets is that the predominant use of metadata, specifically (linked) semantic descriptors, in digital access and reuse restricts users to searching collections by way of prior interpretations. In doing so, the project argues, it prevents them from exploring features that are essential to those users' experience of heritage objects. For instance, one set of characteristics that are insufficiently captured by descriptive metadata are sensory ones, in particular visual features (such as light and colour, shape, or movement) and relations. Furthermore, access to collections so far has focused primarily on the searchability and retrieval of single items, while lasting heritage experiences, but also innovative research, require methods for explorative browsing that draw on the relations between discrete items and entire collections. Arguably, this requires an approach to accessing collections on the basis of principles of explore, rather than search (Flanders). SEMIA aims to achieve this with deep learning methods and retraining of existing neural networks.

By facilitating the browsing and reuse of collections on the basis of sensory features, SEMIA will provide a boost to the practice of users who seek to creatively repurpose collections: artists, the creative industries, but also researchers. For researchers in particular, the presentation will argue, the possibility to source collections based on visual features, rather than by using semantic descriptors, may help to challenge current understandings of how knowledge is produced (in heritage studies, both traditional and digital, and in the digital humanities more broadly), while at the same time opening new avenues for research.

References

"About." *The Sensory Moving Image Archive: Boosting Creative Reuse for Artistic Practice and Research.* 2017. University of Amsterdam/Amsterdam University of Applied Sciences/EYE Filmmuseum/The Netherlands Institute for Sound and Vision/Studio Louter. 12 January 26 , 2018. <http://sensorymovingimagearchive.humanities.uva.nl/index.php/about/>.

Flanders, Julia. "Rethinking Collections." *Advancing Digital Humanities: Research, Methods, Theories*. Eds. Paul Longley Arthur and Katharine Bode. Houndmills: Palgrave Macmillan, 2014. 163-174.

Chávez Heras, Daniel. "The Malleable Computer: Software and the Study of the Moving Image." *Frames Cinema Journal* 1 (2012). Retrieved January 26, 2018. , from <http://framescinemajournal.com/article/the-malleable-computer/>.