Remapping patterns of "big cultural data": from Warburg's *Kulturwissenschaft* to visualization

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> While the explosion of new ideas and methods in cultural disciplines from the 1960s onward affected the subjects being written about and exhibited and their interpretation, one important aspect of our presentation of culture did not change. Books and museums devoted to art, design, media, and other cultural areas continue to arrange their subjects into small numbers of discrete categories – periods, artistic schools, -isms, cultural movements. The chapters in a book or the rooms of a museums act as material divides between these categories. In this way, a continuously evolving cultural "organism" is sliced and segmented into a set of artificial boxes.
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> Lev Manovich,
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> *Visualizing Temporal Patterns in Visual Media*

The Hamburg art historian Aby Warburg's (1866-1929) idea of *Kulturwissenschaft* lends itself to interesting reflections in the context of what, in digital humanities, we call today the technology of linking and the visualization of complexity (Manovich 2009; Lima 2011; Manovich 2012). Numerous are the affinities between Warburg's method of work and the visual developments of semantic web, starting from the idea of connecting discrete areas on the model of Deleuze and Guattari's rhyzome. The physical configuration of the Warburg Library - the largest collection in the world focused on Renaissance studies and the history of the classical tradition - is based in fact on the rhyzomatic model of conceptual and iconographic interconnection among cultural materials, rather than traditional categories and systems of classification. Similarly, the model of map-rhyzome is at the basis of his last project, the *Mnemosyne Atlas,* which blew up the sequential narrative of the bookish kind of logic encouraging a method of visual mapping. By applying the technique of "montage-collision" of images (Didi-Huberman/Michaud 2007), the "atlas" proved to be the best representational form to emphasize iconological patterns throughout history. Both the Library and the *Mnemosyne Atlas* strongly rely on "contact, and movement, between different milieus, and registers, between areas that are usually thought of as distinct and discrete" (O' Sullivan 2006: 17). Interestingly, the mapping between discrete data and a visual representation is precisely the aim of "information visualization" or *infovis* (Manovich 2009a). The affinity between Warburg's method of work and recent forms of visualization of cultural data suggests then that digital technologies could enhance the resources of the Warburg Library in ways that could not only reflect but also expand the original plan of his founder. This paper will therefore concern the potential reconfiguration, or "remapping", of the Warburg's library resources in the digital environment.

The visualization of large collections of "big cultural data" has been one of the main objectives set by researchers in digital humanities. Yet, as Lev Manovich has highlighted in his article *Museum without Walls, Art History Without Names: Visualization Methods for Humanities and Media Studies* (2012), in the first decade of 21st century projects mainly focused on either textual data, such as literature, historical records or social media, or spatial data, such as locations of people, places and events. In other words, visual media had remained "outside of the computational paradigm" (Manovich 2012). Today, computational tools and semantic web allow the visualization of networks and complex patterns in large collections of images and texts. The purpose is not only that of expressing data visually, but especially to discover unknown patters and connections. Although visual mapping is then a relatively new phenomenon in digital humanities, it has already led to the development of multiple practices and new research questions. The main one is why if we are currently fascinated with the idea of flow, evolution, complexity, heterogeneity, and cultural hybridity, our presentations of cultural data do not reflect these ideas (Manovich 2009b). Consequently, another key question is whether visualization can support – and hopefully augment – the key methodology of humanities in this direction. While this can find different answers depending on the aim of our research, there is one big dilemma we face when dealing with "big cultural data" and this is how to combine "microscopic and telescopic vision, close reading and distant reading – "reading" the actual artefacts and "reading" larger patterns abstracted from very large sets of these artefacts" (Manovich 2012).

These questions seem to be very much in tune with Warburg's spirit and idea of cultural history. His method of work revolved around the recognition, through associations, of patterns in the context of flow, evolution, complexity, heterogeneity, and cultural hybridity. With this in mind, the spatial configuration of the Library resources was conceived as to suggest, through physical proximity, potential connections between cultural materials. The recognition of patterns was just one of Warburg's main concerns; in fact, he especially reflected on the representation of such patterns. In this respect, the *Mnemosyne Atlas* can be considered as an early technique of visualization. By drawing upon the resonances identified above then, this paper will investigate the ways in which linked data and computer graphics are likely to affect the process of knowledge production represented in paper format in the Warburg Institute Library. How can digital technology support then – and hopefully augment – Warburg's methodology?