Digital Humanities Lecture Abstract

Balancing computational means and humanities ends in computational musicology

Frans Wiering, f.wiering@uu.nl

Department of Information and Computing Sciences, Utrecht University

Throughout the world, music is one of the main forms of cultural expression, and many people define their identity to a considerable extent by the music they make or listen to. It is therefore not surprising that music was one of the first cultural artefacts to which, around 1950, computational methods were applied. Simplistic as these attempts at generating and classifying music may seem to us now, they gave rise to a vibrant new research area, soon labelled 'computational musicology,' that continues to exist until today. One sign of the liveliness of this interdisciplinary area is the proliferation of names and approaches, some of them studying music in a rather technological manner (e.g. music information retrieval), while others do so from a primarily humanities viewpoint (e.g. digital musicology). Regardless of the exact approach chosen, one of the most difficult challenges has been to balance requirements of technical soundness on the one hand, and of musical relevance on the other. Since this balance is of general interest in Digital Humanities, I will take this as the focus of my talk rather than the technicalities of music processing.

In doing so, will discuss some of the highlights from the history of computational musicology, dealing with issues such as comprehensive cataloguing of musical heritage, corpus creation and fully-automatic music printing and analysis. These topics continued to dominate until the emergence of the Internet, mass digitization and search technologies in the mid-1990s. The boost these new developments provided is most evident in the blossoming of music information retrieval (MIR). MIR aims at making all music accessible to all people in a way that suits all their needs. Well-known

services such as Shazam are products of MIR research. Even though much MIR technology is not specifically targeted at creating musical insight, computational musicology has benefited a lot from it. Among other things, it has enabled certain forms of audio-based research, for example into performance style. In several MIR projects based at the Department of Information and Computing Sciences of Utrecht University, we have closely collaborated with musicologists to design search engines for music, paying particular attention to careful modelling of musical knowledge and relevance of technology to musicological work processes.

The handling of the balance between technology and humanities in something computational musicology could contribute to Digital Humanities at large. In other respects it seems that computational musicology can learn much from Digital Humanities. Computational musicology appears to be first and foremost a separate subdiscipline within musicology, whereas Digital Humanities seem much more a basic skill of a growing proportion of humanities scholars. Also, computational musicology is still mostly about fully-automatic processing of musical information and not so much about creating and using interactive tools that serve the needs of the musicological user. I am convinced that if we manage to address these issues, computational musicology will have a great future.