

Patterns in Ragtime: A computational study in Digital Musicology

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Investigating patterns in large corpora of humanistic material with the help of computational methods lies at the heart of Digital Humanities. In this paper we present our computational corpus-based analysis of patterns in a collection of 11000 digitized Ragtime files through which we seek to investigate fundamental questions on the identity of Ragtime. Musicologists have described Ragtime as a musical style that presents thorny problems to musical scholars, since it is a hybrid of many different styles and origins. Moreover, so far musicological studies have concentrated on analyzing the pieces by Scott Joplin, James Scott and Joseph Lamb, who are considered to be the three main composers of the Ragtime era. However, recent investigations argue that this leads to a biased view on Ragtime as a genre, since the works of the three composers cannot be taken as being representative for the entire genre. We seek to overcome these biases with an investigation of the RAG-corpus¹ comprising ragtime pieces from the 1890s to present. We investigate rhythmic patterns that are considered to be characteristic patterns for the style by musicologists, and how they have evolved in ragtime over time. We show that certain patterns become more important during the evolution of the style. These findings are in sync with observations from related musical styles, such as jazz, of the same time period. Hence, we demonstrate how the investigation of musical patterns within Digital musicology opens new ways of investigating musicological hypotheses on genre, which complements the analysis of single pieces carried out by musical scholars by hand. This is not only of interest for musicologists, but also for the many Ragtime lovers around the world who share their Ragtime files via the Internet and vividly discuss questions related to the identity of Ragtime. Moreover, we will show how the potentials and challenges we face in our pattern search within Ragtime relate to core issues of how pattern search in humanistic material in Digital Humanities allows new questions in the humanities.

¹ The Ragtime Admirers Group-collection: a collection of MIDI files that has been produced, organised and collected by many Ragtime musicians and lovers all around the world and shared via the Internet.