A Search and Retrieval Based Approach to Music Score Metadata Analysis

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as part of the collaborative doctoral degree and/or fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

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ABSTRACT

Music metadata is the body of information that music generates, or leaves behind. It is the notes written on an orchestral score by a composer hoping to ensure his or her longevity; a jazz lead sheet or pop music chart that gives musicians basic instructions of what can be played; the informational encoding of bytes on storage devices (such as CDs or MP4 files), that can be used to capture music recordings; the catalogues of information about collections of recordings held by music streaming services.

This thesis will chart the use of this metadata in creating models of music theory and analysis, and its use in creating prescriptive rules around music practice and creation. It will examine new approaches being taken in music score metadata search and retrieval to understand how these might be leveraged in order to allow a rethinking of music score metadata use. Such approaches can reposition music theory and analysis frameworks as sites of dynamic search and retrieval, which can be highly adaptable to an underlying corpus of music scores.

The dissertation features an extended case study demonstrating how such an approach can be applied to ten Keith Jarrett jazz solos that have been transformed into a single large dataset. It will show how this can provide deep insights and new knowledge into Jarrett's improvisational style, and uncover structures that are not possible to find using more traditional models of music analysis.

Reimagining the music score as metadata challenges both how music theory can be understood, and how it can be presented. In responding to this, the dissertation will show how music theory can be viewed as a crowd sourced phenomenon, related to an underlying corpus and other users. To this end it will present a software application, Stelupa, a nuanced search engine to explore music score

metadata, that leverages off many of the features found in other modern music metadata applications such as Spotify and iTunes.

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