Tutorial - Collaborative approaches to discourse: Music scholarship using performance recordings and Linked Data annotations

Lewis, David

david.lewis@oerc.ox.ac.uk
Oxford e-Research Centre, University of Oxford

Page, Kevin

kevin.page@oerc.ox.ac.uk
Oxford e-Research Centre, University of Oxford

VanderHart, Chanda

vanderhart@mdw.ac.at
mdw - University of Music and Performing Arts Vienna, Austria

Weigl, David M.

weigl@mdw.ac.at
mdw - University of Music and Performing Arts Vienna, Austria

Introduction

In the arts and humanities, the evidence on which we build our discourse comes in a multitude of forms and formats – not just text, but a wide range of images, sound and video recordings and specialised information formats. The elements that we discuss are often concepts and ideas that this evidential material may embody and exemplify, but which are not wholly contained by that material. For example, a musical theme can occur multiple times in a piece, in multiple forms and, for each of those occurrences, will be found in recordings and scores made from different versions of the work.

Traditionally concerned almost exclusively with score study and the deification of the text, musicological analyses increasingly consider a wider set of properties, particularly those of performance. These include musical structures at many different levels of abstraction, including performance study, interpretation, questions of agency, socio-political and historical contexts and other forms of extra-musical evidence (such as reception history and prior musicological scholarship). Current work in musicology shares this need to incorporate broader aspects and contexts into the analysis of objects of interest, beyond the traditional narrow focus on 'text', with various branches of the humanities.

The study of these facets, alongside their complex interactions, is enriched by scholarly collaboration across disciplinary boundaries and requires a suitably flexible, rhizomatic approach to modelling. Where models such as FRBR address issues of abstraction at the level of the work or book, there has been little explicit work on the equivalent for internal musical structures. Building on technical and conceptual standards, we have developed a Linked Data model that supports the annotation of units of musical content at the level of abstraction appropriate to that annotation. Our model was devised in close collaboration between musicologists and digital modelling experts through intensive workshopping, implementation and testing.

By building this model using Linked Data, we enable both evidence components, as well as scholarly observations and assertions established through music research to be distinctly expressed, addressed, and interconnected. These properties allow the created data to be examined, reassessed, and reinterpreted in an ongoing scholarly conversation, inviting lively collaboration as well as contributions from diverging perspectives.

Our development of the Music Annotation Ontology arose from the Beethoven in the House project, which examines music in multiple arrangements – particularly nineteenth century concert music adapted by contemporaries for a home environment. In the first part of our tutorial, we use practical group exercises to explore the semantics of music annotation, based on the project's use cases. We go beyond models that indicate co-ordination of 'the same content' in different media to ask questions about the sorts of relationships and concepts that scholars and performers might want to talk about.

In the second part of the tutorial, we challenge participants to employ the model in hands-on exercises focussed on recorded music materials from the New Year's Concerts of the Vienna Philharmonics, providing a glimpse into the methods developed within Signature Sound Vienna, an ongoing research project at the mdw – University of Music and Performing Arts Vienna. During this exercise, participants will make use of software tooling supporting close listening and mark-up of aligned collections of performance recordings. The resulting annotations feed into the Linked Data model introduced in the first half of the tutorial, allowing participants to compare and contrast their discoveries with those of their colleagues, demonstrating how this approach facilitates a collective scholarly discourse.

Beyond the context of classical music study in which it is demonstrated, the presented model has wider applications to the arts and humanities wherever objects of interest are most appropriately understood in connection with their surrounding layers of discourse and analysis. Having explored the model and its application, the tutorial will close with a discussion of these extended scenarios, motivated by attendees' own projects and research.

Tutorial audience

The tutorial will be a practical exploration of Linked Data modelling and annotation as applied to multimedia materials.

The tutorial will use musical materials describing performances, which are of particular interest to musicologists, but from which general principles can be applied to other fields involving performance and/or using multimedia sources. No specialist musical knowledge is required, although an interest and enthusiasm for music performance is welcomed!

The tutorial will be viable with a group size up to approximately 20 attendees, based on past experience of modelling workshops at DH and elsewhere. We would expect the number of registrations to be in the range of 15-20.

Special requirements for technical support: the instructors will require an audio/video setup capable of displaying material from their laptops *and* playing music from their laptops through a speaker system to the audience. Attendees should expect to bring laptops *and headphones*. The digital tools used during hands on ses-

sions will be web-based, and will be re-usable by participants in other project contexts.

Outline schedule

This half-day workshop is divided into two parts, with a break in between.

Part 1. Modelling music annotation to accommodate multiple versions, media and performances (90 mins)

Presentation: Motivation and worked example
Group exercise 1: ontology design
Group exercise 2: instance data testing
Presentation: The music annotation model

Part 2. Applying the model for studying performance (90 mins)

Presentation: Setting out some research questions
Group exercise 1: Exploring music performance through recordings
Group exercise 2: Exploring musical style through recordings
Presentation: Expanding the scope
Questions and feedback

Instructors

David Lewis is a researcher at the University of Oxford e-Research Centre and lecturer in Computer Science at Goldsmiths, University of London. Trained in historical musicology at Kings College London, he has spent the last 20 years researching on a wide variety of digital musicology and digital humanities projects, currently the 'Beethoven in the House' project. He is particularly interested in digital approaches to music that remain sensitive to its historical, theoretical and social context. David has taught on the Digital Humanities at Oxford Summer School since 2015, on DH summer schools in Philadelphia and Bonn, and on workshops and tutorials at the DH and Music Encoding conferences. david.lewis@oerc.ox.ac.uk

Dr. Kevin Page is a Senior Research and Associate Faculty at the University of Oxford e-Research Centre, where he is the UK principal investigator of the 'Beethoven in the House' research project, previously 'Unlocking Musicology' and a co-investigator of 'Digital Delius'. His research on computational methods for the organisation and analysis of music and musical information has, for several years, aligned with an interest in their use for digital musicology. In 2014 Kevin co-founded the international Digital Libraries for Musicology conference, and has led the Digital Musicology course at the Digital Humanities at Oxford Summer School since instigating it in 2015. At Oxford he teaches Digital Musicology and Linked Data courses as part of the Masters programme in Digital Scholarship.
https://eng.ox.ac.uk/people/kevin-page/ / kevin.page@oerc.ox.ac.uk

Chanda VanderHart, PhD is a musicologist & pianist working in three departments at the mdw – University of Music and Performing Arts Vienna (Department of Music Acoustics – Wiener Klangstil (IWK); Lecturer Institute for Musicology and Performance Studies (IMI) and Senior Lecturer at the Anton Bruckner Institute of the mdw- University for Music and Performing Arts Vienna. She is currently a research assistant for the FWF project "Signature Sound Vienna", completing the monograph "Lieder and Performance in 19th Century Vienna; Contexts and Perspectives" and teaching graduate level musicology courses focused on music, performance and their shifting cultural currencies at the institute for musicology. VanderHart has four performance degrees from the USA, Italy and Austria and a PhD in historical musicology. https://iwk.mdw.ac.at/chanda-vanderhart/ / vanderhart@mdw.ac.at

David M. Weigl, PhD is a Postdoctoral Research Associate at the Dept. of Music Acoustics – Wiener Klangstil at the mdw – University of Music and Performing Arts Vienna, and principal investigator of Signature Sound Vienna, a research project funded by the Austrian Science Fund. With a PhD in Information Studies from McGill University, he has conducted postdoctoral research at mdw and at the University of Oxford e-Research Centre applying semantic technologies in music industry and music scholarship contexts. He has taught on the Digital Humanities at Oxford Summer School since 2015, the Edirom Summer School in 2019, and has (co-)organised and presented workshops and tutorials at the Joint Conference for Digital Libraries, and at the International Society for Music Information Retrieval, Music Encoding, and the Extended and International Semantic Web conferences.
https://iwk.mdw.ac.at/david-weigl/ / weigl@mdw.ac.at

Acknowledgements