

Editor's Note

DANIEL MÜLLENSIEFEN
Goldsmiths, University of London, UK

NIELS CHR. HANSEN
Aarhus University, Royal Academy of Music Aarhus/Aalborg, & University of Jyväskylä

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DEFINING empirical musicology as a scientific discipline or an area of study is currently not an easy task. The technology for producing, storing, processing, and investigating music is changing at a rapid pace. Clark and Cook already remarked 20 years ago (Clark & Cook, 2004) that most musicology handles data and could therefore be considered empirical in some way. Yet, their observation seems to be even more true today, given the handling of music in data contexts that has become so ubiquitous. But if it is not the nature of music as data that distinguishes *empirical* from other types of musicology, what then is its defining feature? We are not answering this question today, but will leave to address it in an Editor's Notes in one of the upcoming EMR volumes. However, this issue of *Empirical Musicology Review* illustrates clearly by example how empirical musicology can manifest itself.

The target paper by Temperley posits three hypotheses about the compositional practice of tonal music. The hypotheses derive from a connection of music theory to human cognition, and Temperley uses large amounts of music data (i.e., corpora of classical themes and European folk songs) to provide evidence for the hypotheses. Here, inference is drawn from music that is transcribed as data to general regularities of how the human mind processes music. The commentary by Jon Prince praises Temperley's approach but also suggests several extensions that would contribute to its validity and that could potentially increase its scope and usefulness substantially.

The type of data used by Frank and collaborators is different. They conduct psychological experiments with modern-day listeners to investigate the degree to which these listeners can perceive the specific emotional intention content that composer Johann David Heinichen created explicitly in short musical examples about 300 years ago. Would it not be interesting to see whether modern listeners can decode emotions that a composer from a very different time put into his music? The data of this target paper consists of compositions, the composers own writing regarding his compositions as well responses from participants in a psychological experiment and the inference is about the stability vs. variability of emotional meaning in music over time. The commentaries by Fiedler and Albrecht highlight the cleverness of the experimental question and implementation, but also point to difficulties and limitations that come with the approach.

North and Krause focus on the music of the Beatles as data in their target article. Instead of transcriptions, they use numerical features that are directly computed from audio recordings. Some of these features describe musical attributes, such as acoustiness, fastness, loudness, key, and mode. Other features are more high-level and rather related to cultural or emotional attributes, for example, danceability, energy, or valence. The authors use these feature data to identify statistically in what ways the recordings of the Beatles differ from the other popular music recordings of the 1960 and whether the specific combination of musical features can be considered innovative and might ultimately help to explain the Beatles' enormous popularity. The elegant reanalysis and commentary by Condit-Schulz cast some doubts about whether the innovative power of the Beatles can really be captured by a few and relatively simple features derived from audio recordings.

This issue of *Empirical Musicology Review* concludes with a commentary by de Clerq discussing the approach for sampling in ways that address racial, ethnic, and gender biases in empirical music research proposed by Shea in EMR Vol. 17(1). The target paper from the previous issue as well as de Clerq's commentary treat musical repertoire as databases and explore principles from population statistics to refine the empirical methodology that researchers can adopt to study music.

In sum, the common denominator of all contributions of this issue is that they use music-related, quantitative data as the basis for scientific investigation. But it is not just the data that makes these contributions empirical. It is also the specific ways and rules in and by which they draw inference from the musical data to the hypotheses or substantive questions of interest. The use of statistical methodology and the framing of a study as an experiment with a limited number of possible outcomes and an *a priori* unknown result are crucial features in this respect.

REFERENCES

Clarke, E. & Cook, N. (Eds.). (2004). *Empirical Musicology: Aims, Methods, Prospects*. Oxford: University Press. <https://doi.org/10.1093/acprof:oso/9780195167498.001.0001>

