

Introducing a new test battery and self-report inventory for measuring musical sophistication: The Goldsmiths Musical Sophistication Index

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ABSTRACT

Background

There is a gap in the range of psychometric instruments that measure musical expertise and behaviour. On one hand, there is a long tradition of established tests of musical ability or achievement often from a background in western art music education (e.g. Gordon, 1989). On the other hand, a number of questionnaire inventories have been published in recent times (e.g. Werner, Swope, & Heide, 2006) that capture a breadth of musical experiences and engagement. However, so far there seems to be no psychometric instrument that assesses the level of expertise across a range of basic musical tasks that are at the core of common musical activities in modern western societies other than formal music training.

Aims

The aim of this talk is to present the Goldsmiths Musical Sophistication Index (Gold-MSI) as a research tool to capture different levels of musical sophistication in the non-specialist population that may develop through sustained and in-depth engagement with music in various forms, such as listening, playing, or processing music in other cognitive or emotional ways. This is the first time that the content of this research project is presented to a scientific audience.

Method

A self-report questionnaire as well as an initial set of four different tests of music perception and production abilities have been designed based on established findings from music cognition research: a) sorting very short (400ms) music clips by timbral similarity (akin to Gjerdingen & Parrot, 2008), b) perceiving and c) producing a beat to a musical excerpt (akin to Iversen & Patel, 2008) and d) detecting schematic and veridical changes in a melodic memory task. A version of the Gold-MSI has been implemented online by the BBC and has generated datasets from more than 120,000 participants.

Results

Analysis of the data from the self-report inventory generated a statistical model with a clear multi-dimensional structure for musical sophistication delineating e.g. musical training, emotional usage of music, and perception and production abilities. Furthermore, these self-reported multidimensional profiles of musical sophistication are related to performance on the four perception and production tasks.

Conclusions

The Gold-MSI, as a new tool to the research community, measures the level of musical sophistication in the non-specialist population on several distinct dimensions. The question inventory and the ability tests have been psychometrically optimized and come with data norms from a western sample of more than 120,000 individuals. The Gold-MSI is fully documented and free to use for research purposes.

Keywords

Musical ability tests, psychometrics, musical sophistication, musical experience, musical expertise

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