Musical structure : an interdisciplinary notion and its significance for music analysis

Florence Levé*[1,2], Jean-Marc Chouvel[3], Nathalie Hérold*[3], Frédéric Bimbot[4], Mathieu Giraud[5], Sylvain Marchand[6], Joséphine Calandra[3], Sébastien Choplin[1], Thibault Daraignes[3], Gérald Guillot[7,8,9], Emmanuel Leguy[5], and Yann Teytaut[5]

[1]Laboratoire MIS, UR UPJV 4290 – Modélisation, Information et Systèmes - UR UPJV 4290 – France
[2]Centre de Recherche en Informatique, Signal et Automatique de Lille (CRIStAL) - UMR 9189 – Ecole Centrale de Lille, Université de Lille, Centre National de la Recherche Scientifique : UMR9189, Centre National de la Recherche Scientifique – France
[3]IReMus, UMR 8223 – Sorbonne Universités, UPMC, CNRS – France
[4]CNRS, IRISA – Univ Rennes, CNRS, IRISA – France
[5]Centre de Recherche en Informatique, Signal et Automatique de Lille (CRIStAL) - UMR 9189 – Ecole Centrale de Lille, Université de Lille, Centre National de la Recherche Scientifique : UMR9189, Centre National de la Recherche Scientifique – France
[6]L3i / Université de La Rochelle – Laboratoire L3i – La Rochelle, France
[7]IReMus, UMR 8223 – Sorbonne Universités, UPMC, CNRS – France
[8]ARTES, UR 24141 – université Bordeaux Montaigne – France
[9]Eco-anthropologie, UMR 7206 – Musée de l'Homme – France

Abstract

The term "structure" is widely used in the field of music theory and analysis, but also in related fields like computer science, linguistics or cognitive sciences. However, this concept does not necessarily cover the same meaning according to the musical and/or scientific backgrounds involved. For example, the "structure" referring to a melody, a whole musical piece, an audio file or another digital representation of music, can differ in nature and exhaustivity. The structure is often incomplete, not allowing the recomposition of the musical piece, at least at the audio level. Furthermore, musical structure often implies a certain relation to time while a structural representation of sound can also be considered like a spatial metaphor.
The *(ANONYMIZED)* interdisciplinary project – funded by the French National Research Agency – aims at analyzing music from a multi-scale perspective and at proposing innovative ways of describing perception and interaction mechanisms with musical structure. It is committed to converge towards some agreement on trusted notions and terminology, independently from a specific musical style or genre, to account for the diverse schools and approaches used to represent musical structure. The notion of structure is crucial in this context, as a generic articulation between sound objects, formal and narrative components, as well as logical processes. The way a structure occurs, expresses itself, and is cognitively unveiled remains a pending topic. The need for a strong theoretical basis on this issue is also a required premise for the realization of new computer representations of music, covering

*Speaker

the whole range of scales implied by the complex relations building a structural consistency, from the sound sample level to the global "form".

While a review of former conceptions of structure appears essential, this collective proposal intends to underline the importance of approaching the notion of structure as a process and a way of understanding the musical flow in between its paradigms and its grammaticalization. It also aims to better understand the conceptual continuity between the notions of structure, cycles, or rhythm, and of the relations between duration, similarities and scales, these aspects appearing strongly correlated to various structural levels of musical "objects". First results of the *(ANONYMIZED)* project will be presented on ways to represent structure diagrams involving time/duration, along with their impact on music analysis in the context of various stylistic configurations.

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