

Performance and Interpretation

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The study is related to the theory of musical interpretation and its performance. Performance means the transformation of a priori abstract data into a sensorial environment of human space-time. Performance transformations from symbolic to physical reality are described by performance vector fields. Such fields are shaped by specific performance operators the arguments of which are weight functions issued from music analyses. The performance is based on parameters as onset, duration, pitch, loudness, instruments and gestures. In this study shows inverse performance theory, that deals with the reconstruction of system parameters that lead to a given performance.

Music reality has basic levels as: mental, psychological and physical. While performing, the relation between these levels is a very dynamic one. Music performance is expression of content, and it needs rhetoric categories for shaping the abstract facts in the sensory space of audio-visual-gesture reality. Music has its symbolic reality and the score contains a number of hints of how to perform.

The manifold of timbres is huge and mathematically very complex. Geurino Mazzola concluded by a personal remark concerning control in music:” It is the music which plays you, when it really lives”. So control is not centered on the technical skill and the engineering of sound production. The space of a common piano score is four dimensional and we can not pretend to control the configuration of thousands of points in such a space.

Artistic performance is the physical execution of a work of art, maybe written as poem or piece of music or as sculpture. We can not analyze of a work on the level of reflection because (1) the existential level of physical execution is different from the mental level of score symbol, and (2) the compact sensual presentation of a fact has a degree of evidence which can not be paralleled by intellectual meditation.

Performance theory divides into two main concerns: structure theory and semantic theory. Structure theory deals with the precise description of a given performance and semantic theory deals with understanding the rationales of a given performance. There are three rationales for performance: emotion, gesture, and ration. The gesture motivation for a determined instance of performance is complex. Rational performance is based on music analysis which is susceptible of quantitative representation. RUBATO use numerical weight functions which account for the analytical relevance of score events. A metrical weight is a numerical function on the onsets of a given composition which measures the metrical and rhythmic importance of a given onset.

The goal of rational performance is to express analytical data on the level of dynamics, articulation and intonation. The rational performance is an instrumental interpretation of the analytical interpretation of a given score text. A number of performances have to be executed to allow a faithful representation of analyses. Adorno`s and Walter Benjamin`s method of “micro logical performance “asks for infinite interpolation. And the machinery enables performance shaping of infinitesimal precision. In Celibidache`s initial magic, the performance field Ts can produce performance if initial performance values are available. Initial performance is a dramatic phenomenon

since it specifies the point where the fictitious reality of the score is anchored in the physical reality of performance. Initial performance is a shifter, it relies the factious symbolic work to its full fledged realization by the artist, the conductor, and the orchestra.

Not all music parameters play the same role in performance. In a richer context of musical parameters, one may not only stick to the representation of tone parameters, but also enrich the parameters in such a way as to yield a formal description of gestures.

Artists have to practice, to rehearse, to develop their valid performance through performances, starting with the mechanical performance of the given score. It is a genealogical tree, starting from the mechanical prima performance, and successively splitting into performances of the scores parts and generated from the previous performances. These performances are loaded with selected weight functions. John Sundberg, one of the fathers of modern performance theory has been termed “performance grammar” to the way how a given bunch of analytical weights acts on the successive refinement of performance on the stemma.

Performance research is the search for systems which generate interesting performances, and this is what a grammar should look like. Stange-Elbe has studied the possibilities to generate interesting performances of Bach by use of performance operators which are implemented in Rubato’s performance. It uses the given weights and tries to produce a performance which should sound like what you expect from experience and tradition.

The subject of inverse performance theory is to understand the mechanisms which could lead to a control performance. Roberto Ferretti has calculated the algebraic varieties of parameters which lead to some parameters to distinguish different performances. The situation of performance is like mapping from a more or less abstract and static piece of knowledge onto an image that lives in the human sensorial reality of physics. The essential of such a mapping is that the abstract score content should be transformed in such a way that the understanding of its contents is optimized.

Visual performance of music databases is a difficult task because:(1) the data structure is not a priori in a geometric shape, (2) the geometric shape is not a priori adapted to human 3D vision, (3) Objects may be composed of other objects. The quality of visual performance is essentially tied to the requirement that it should ease one’s access to the information which generates knowledge.

The instantiation of knowledge involves navigation on ordered spaces. The visual performance must reflect linear orderings. Performance of high dimensions is known as the limit type, which means that the entity of a database is determined by a sequence of attribute objects.

The Satellite data model is designed for compound multimedia objects. A Satellite object is a compound structure which is built recursively from sub objects and may show animated behaviors, produce sounds, respond to data glove interaction, and have a visual appearance with color, transparency, texture and shape.

The study had an overview of the important points in musical performance theory; also it covers an extension of the artistic performance concept to performance of more general database. Performance turns out to be crucial process to whatever abstract knowledge data humans try to understand.