

NEUROBIOLOGICAL SPATIAL CODES ARE USED TO STEER MUSICAL FORMS

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ABSTRACT

Musicians have dealt with different ways to transform biological information into musical ideas. For the construction of music biological achievements have been either used as source of inspiration and reservoirs of material for musical purposes, or, even more extensively, in processes of data sonification.

Here I describe a novel strategy in which sets of neurobiological spatial data are translated into relational structures able to generate sound objects by consistent control of the sound parameters. Firstly, indexes of the sound parameters (such as pitch, duration, envelope, dynamics) were never derived from fixed transcriptions of data properties. The theoretical groundwork of this procedure to obtain sources for sound construction was to develop spatial descriptions of data interrelations. Secondly, the process of exploiting these frames to model - or sculpture - sound objects required a profound rethinking on what exactly are the relevant compositional parameters for this music. Examples will be given from microformal aspects of sound aggregation to large-scale designs of sound spatialization.

Main advantage of this new approach is to allow equivalent processing of the different sound parameters being respectful of their individual properties. The described translation strategy is also potentially able to contribute to the development of a unitary view of the sound parameters and the micro- and macroformal aspects of the compositional process.

All neurobiological data here referred originate from experiments performed using standard anatomical techniques and results of studies on these experimental materials were all published. The strategies of brain data translation here outlined have been actualized through several musical works which have been produced, released and performed in a quite large series of live (festivals, concerts) and recorded (CD productions, radio broadcastings) conditions.

Keywords: sound coding, music composition, brain data translation.