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Vuza serialism. Musings on music and mathematics

ABSTRACT

Who organizes something has to calculate, including one who organizes sound events. Who makes music organizes sound events; so who makes music has to calculate. Calculating sound is one way of relating to it; but making music means relating to sound in many more ways than just calculating. Hence, there is always a close relation between music and mathematics. But there is also a huge variety of options how important or not mathematical calculus can be in making music. Where one might expect a relation like: the more calculus, the less emotion (or expression), reality proves otherwise – not only in Bach, but he is a prime example.

In my presentation I would like to venture into the relation between music and mathematics with a practical example of my own – a short composition of mine where I experimented with an extremely constructivist, calculating approach to making music. Starting from a structure of the kind developed by mathematician Dan Tudor Vuza, and used by Violeta Dinescu in one of her recent compositions, my experiment consisted in applying the structure more radically, so as to derive even the pitches and durations from it. This is a somewhat similar step to that from dodecaphonism to serialism; and similar to serialists, I had to ask myself: How far can I go this way, and still make music?