Sequenza III, spatialized

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Music, as a time and space dependent progression of sound is strongly associated with the acoustical character and the dimensions of the performance room. Using these dimensions by spatializing the music, intensively related to its content, will enrich and widen the awareness and experience of the music. In the spatialized edition of *Sequenza III*, a composition of Luciano Berio "per voce femminile", the vocal sound actively adopts the room. The complex modulations, the spectra, colours and bizarre changes of the voice determine and define the movements and seeks for its local positions itself. The spatial wandering of the voice is driven by its music's inherent richness, which enables to unfold and develop the vocal's actions and alterations spatially.

The human voice as a musical instrument is to be considered as one of the most subtle mean of musical expression. Versatile and dynamic, provoked from the most inner part of the human, can reach the listener completely without any mechanical or electronic links. The declared aim of this edition is, to make the immediacy of the voice audible three-dimensionally. Sequenza III contains a maximum of diversity and expressiveness that can unfold itself spatially. The score's most important instructions are emotional hints and determinations, transferred by the voice's powerful expressiveness, which has now a spatial counterpart.

Fig. 1: The score of Sequenza III has been divided in clear-cut parts with a distinct musical expression. For spatialization a pair of audio descriptors is specified for every part.

The immediate vocal-to-space relations give the sound segments among each others a separated, locally related spectra, Fig. 1. The pairs of descriptors, used for spatial movements, have been activated at certain time points to match the defined parts of the score. Counting from above the numbers are consistent with the numbers of the distinguished parts, as defined in the score. Therefore, the vocal expression is decentralized, the movements perceived by the spatial cognition supports the auditive perception.

The subtle changes in the voice's colours and expression can be taken by audio descriptors and transformed into spacial motions. The descriptor's meta data are distinctive patterns in time of a

definite piece of music and represents its inherent qualities as well as its unique temporal and spectral relations. They are closely connected with music and in this edition of Sequenza III, used intensively for an instantaneous spatialization.

 Tagging such inherent features of sound to some kind of spatial motions will give a tight and fast connection between the sound's subtle alterations and its movement in space. Determinations, which descriptors are appropriate for controlling some kind of moves can be founded on possible perceptual qualities of the descriptors with spectral/timbral or structural/temporal aspects for example [Grill, 2012] and a proper spatial movement. The latter can be derived by choosing a pair of descriptors which are applied directly to the 2 dimensional space or by combining some descriptors via an algorithm to control a sound's motion. Some pairs of descriptors used are shown in Fig. 2. Since the voice was pre-recorded, the course in time is defined and also the times of changes of the pairs, as the parameter „zeitpunkt" does.
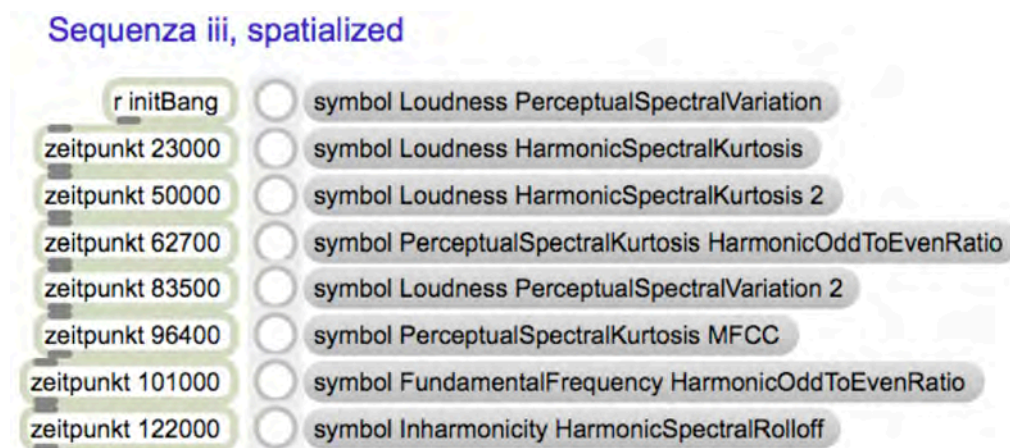

Fig. 2: Some pairs of descriptors, used at the beginning of the piece.

The association of sound and its movement is often like to relate an emotional content with room properties, furthermore, to relate a musical dramatic arc to a suitable spatial behaviour. For that purpose one has to find some descriptors which are appropriate to picture the intension of the chosen sound frame. Furthermore, some descriptors can be combined by an algorithm to meet the proposed intension better.

Little descriptors or their behaviours can clearly bound to some auditory attributes, like perceptual qualities or musical emotions [see Grill, 2012]. So it is an act of composing to add and shape it, an additional dimension of creating. Spatializing descriptors can use spatial movements to support a certain aspect of music or to give it a definite meaning which might not possible with the music on its own.

References

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