

INTER-PARAMETRIC ANALOGY AND THE PERCEPTION OF SIMILARITY IN MUSIC

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Background

Music theorists (Berry, Rink) and psychologists (Clarke, Todd) have described musical processes as bipolar changes in “intensity” (intensifications or abatements), analogously expressed by different musical parameters. This notion implies that musical gestures whose contours of intensity change are analogous may be perceived as similar, even when these changes are expressed by different parameters. Relevant studies notwithstanding (e.g., by Clynes), the validity of this hypothesis has yet to be studied systematically.

Aims

We examine whether (other things being equal) stimuli presenting analogous intensity contours in different musical parameters are perceived as similar.

Method

Subjects listened to a brief musical stimulus (the standard stimulus), in which intensity in a specific parameter was changed, while other parameters were held constant (e.g., an *accelerando*, with no change in pitch or dynamics). They then listened to pairs of comparison stimuli (presented in random order), in all of which the parameter varied in the standard stimulus was held constant. Each pair presented contrasting intensity changes in a specific parameter, one member paralleling

the intensity contour of the standard stimulus, the other contrasting it (e.g., when the standard is an *accelerando*, one comparison presents a *crescendo*, the other a *diminuendo*). The varied parameters included pitch contour, pitch intervals, inter-onset intervals, dynamics, articulation, and harmonic direction in the circle of 5ths. Stimuli exhibiting combinations of these parameters were also presented. Subjects were asked to rate on a numerical scale how “close in character” is each comparison stimulus to the standard.

Results

Experiment is currently in progress. Results are expected in January 2003.

Conclusions

The hypothesis presented here suggests that analogies between parameters are consequential in shaping perceived similarity in music. If confirmed, it may enhance the study of motivic structure in music, and empirically support current theories of musical gesture.