

Contour vector space

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Abstract

Upon first glance, contour space (c-space) appears to be a decidedly impoverished musical habitat. Indeed, "a pitch-space consisting of elements arranged from low to high disregarding the exact intervals between the elements," to use Robert Morris's (1987, 340) description, inherently lacks many of the defining features that make music recognizable as such. A significant corpus of theoretical and analytical studies, however, has nevertheless emerged, proving the study of musical contour to exhibit a perhaps surprising degree of sophistication and complexity.

The bulk of this research has focused primarily on equivalence-class and similarity relations, thus yielding a multitude of compelling methods for relating two or more contours with one another, but no concrete means of situating them within a larger c-space framework. The various contour vectors introduced by Michael Friedmann (1985), however, in fact provide fertile ground for developing the tools with which to do so. The goal of this paper is to execute this task. First, it employs Friedmann's contour vectors to generate *contour vector spaces (cv-spaces)* of various cardinalities, and briefly illustrates their use in a short analysis of a motivic process from Alban Berg's *Altenberg-Lieder*, Op. 4. It then cites two crucial weaknesses of the methodology—its inability to account for repeated notes and the lack of inter-cardinality communication—and constructs new cv-spaces that fully rectify these points. Finally, it deploys these new spaces in analysis of the opening section of Pierre Boulez's *Messagesquisse* for seven cellos (1976), in order to illustrate how cv-spaces can inform and enhance our understanding of the passage.

CV

Rob Schultz received his Ph.D. in Music Theory from the University of Washington in 2009. He has previously taught Music Theory and Aural Skills at the University of Washington and the University of Massachusetts Lowell. Dr. Schultz's articles on musical contour appear in *Music Theory Spectrum* and in volume four of the "musik theorien der gegenwart" series, published by Pfau-Verlag (forthcoming). He has presented his research at regional, national, and international conferences, including meetings of the Society for Music Theory, Gesellschaft für Musiktheorie, Music Theory Southeast, the West Coast Conference of Music Theory and Analysis, the Music Theory Society of New York State, and the Symposium on Music and Nature. He is also Co-Organizer of the First International Conference on Analytical Approaches to World Music.