

UC Merced

Proceedings of the Annual Meeting of the Cognitive Science Society

Title

An Ecological Analysis of Music Making in Ensemble Rehearsals

Permalink

<https://escholarship.org/uc/item/1g24j6ns>

Journal

Proceedings of the Annual Meeting of the Cognitive Science Society, 29(29)

ISSN

1069-7977

Author

Kaastra, Linda T.

Publication Date

2007

Peer reviewed

An Ecological Analysis of Music Making in Ensemble Rehearsals

Linda T. Kaastra, (eudaimonia96@gmail.com)

Individual Interdisciplinary Graduate Studies Program, University of British Columbia

Keywords: musical interaction, music gesture, performance analysis.

Introduction

This poster presents a method for conceptualizing domains of activity in “real world” music making. An extension of Herbert H. Clark’s (1996) “action” theory of language use, this poster demonstrates how music making can be viewed as an integrated layering of verbal and nonverbal activity, personal and public goals, and situational awareness. A sample ecological analysis of performed music drawn from real world rehearsal data demonstrates how single parameters of performance, e.g. gesture, can be understood as one of a number of *coordination devices* used in the process of negotiating musical understanding.

Event Structure in Rehearsal

Clark discusses music making as a single activity such as “playing a duet” or “playing a string quartet.” He suggests that such musical activities are *periodic*, “synchronized mainly by a cadence or rhythm” (p. 82), whereas day to day activities such as “shaking hands, eating dinner, waving good-bye,” are largely *aperiodic*. Clark also defines musical activities as *balanced*; even though he acknowledges that one member of an ensemble can initiate an activity, he feels that once the performance begins, the participants engage as equals. This analysis presents a picture of musical activity that is alternately *periodic* and *aperiodic*, *balanced*, and *unbalanced*.

Real World Rehearsal Data

Data for this study includes video-taped recordings of nine rehearsals and one performance of a single ensemble preparing Torû Takemitsu’s *Masque for Two Flutes*. Data was collected according to the guidelines of grounded theory. The flutists consented to have all rehearsals of this piece recorded and to have their discussion and repetition analyzed. Sessions are labeled by date (e.g. 92905 is September 29, 2005).

To isolate activities within the rehearsal process, I borrow Clark’s representation for identifying *sections and boundaries*:

Entry: A and B go from not being in J to being in J

Body: A and B are in J

Exit: A and B go from being in J to not being in J

Entries and exits have to be engineered for each joint activity (p. 36).

A representation like the above allows the analyst to zoom in on single events while maintaining an awareness of context.

Coordination Devices

Clark provides the following representation for identifying coordination devices: For two people, A and B, it is common ground that *p* if and only if:

1. A and B have some information that some basis *b* holds;
2. *b* indicates to A and B that A and B have information that *b* holds;
3. *b* indicates to A and B that *p*.

This poster provides several variables for *p* and *b* to demonstrate the layering of coordination devices (e.g. score markings, body motions, performance conventions) in the Takemitsu rehearsal data.

Finally, a preliminary analysis highlights how *conventions of performance* such as, “being visible with [x],” (where *x* could be drawn from any of the following: *Intent* for: breath, beat, articulation, dynamics, character) can be used to distinguish between *autonomous* and *participatory* actions (Clark p. 61).

Ensemble A-and-B is doing joint action *k* if and only if:

0. the action *k* includes 1 and 2;
1. A intends to be doing A’s part of *k* and believes that 0.
2. B intends to be doing B’s part of *k* and believes that 0.

In this case, both flutists intend to participate together and to “be visible” with their intentions in order to facilitate coordination.

Findings

Rather than fulfilling static measurable roles in music making, coordination devices shift in emphasis as the flutists become more familiar with the music. In the first phase, considerable emphasis is placed on the beat markings added to the score. Later, body motion is emphasized as a coordination device. Later still, the use of body motion appears expendable as the flutists respond to experimental changes in the performance environment.

Acknowledgments:

The author would like to thank Dr. Brian Fisher, Dr. Eric Vatikiotis-Bateson and the National Sciences and Engineering Research Council of Canada for assistance with this project.

References:

Clark, H. H. (1996). *Using language*. Cambridge: Cambridge University Press.