Embodied meaning in musical gesture Cross-disciplinary approaches

Porto International Conference on Musical Gesture 17-19 March, 2016

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Listening for embodied meaning

Phenomenology
 Expressive music therapy
 Receptive music therapy
 Neuroscience

Ist, 2nd person
Ist, 2nd, 3rd person
Ist, 2nd, 3rd person
3rd person

I.I Phenomenology - Open Listening Ist & 2nd person

Piece for string quartet30 secondsListen twiceWhat did you hear?Tell your neighborOne minute

1.2



Emerson String Quartet

Webern: Bagatelle op. 9, no. 1 0'30

Thomas Clifton 1976, 1983

I.3 Intensive listening:Phenomenological variations

Open listenings Focused listenings: descriptions Hermeneutical listenings: interpretations Dialogues

Christensen 2012: 42-63

1.4 Intensive listening
1st & 2nd person

Multiple repeated listenings: First person descriptions and interpretations

Dialogues: Intersubjective evaluations of the multivariable musical experience

Don Ihde 2007: 29-32, 2012:18-22; Ian Cross 2005:30; Aksnes & Ruud 2008:55 2.1 Expressive music therapy Improvisation, one minute. Therapist: drums. Autistic boy: cymbal





Wigram et al. 2002: 253-256

2.2 Methods for description and interpretation of gesture, expression, and interaction 1 st, 2nd, 3rd person

> Lawrence Ferrara 1984; Even Ruud 1987 Colin Lee 2000; Gro Trondalen 2003, 2007 Overview in Christensen 2012: 26-42

2.3 Expressive music therapy Parent-child improvisation 1st, 2nd, 3rd person

Goal: Assessment and development of parental competences

Jacobsen 2012 Jacobsen, McKinney & Holck 2014

2.4 Method: Interaction analysis

Jacobsen 2012:162



3.1 Receptive music therapy Music listening in a relaxed state

GIM: Guided Imagery and Music The client describes

music-induced images, memories, body sensations, emotions, narratives

The therapist guides with sparse comments

3.2 Method: Correlations between

Musical gestures and structures and

Experienced imagery and narrative

Grocke 2007; Bonde 2004: 257-268

4.1 Neuroscience Music listening activates motor planning in Cortex PMA: Premotor Area SMA: Supplementary Motor Area



Zatorre et al. 2007

4.2 Neuroscience Music listening activates the Basal Ganglia and Cerebellum



4.3 Neuroscience method: fMRI scanning during music listening 3rd person



4.4 Neuroscience method: EEG 3rd person





4.5 Two different kinds of music:

Beat-related music Music in free flow

"The mind is capable of organizing temporal patterns without reference to a beat" (Patel 2008:98)

> Beat-related entrainment: Grahn & Rowe 2009 Free flow: Huron 2006:187; Leman et al. 2009

4.6 Two networks for auditory timing



Duration-based: Brainstem nuclei Cerebellum

Teki et al. 2011, 2012

5. Suggestions for Cross-disciplinary approaches

5.1. Cross-disciplinary approach

Extending studies of guqin music to neuroscience



Henbing & Leman 2007, Leman et al. 2009

5.2 Cross-disciplinary approach Neuroscience and music therapy

Systematic comparisons in fMRI: Predominant gestural music in free flow versus Predominant beat-related music

including audio and video recordings of music therapy improvisations, music from different continents, contemporary art music 5.3 Cross-disciplinary approach Phenomenology, linguistics, sound analysis, neuroscience

Comparison of gestural timing in music and spoken language

Kotz & Schwartze 2010; Schwartze et al. 2013

5.4 Cross-disciplinary approach Music therapy and neuroscience: Dual EEG



Dumas et al. 2010



Inter-brain research: Konvalinka & Roepstorff 2012; DeVos et al. 2014

Thank you for listening!



What are your questions and suggestions?

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