

**Tele-Improvisation: A Multimodal Analysis
of Intercultural Improvisation in Networked
Music Performance**

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the Degree of Doctor of Philosophy.

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CERTIFICATE OF ORIGINAL AUTHORSHIP

I certify that the work in this thesis has not previously been submitted for a degree nor has it been submitted as part of requirements for a degree except as fully acknowledged within the text.

I also certify that the thesis has been written by me. Any help that I have received in my research work and the preparation of the thesis itself has been acknowledged. In addition, I certify that all information sources and literature used are indicated in the thesis.

Roger Mills 2014

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ABSTRACT

This thesis presents an interdisciplinary, practice-led framework for the analysis of intercultural musical interaction in tele-improvisation (musical improvisation via telecommunication systems). Recent developments in network technology and high-speed broadband have created unprecedented opportunities for hitherto improbable meetings between musicians of different cultures to improvise with one another across global distances. While network technology eliminates distance in geographical space, signifiers of presence such as co-located acoustics, gesture, facial expression and body language are not available to mediate this experience. Video streaming of dispersed locations and collaborators cannot replace the essential nuances of co-located performative interaction. Most research in this field has focused on improving technical and interactive network music performance, highlighting the need for an evaluative framework and language for revealing musicians creative and strategic thought-processes. This thesis examines the approaches and strategies that musicians develop to perform with unknown and geographically dispersed collaborators through its analysis of three case studies that feature musicians improvising in the telematic music system eJamming. The analysis employs a social semiotic analytical framework combining multimodal discourse analysis (MDA), and ideas from the related field of cognitive linguistics (CL). This multimodal approach employs MDA to analyse music, sound, gesture and transcripts of networked musicians' reflective experiences of tele-improvised musical interaction. These transcripts are examined through an interpretive framework of conceptual metaphor theory that enables an understanding of the ways in which musicians perceive and structure their interaction. The innovation of the proposed framework provides a pedagogical model for musicians and researchers to learn about cross-cultural musicians' interaction in the rapidly growing field of Networked Music Performance (NMP).

The main contributions of this thesis are:

- A framework for the analysis of interaction in intercultural tele-improvisation;
- An evaluation of cross-cultural musicians' approaches and strategies to tele-improvisation; and
- A theory of intercultural interaction in tele-improvisation.

