Notice of the Final Oral Examination
for the Degree of Doctor of Philosophy

of

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MA (American University of Beirut, 2015)
BA (Notre Dame University, 2012)

“Tactical Network Sonification: A Listening Technique for Science and Technology Studies”

Department of English

Friday, December 18, 2020
10:30 A.M.
Conducted Remotely

Supervisory Committee:
Dr. Jentery Sayers, Department of English, University of Victoria (Supervisor)
Dr. Stephen Ross, Department of English, UVic (Member)
Dr. Alexandrine Boudreault-Fournier, Department of Anthropology, UVic (Outside Member)

External Examiner:
Dr. Jacqueline Wernimont, Women's, Gender, and Sexuality Studies, Dartmouth College

Chair of Oral Examination:
Dr. Annalee Lepp, Department of Gender Studies, UVic

Dr. Stephen Evans, Acting Dean, Faculty of Graduate Studies
Abstract

Networks are an integral part of everyday life. Today, public concern with the extent to which they influence people’s routines, and how much they affect cultures and societies, has grown substantially. People are thus now engaging in conversations and movements to evaluate and address the biases and discriminatory behaviours to which networks contribute. The media play an important part in this conversation, often directing the discourse towards fears of technology. Although such concerns are very real, the stories that media circulate typically rely on the “magical” nature of networks and therefore accentuate their figurative power. But, for people to participate meaningfully in the conversation, and for them to approach technologies responsibly, they need access to the complexities and technical intricacies of networks, not just their surfaces or metaphors.

This dissertation argues that, by listening to networks, people can begin to apprehend, and even comprehend, the complex, ostensibly “magical” nature of their communications. One problem is that listening semantically to networks is incredibly difficult, if not impossible. Networks are very noisy, and they do not, for instance, use alphabetic language for internal or external communication. Yet there are other ways to hear and interpret them. I argue that Michel Chion’s techniques of reduced and causal listening are two such ways, and that they afford a “sensible” and timely method for approaching networks. Of course, network communications must first be rendered audible to hear them. For this purpose, I propose “tactical network sonification” (TNS) as a methodology for Science and Technology Studies (STS). As this dissertation’s primary contribution to the field of STS, TNS focuses on making the materiality of networks sensibly accessible to the general public, especially people who are not technology experts. In so doing, TNS builds on the scholarship of not only Chion but also Beth Coleman, Matthew Kirschenbaum, Henri Lefebvre, Shannon Mattern, Shintaro Miyazaki, Pauline Oliveros, Rita Raley, and Jonathan Sterne in particular. This project finds that TNS results in crowded sound clips that represent the complexity of network infrastructure, through the many overlapping rhythms and layers of sound that each clip contains. It explains that sonifications may assist in creating multimodal network stories, making networks sensible and apprehendable. Finally, this dissertation proposes that using TNS can help understand potential discriminatory distribution of network infrastructure across communities.