

## Our Changing World of Sound

We want to find out how changes in the aural environment have manifested themselves in our everyday lives. How does sound affect such diverse topics as learning, wildlife, child development, healing and stress? To what extent are we aware of our sonic environment? What can we learn by simply paying more attention to the world of sound around us?

The problems or questions at which we're looking have the potential to become very broad and unfocused. In order to put a frame around the topic that will make it more focused and manageable, we will look specifically at the U of M campus over the past 100 years. This time frame will allow us to look at the changes in the aural environment caused by the rise of industrialization and motorized transportation. This time period for our area is important because of the explosion of emerging industrial technologies from Detroit.

The literary sources that we have been/ will be looking at to inform the project fall under two big categories: historical facts, and writings on the impact of sound to humans. The Bentley Historical Library will probably be our main source for information pertaining directly to the history of the university's development, as well as the growth of the surrounding community.

We have been surveying many different resources on the nature of sound, how we perceive sound, and how sound affects each of us. Starting from a broad, conceptual level, John Cage's masterpiece *Silence* has provided us with great questions and great insight about the nature of sound from a philosophical level. Oliver Sacks, the world-renown neurologist has a book entitled *Musicophilia: Tales of Music and The Brain*, which uses many case studies to show that sound is very much an individual experience, and that sounds affect each one of us very differently in some cases. In addition to these resources, we have been surveying online journals, such as the *Journal of Neurophysiology* and *Science Daily*. These online resources are a great way to find the latest research into such topics as the psychological effects of our increasingly noisy modern environment.

In addition to these literary sources, we will also survey audio sources for inspiration. Locally, we have gotten a recording by Greg Laman and Stacie Printon entitled *Sounds of the Arb*, an entire album made from field recordings taken in the Nichols Arboretum. The *musique concrète* works by composers such as Luc Ferrari, Iannis Xenakis, and Pierre Schaeffer use "non-musical" sound sources (such as field recordings) to create musical compositions. These works will be a valuable model for any audio work that we may generate as part of our research.

We hope to examine the aforementioned questions by studying the specific changes in our culture that have contributed to changes in the sonic environment. We want to generate a timeline of events that effectively shows the rise in the noise of modern life. We as a people take our noisy lifestyles for granted, or even drown out the noise with more noise. As an effective learning tool, we aim to recreate the progression of the sonic environment over the past 100 years in an original audio composition. By listening to this scaled-down demonstration from start to finish, we hope to help people to be more aware of the sounds around them, and to learn to listen.

Collaboration plays an important part in this project. As stated in the introductory paragraph, this topic could become quite broad and unwieldy. To avoid this, we will use local history to contextualize our findings, and to make them "real" for the people who are likely to see/ hear our eventual presentation. There are factors on the university's campus that make our

sonic environment unique. For instance, Ann Arbor is one of the only cities in the world where one can hear two full carillons from the same place. So, when we are given the opportunity to demonstrate such phenomena, hopefully people will easily be able to connect with it, hear it, and take that “ear-opening” experience with them wherever they go. Our results will have the potential to be presented much more effectively because of the collaboration between historical and sonic research.

The team we have put together is very well-equipped for collaboration in this area. Jeremy Edwards is a Performing Arts and Technology graduate, currently pursuing an MM in Improvisation. He has experience with many of the technologies that we may use to create our audio work, including Logic, Max/MSP, and algorithmic composition and field recordings. Colin Campbell is also a graduate student in music, with a similar background to Mr. Edwards. He has experience in live sound recording/ mixing and audio production. Stephen Wisniewski is a doctoral candidate in the history department. In addition to his history background, Stephen is also a musician. This fact will aid the team in communicating ideas, as well as having the benefit of three critically-tuned pairs of ears to make our work the best it can possibly be.

This project aims to bring awareness of the sound environment in which we spend our daily lives. By bringing attention to these sounds, we can get people thinking about how they effect stress level, learning ability, relaxation, the human brain, and the environment. We hope to inspire others to consider how to better construct a city, cars or household appliances to reduce their sonic impact. We also hope to raise the questions: where does sound go, do vibrations ever stop, and is it possible to find silence?

Our specific equipment requirements will become clearer as our project evolves. We will certainly make use of the Duderstadt Center’s audio facilities and multimedia workspaces. It is likely that we will require a high-quality microphone for gathering field recordings. We may utilize existing sound libraries as well if they meet our needs. It is also likely that we will need several video projectors and multiple speakers for whatever form that our presentation takes. We will evaluate our needs on a continuing basis as our final presentation develops.