SOUND STILLS SOUND-PIECE VERSION 2.0

AlexiHall 1 day ago

Work In Progress

Tags: S ound stills soundscape Reaction Reactions Photo Photography Photographic Record Recording Experiment Unbearable Annoying Noise Noises

TO BE PLAYED IN AN ART SPACE IN LEEDS CITY CENTRE, MEXICO PROJECT SPACE. USING LOCAL RESIDENTS AND GENERAL PUBLIC AS AN AUDIENCE

Over the past 100 years scientists have spent a lot of time researching what is about the sound of fingernails on a chalkboard so unbearable for humans. A recent study blames psychology and the design of our ear canals.

Previous research has suggested that the sound is acoustically similar to that of a warning call of a primate, however that theory was discredited after is was discovered that monkeys responded to amplitude-matched white noises, and humans did not. Fur- ther studies conducted in 1986, by Randolph Blake modified the recording of the sound of blackboard scraping and discovered that it was the medium pitched noises that bother us so much and not the higher pitches (as scientist thought before).

The latest study which was organized by two musicologists Michael Oehler from Macromedia University for Media and Communi- cation in Cologne, Germany, and Christoph Reuter from the University of Vienna explored other sounds that evoke similar reac- tions from humans; such as the sound of chalk on slate, squeaky Styrofoam, cutlery being scraped across a plate and the sound of fingers being scratched down a chalkboard.

A selection of the participants in the study were told the source of the sounds, while others were told that the noises were part of a contemporary music piece. The participants were then asked by the researchers to rank which sounds they felt were the worst, they also monitored the patients of physical signs of distress – heart rate, blood pressure and the electrical conductivity of skin. They discovered that do cause a very measurable physical reaction, with skin conductivity changing drastically, and that the frequencies involved with the uncomfortable noises also lay in the range of human speech – somewhere between 2,000 and 4,000 Hz. Removing those frequencies from the sound made them much more pleasant of the ears however removing the screeching sounds made very little difference at all.

A very strong psychological indicator was identified. If the listeners were aware that the sound was fingernails on chalkboard they rated it far more unpleasant than if they thought the sounds were all part of a contemporary musical composition. However even when they did think it was from music, their sin conductivity still changed by the same amount – indicating that the physical part of the response stayed the same.

That physical change is probably because of the shape of the human ear canal, which past studies have shown can amplify frequencies in the range of 2,000 to 4,000 Hz. The scientists believe that when the sound of fingernails on a chalkboard is gener- ated, the sound is amplified within our ears to a painful degree.

Stats for this track

	This Week	Total
Plays	1	1

Uploaded by

AlexiHall
3 | 0
Follow

Report copyright infringement

More tracks by AlexiHall

SOUND STILLS SOUND-PIECE VERSION 1.2

SOUND STILLS SOUND-PIECE VERSION 1.0

Add a new comment

You need to be logged in to post a comment. If you're already a member, pleaselog inorsign upfor a free account.