

rockfall

Sergio Abugattás Tenaud and Michael Winter (Cocachimba, Peru; 2017)



Installation Description:

rockfall is a sound installation / kinetic sculpture that automates rocks falling against rocks. The installation is a machine that consists of a conveyor belt that raises rocks from ground level to be dropped unto a rock formation that funnels the rocks back onto the conveyor belt.

The original prototype (pictured above with video documentation available to view online at <http://www.vimeo.com/mwinter/rockfall>) actually implements two conveyor belts that run in opposite directions such that the rocks are dropped from one conveyor belt and then funneled onto the other. The frame is constructed of steel and the belts are made of leather. Two high-powered motors drive the conveyor belts from below and the rock funnels were constructed around the machine by large rocks found locally.

We envision *rockfall* as a scalable concept that can be installed in various ways. That is, the original prototype is not the only version of the piece. To date, we have considered the following forms of exhibition:

- 1) the original prototype installed outdoors in a natural setting;
- 2) a larger version installed in a room where rocks from a given area are brought in to recreate an artificial nature indoors;
- 3) several rockfalls placed within the same space or nearby each other (even if in different rooms) such that each rockfall uses rocks from a different area resulting in different sounds based on the geology of the location from where the rocks were retrieved.

For the third version, the spatial distance between the different rockfalls will allow viewers to navigate different combinations of sounds based on how they position themselves relative to the various rockfalls. We have also considered triggering different combinations of the rockfalls using microcontrollers in order to combine sounds automatically based on which rockfalls are running at any given moment.

Artistic Statement

When traveling in Bolivia with my friend and fellow composer Todd Lerew, I noticed that both of us were frequently playing with stones in the various locations we visited in order to listen to the sounds of the stones themselves. It was a very natural action. Perhaps our inclination / curiosity came so naturally because stones have become a defacto instrument in open works of the experimental music tradition.

We also had the opportunity to take a tour of the mines of Potosi in the mountain that hails above the city called Cerro Rico (or the rich mountain). Unfortunately, the mountain is on the brink of collapse from years of exploitation.

It was a formative experience to see the absurd conditions that the miners work in. All to extract rocks and precious metals. However, the miners hardly benefit from their labor. The sights, sounds, and smells will remain present to me for the rest of my life.

The miners work with essentially the same technologies used by their counterparts hundreds of years ago when the Spanish first started exploiting the local people to extract silver from the rich mountain. Nowadays, in modern mines and quarries, the miner is complemented by more automated, industrialized technologies. One particular technology that has become ubiquitous in the landscapes of resource rich areas are industrial conveyor belts used by mining companies to transport material in large quantities. The use of these large-scale technologies perhaps minimizes the dependence of what amounts to slave labor (though likely only to a small extent), however the exploitation of the land itself is maximized.

In collaboration with Sergio Abugattás Tenaud, when I was in residence at GoctaLab (the organization Sergio founded and runs in Cocachimba, Peru), we decided to reappropriate the conveyor belt for artistic purposes: to create a sound installation / kinetic sculpture that automates rocks falling against rocks. That is, to create a machine that mechanizes the very explorations of sound that Todd and I were doing manually with our hands on our trip in Bolivia.

Cocachimba, Peru is quite remote. One particular challenge was acquiring the materials for the piece. We started by purchasing the motors that would drive the conveyor belts in Lima as we knew that even in the nearest city of Chachapoyas (an hour away from Cocachimba), they would be hard to find. The frame was created with metal which could easily be acquired in the nearby town of Pedro Ruiz. Perhaps the most interesting decision was to use leather for the conveyor belt. In Chachapoyas, we were fortunate to find a man who was able to cut and fashion cowhides for the belts. Both the person that sold us the motors and the person that fashioned the leather belts were a dying breed. Seasoned

individuals that had likely learned their trade by curiosity and action in a system of apprenticeship education that hardly exists anymore.

In the process, I kept thinking of what it must have been like to create some of the first conveyor belts only to realize that Sergio and I were experiencing something similar. In the end, the piece became as much about the process of building the installation using resources available to us as all the other reasons mentioned above.

Still, the sounds of rocks falling on rocks always intrigues me.

-michael winter (Cuenca, Ecuador; April 2017)