Polartide: Floods of Data, Floods of Tones

by Julia Bryan-Wilson

What does catastrophe sound like? It could be an emergency alert siren howling its urgent alarm, or a low persistent rumble accompanying a seismic shift. Polartide—a participatory work created for the Maldives Pavilion at the 2013 Venice Biennale by Greg Niemeyer in collaboration with Chris Chafe, Perrin Meyer, and Rama Gottfried—reminds us that the notes of distress can also be melodic, as when chiming harbor buoy bells are activated by roiling ocean waves. Polartide utilizes the digitized tones of buoy bells linked to sea levels (and the corporate jingles of oil companies), not only to signal the growing threat of global climate change, but also to encourage us to understand data in a new way—by listening. For non-scientists like myself, data in the form of digits or charts is often difficult to assimilate, so when Polartide turns numbers into sounds, this process of sonification invites different kinds of interaction with raw bits of information. The year 2013 marks the first time that the small island nation of the Maldives has been represented at the Venice Biennale, and its inclusion signals an intensification of awareness about the potential role of cultural policy regarding the environmental destruction of climate change. Curated by the collective Chamber of Public Secrets, the pavilion's theme is "Portable Nation," a reflection of the fact that the entire country is forecasted to be under water in a matter of decades, and its population might have to become ecological refugees, uprooted permanently from their doomed homeland in the Indian Ocean. Within the Biennale's long history, many nations have used it as a platform for publicity both negative and positive, and the Maldives's presence in Venice has been seen as way for it to "seize the spotlight to decry climate change." For the 55th Biennale, the Chamber of Public Secrets commissioned artists to reflect upon the idea of "contemporary ecological romanticism," referring not to sentimental ideas about idealized nature but to 19th century notions about the slippages between the "wild" and the "civilized," and the interrogation, even collapse, of these dualities. Subtitled "Disappearance as Work in Progress," the pavilion, with works like Polartide, underscores that the problems faced by the Maldives are the extreme end of a spectrum on which we are all perilously situated.

Polartide places two different fluctuating data sets in conversation with each other—sea levels and stock valuations for oil companies. Both data streams rise and fall daily, and the piece tracks their ebbs and flows in real time, even as this constant flux of short-term currents masks the fact that both the ocean and oil profits are in fact steadily, inexorably, rising. The website for Polartide features a graph with eight circles arrayed symmetrically along a horizontal axis, with four on top, four on the bottom. The upper register shows data points from UNESCO sea level monitoring stations on four different islands: Kerguelen Island (KERG2), the Maldives (GANM), Venice (VE19), and Reykjavik, Iceland (REYK). Clicking on these stations produces the synthesized note of a resonating buoy bell, one whose tone changes in correspondence to the level of the water at that location at that time.

The bottom register shows the current stock prices for the four largest oil companies: Royal Dutch Shell, ExxonMobile, BP, and China Petroleum and Chemical Corp; clicking on those buttons yields a short corporate tune that corresponds to the value of its stocks. When played together, these different data streams produce what Niemeyer refers to as "measurement music:" unique sonic instances that are calibrated and composed in relationship to ever-changing live conditions. Importantly, the sound generated by the website is heard in multiple locations—by a person viewing the site from anywhere in the world with a web connection on a computer or cellphone, as well as in Venice, where the tones simultaneously resonate through an eight-channel sound system, echoing through the physical location of the Maldives Pavilion. Polartide is a site-specific piece that takes seriously the possibility of international connections catalyzed by the internet, but is equally invested in the problems specific to local circumstances. It was designed to take advantage of its proximity to the Via Garibaldi canal, as the digital warning bells are a persistent reminder that Venice, like the Maldives, is a place structured by its relationship to the sea. Located on the fragile threshold between water and land, both Venice and the Maldives are constantly under threat of destruction, yet the Maldives is without the small protections afforded to Venice by virtue of its cultural and economic capital.

According to Niemeyer, who is the associate director of the Data and Democracy Project at the University of California, Berkeley, the "musification" of data can help disseminate knowledge, infusing scientific statistics with other sorts of interest, drama, or implicit narrative. He hopes to build a culture around data that might be accessible to specialists and non-specialists alike. In another artwork created with musician Chafe entitled Seven Airs, from 2012, air quality measurements from seven sites in southern California generated musical performances that eerily embody polluting carbon dioxide and volatile organic compound concentrations. These aural forms are shaped not by individual feeling or emotion but rather dictated by the logic of other kinds of pacing and tempo, becoming suspenseful crescendos as they track the measurements up and down through unpredictable undulations.
As viewers in Venice or elsewhere click on the Polartide graph to activate the bell chimes near the Via Garibaldi canal, they trigger one more effect: when enough people have clicked, a massive wave crashes through the Pavilion, an engulfing flood of sound whose startlingly realistic detail is in fact a dematerialized acoustic illusion. This participatory aspect of Polartide brings to mind recent debates about so-called "clicktivism," or activism fueled by on-line petitions and social media announcements. Though some decry clicktivism as a passive and poor substitute for on-the-ground demonstrating, others, such as artist Ricardo Dominguez, have pioneered the "virtual sit-in" and have used targeted "tactical media" to do things such as shut down governmental websites.

The carbon footprint of the tiny Maldives is nothing compared to industrial giants like the U.S. or China; and in fact, when the website is viewed by someone in the Maldives, it contains a further button— one not visible anywhere else on the planet—that can trigger the wave to rush over the pavilion at any time. Only those using a computer with an IP address located in the Maldives can exercise the power of sending the precipitously swelling ocean so keenly felt there back to Venice. By constructing a platform on which we can listen to data about global climate change—and corporate profits— Polartide also illustrates the cumulative imaginative effects of collective actions. Many drops, bigger waves: every millimeter counts.

Julia Bryan-Wilson, Berlin, 2013

polartide.org
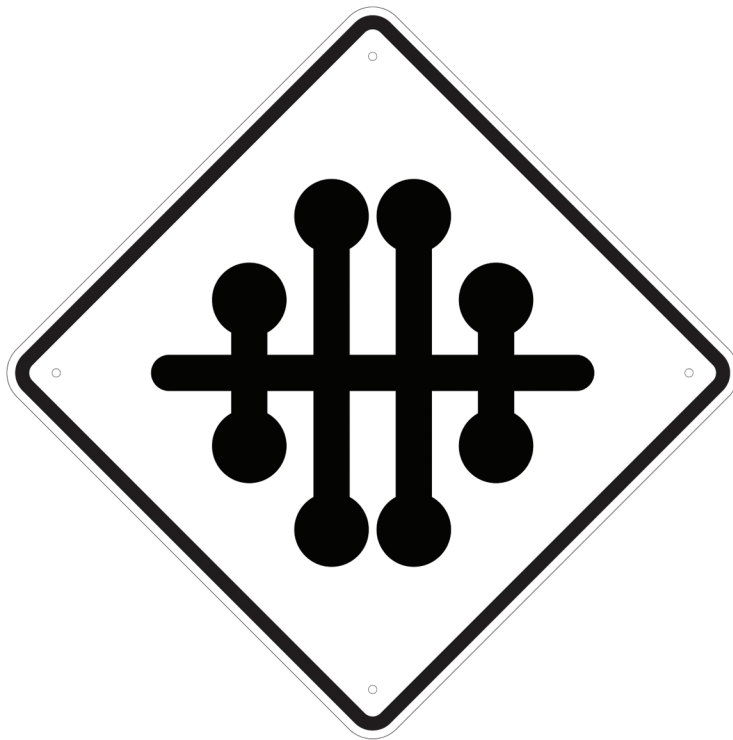
**Chris Chafe, Rama Gottfried,
Perrin Meyer, Greg Niemeyer
Worth Ryder Gallery**