


Julianne Swartz, Opert, 2009; hardwood, electronics, soundtrack, hardware
modulated wonder, by beginning to think of this state as an emotion rather than a passion, we can see it as instinctive, felt, and put out into the world. Emotions exist in two categories: primary, or those existing at birth (fear, anger, sadness, amazement) and secondary or learned emotions (desire, love, grief). It is curious then, as Robert C. Fuller notes, that "not one major Western theorist in the past hundred years has explicitly listed wonder as one of the primary or secondary emotions. ${ }^{"+8}$ Does this 80 back to Descartes's suspected fear that an excess of wonder leads to an arrest of reason? What is so bad about having reason arrested occasionally? Fuller goes on to state: "What distinguishes the experience of wonder from most other emotional experiences is that even though it occurs while the association cortex is active, it does not usher in immediate, goal-oriented behavior. Wonder, instead, is associated with a recognition and contemplation of the intrinsic significance of the stimuli at hand ... wonder is typically characterized by a strong sense of the fullness of the present, which has an effect of 'dethroning ordinary plans, purposes, and motivations. ${ }^{\prime \pi_{49}}$ This shift from an inward and controlled passion to an outward emotion may signal why we so often desire to share our wonder moments, and why they are intrinsically linked to the body. 's work is rooted in emotion, vulnerability, and the provocation to recognize and connect to one another as feeling human beings. There is empathy in this work and tenderness. For example, in Terrain (2008) Swartz recorded participants humming, breathing, and whispering, while simultaneously giving them prompts such as "Whisper 'I love you' for about one minute until the words start to sound like gibberish and lose their meaning" and "Imagine you are whispering into someone's ear." ${ }^{\text {" }}$ " The result is a chorus of compassion, much like her work Open (2009), in which the participant-for
one is never just a viewer or listener with Swartz's work-approaches a nondescript wooden box humbly resting on the floor. Those who choose to open the box are met with whispers of "I love you," but the longer the box is held open, the louder and more aggressive the chorus becomes. This vacillation between comfort and discomfort is evident in Lean (2012), a slim metal rod, one end delicately touching the ground, and the other end curving up the wall. But look closer, and notice that the upper end is hovering just away from the wall, making its tenuous hold on the floor even more vulnerable. This precariousness is also palpable as we approach the Bone Scores (2016), a series of sculptures made of wood, ceramic, wire, and paper. These constructions serve as speakers, through which Swartz has placed coils and magnets. As sound is played through the sculptures, the coils excite the magnets, and the materials begin to vibrate. The objects tremble before us, as if sound has suddenly brought them to life. The audio includes recordings of electrical currents, heartbeats, chanting, lullabies, humming, pop songs, flocks of birds, and even a Kepler star signal. These quivering sculptures seem animate. There is a synesthesia in this workwe hear the sound, but also feel it-as if our body is excited by its own magnet. In the end, Swartz creates a somatic rather than aural experience, reminding us once again that wonder, when emotional, is felt in the body.

This poetics of the body is imprinted into the tissue of Jen Bervin's
The Silk Poems (2012-16), which the artist describes as "an experimental poem that takes this ancient textile as its subject and form, exploring the cultural, scientific, and linguistic complexities of silk, mending, and the body through text and images nanoimprinted on silk film. ${ }^{\prime \prime}{ }^{11}$ At Tufts University, Fiorenzo Omenetto is pioneering biomedical uses for liquefied silk, creating nanopatterned bioactive silk sensors that can be imprinted and embedded in the body (silk is universally biocompatible), allowing doctors to less invasively monitor long-term medical conditions. When Bervin, an artist and poet who works with text and textiles, visited Omenetto's lab, she was struck by the new possibilities inherent in this five-thousand-year-old material. Bervin researched the history and nature (both culturally and physically) of silk internationally-visiting laboratories, weaving studios, silkworm farms, archives, and museums. In Suzhou, China, she even encountered a reversible silk poem with thousands of possible readings written by a Chinese woman in the fourth century. ${ }^{52} \ln$ the end, The Silk Poems is just that, a poem about silk made of silk. Bervin worked with Omenetto's lab to create a film onto which her poem is nanoprinted in the form of a sinuous six-character strand. If you were to $x$-ray an actual silk cocoon, you would find that the worm builds it by expelling silk while wriggling in a figure-eight pattern,

## Julianne Swartz


left to right: Bone Score (Air), 2016; steel, balloon, magnet wire, magnet, amplifier, audio player, wood; sounds of voices humming, voices speaking, prayers, chants, a haby's voice, glass resonating, water dripping. Bone Score (Drum), 2016; unglazed porcelain, stainless steel, magnet wire, magnets, abaca paper, wire, amplifier, audio player, wood; sounds of breathing, swallowing, metal flexing, an MRI, rain on a metal roof, a Beatles song, a heart beating, a man's last breaths on an oxygen machine. Bone Score (Tangle), 2016; stainless steel wire, magnet wire, magnets, abaca paper, amplificr, audio player, wood; sounds of breathing, a geiger counter,

[^0] fireworks, electrical current, a windy night, a flock of birds. Bone Score (Paper Zero), 2016; stainless steel wire, magnet wire, magnet, abaca paper, amplifier, audio player, wood; sounds of breathing, a whispered conversation, a timpani drum, rustling paper, a child's laugh, a rain storm, thunder


ahowe: Hone Score (Long Tail), 2016s unglaned porcelain, magnet wire, magnets, abaca paper, wire, amplifier.
280 audio player, wood; sounds of breathing, a heart beating, fire, a Kepler star pulse, a chillren's sung

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## 1. Define wonder in your own words.

Wonder reverberates. It contains an element of disbelief, but also confusion and perhaps disruption or pleasure. It takes me out of time. An experience of wonder activates my emotions, so it is more durable and complicated than an experience that is purely phenomenal or sensory. Wonder remains with me. After the experience is over, I continue to think about or feel it.

## 2. What is your earliest childhood experience with wonder?

I have a strong memory from when I was about eight years old, of visiting a science museum with my father. The museum was in a huge space, as big as a football field. At either end of the space, up high above the people and the exhibits, there were giant parabolic satellite dishes facing one another. You could walk up a tall staircase, speak into the parabola, and have a conversation with someone facing the parabola on the other side of the room.
I waited for my father to traverse the room, then climbed my staircase. I stood in front of that enormous dish, alone in that noisy place, and heard my father speaking to me with total clarity. He was hundreds of feet from me, on the other end of the huge room, but he was whispering in my ear. I felt a collapse of space and time, as well as an unfamiliar sense of this very familiar person.
At that time, I didn't comprehend why the experience was so powerful to me and why I could not forget it. It made an impression far beyond all of the other scientific spectacles in the museum. In retrospect, I think it was because it encapsulated a complex series of emotions that were beyond my understanding at the time. The simultaneity of intimacy and distance, presence and absence, made each more palpable.

## 3. What is the last wonder moment you had that left you speechless?

I recently visited a place called the Integratron in the desert near Joshua Tree, California. It's a wooden, parabolically shaped building, hand-built without nails or screws by an obsessed and brilliant man. You could stand in the center of the room, speak, and hear your voice "spoken" back to you. It was a completely strange sensation of feeling your own voice as extrinsic, as though it were coming from outside your body. This was extraordinary in itself, but it also brought me back to the experience I described above, poignantly, because I hadn't thought of it since I lost my father two years ago.
4. Was there a wonder or aha moment that led to your work in this exhibition?

A good friend died a few years ago. She was Buddhist, and part of her death ceremony included the playing of some singing bowls. Certainly, this was a situation where I was extra receptive, and I had a somatic impression of those sounds in a way that I had never experienced. The sounds were tactile; I felt them more than I heard them. For months afterwards, the clarity, potency, and corporality of those tones returned to me often. I generally think of sound as carrying content or emotion, but this was something quite different. It was not apparent intellectual or even emotional content that had affected me. It was the palpable physical energy in those tones that moved through me, and their vibrations seemed to reverberate within my body.


[^0]:    b) 6) $(2)$

