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Departments

Photo Andrea Rossetti/Courtesy Officine Grandi Riparazioni, Turin

View of Nina Canell's exhibition "HARDSCAPES," 2022, at Officine Grandi Riparazioni, Turin.

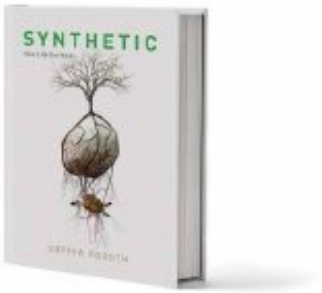
Geobiology

A conversation about how different timescales complicate the distinction between life and nonlife.

by Nina Canell with Sophia Roosth

For "Tectonic Tender," Nina Canell's recent exhibition at the Berlinische Galerie, the Swedish artist spread seven tons of seashells across the gallery floor. Then, she invited visitors to walk across them, crushing and crunching shells beneath their feet as they meandered. After their walk, they encountered *Energy Budget* (2017–18), a 16-minute video Canell made with her Swedish collabtakorator Robin Watkins. It showed shell-less mollusks—leopard slugs—dragging themselves across electrical switchboards intercut with striking scenes of colossal concrete towers. Taken together, these elements gesture toward calcite. The construction industry often sources the mineral, which is essential to making modern concrete, from limestone deposits that comprise the shells of marine mollusks. To discuss this surprising supply chain, Canell met with anthropologist Sophia Roosth on Zoom. An expert in the life sciences, Roosth is at work on a book about geobiology, a discipline that looks at how biotic and geologic systems affect one another. Roosth is an associate professor at New York University and the author of *Synthetic: How Life Got Made* (2017). Her research often asks the question: what is life? Below, the two discuss the process behind and implications of biomineralization—the ways living organisms form and accumulate minerals.

NINA CANELL I titled the show "Tectonic Tender" after coming across the intriguing etymology of the word "tectonic." I found "carpenter" and "builder" in its Latin and Greek origins [*tectonicus* and *tektonikós*, respectively]. I housed the shells in a kind of sound chamber, so you could really hear them breaking under your feet. I was quite surprised by the crunchiness of the material; it's not a comfortable experience.



Synthetic: How Life Got Made by Sophia Roosth, University of Chicago Press, 2017; 256 pages, 16 halftones.

SOPHIA ROOSTH Where do you think the discomfort comes from?

CANELL From the feeling of breaking something. You can sense that it's a form that's been compromised.

ROOSTH Interesting; I find it to be a very satisfying crunch.

CANELL The sound is one of a small explosion, which does remind me of bubble wrap, so I suppose it can be both. In the gallery—this highly artificial, starkly lit environment—I wanted to bring forth the shells' relation to the construction industry, and show that walking across this material is not so different from a normal walk across the gallery's polished concrete floor, which was just underneath. I wanted to invite viewers to have a more tactile connection to the material.

ROOSTH Listening to the sound of walking on shells—on calcite—I was reminded of all the time I've spent interviewing geologists for the book I'm writing. They're studying outcrops, so inevitably, all my field recordings have crunches that interrupt the flow of our conversations.

The acoustic chamber certainly amplifies that sound in an artificial way; the crunching sounds different than it would outdoors. In the brochure accompanying the exhibition, you say that the seven tons of shells "speak up from the ground." So it's not just a crunch, but also a voice, right? The shells are saying something in conjunction with the person who's participating in your exhibition, and who breaks them down.

The anthropologist Stefan Helmreich wrote an essay called "Seashell Sound" [2012]. He talks about the history of the metaphor of seashells as mouths that speak, tracing the appearance of shells in poems, including one by William Wordsworth, but also the ways seashells figure as ears. Of course, you can put the shell to your ear and hear the sound of the sea. You can hear what the sea is telling you, because the ear and the shell are both spirals—"cochlea" is Latin for snail. If these shells are, as you put it, "speaking up from the ground," what is it that you hear them saying?

CANELL I love how shells evoke this elision between making, producing, and hearing sound that you describe. They speak of pressure and transformation, emitting the sound of a broken dried-out voice. I am also interested in the idea of speaking up from the ground. I often think of sculpture as something that is, in a sense, bound to the ground, and about speaking from underneath as a particular position. Muddling the indoor

Illustrations by Justine Lecouffe

and the outdoor encourages different modes of interacting with the ground; bipedalism is only one way to journey. I wanted to invite viewers to reflect on the fact that there is a kind of vitality there in the ground, and that plenty of building processes are tied up with the act of breaking.

ROOSTH What you said about bipedalism makes me think of topographic knowledge, and the difference between space and place. Space is an abstraction; place is something that's lived in and experienced. [Anthropologist] Tim Ingold has written about movement as a kind of knowledge. He says that, for inhabitants of a place, things don't exist—they occur. To me, it feels that you're after something similar—the piece is less about the intrinsic quality of the shells themselves than about their containing knots of stories that many people are probably not attuned to. In that kind of dilatory geological time, all sorts of different stories intercalate.

CANELL Absolutely. For me, sculpture is an encounter; it's atmospheric and material at the same time. I was definitely thinking about what you call "knots of stories," and the long and intricate process of biomineralization. Each shell is unique, yet when you encounter them in the form of building material, it comes out of big generic sacks. Many of our encounters with nature come through extraction. By showing the shells in such bulk, I wanted to evoke a sense of brutality that contradicts the intricate nature of each shell's form.

ROOSTH Do you mean brutality in the sense that all these materials have been extracted from their marine environment? Or are you thinking of the Anthropocene and energy consumption?

CANELL Both. The whole process is brutal. Shells are dredged up from the seafloor. I learned about the dredging process while looking to buy pebbles through a supplier. Then, I found out that you could also buy shells by the ton for hardscaping purposes. I was really taken aback, because I hadn't known that mollusk shells were something that you could buy at that scale. I found it completely bizarre. But after reflecting a bit, I started thinking, what is the difference between shells and cement, anyway? My interest grew over time I spent in the sedimentary reefs of Gotland, a region of Sweden always in conflict with the cement industry.

ROOSTH You make those connections between industry and geology really explicit. This opens up other ways of thinking about the relationship between process and material and time. Architectural historian Lucia Allais has been writing about what she calls the "carbonation equation." Basically, it's the idea that reinforced concrete has a "lifespan" of about a hundred years, so we're nearing a moment in which a lot of reinforced concrete will start to become obsolete. She makes the point that concrete mixes up different kinds of periodization—there's the geological timescale as well as the day-to-day life of construction and architecture. So there are several ways you can ask how long it will take for concrete to decay—there's the deep time in which the shells and various substances that form concrete come together. There's also the popular expectation that concrete will last forever. And then there are all the ways in which concrete is responsible for anthropogenic climate change and other forms of degradation.

CANELL I was really shocked to learn about the life span of concrete buildings, especially since we have Roman architecture that's still standing. Apparently Roman concrete is more durable because they used volcanic ash and seawater. I'm definitely interested in contrasting these timescales; similarly, in your essay "Mineral Autobiography" [in the catalogue for the 2019 Milan Triennial], you write about resisting linear time, and about situations that engage multiple temporalities. You use the expression "elsewhen" in your text—I am smitten with this word! You describe how certain rock formations complicate our understanding of continuity and linearity. I experience this with rocks too, amateur that I am. The vitality of the material evokes a multiplicity of durations.

ROOSTH There's something about rocks that lets us all be amateurs, in a sense. My son, who is 5, has a book called *Old Rock (is not boring)* [2020], in which a rock tells stories about its long life. Sometimes, I fantasize

From left: Photo Robin Watkins/Courtesy Berlinische Galerie, Berlin; Photo Nick Ash/Courtesy Berlinische Galerie, Berlin

Left, close-up of Nina Canell's *Muscle Memory (7 Tonnes)*, 2022, hardscaping material from marine mollusks, dimensions variable, and right, view of the installation at Berlinische Galerie, Berlin.

Two views of Maria Hassabi's performance *HERE,* 2022, on view alongside Nina Canell's *Hardscapes* at the Officine Grandi Riparazioni, Turin, Italy.

that this would be the title of my book! In the humanities, we often think about time in a pretty limited way. I first noticed this in discussions of the Anthropocene. As I talked to earth scientists, geologists, geobiologists, and micropaleontologists, I noticed that they constantly think about different timescales. I started to wonder why these scales seem so unthinkable or irrelevant to so many of us when there are plenty of people who think about them all the time. I kept coming back to that word you just used: vitality. Why is it that things that don't move, or that move really slowly, are imagined to be inanimate, while things that do move are imagined to be animate? Movement is this criterion by which we decide whether something is vital or not, but some things move on different timescales. You're ascribing vitality to these shells, and to other things that are all around us, like concrete.

CANELL I've worked with this question in various contexts. My exhibition 2017 exhibition "Viscosity" and related works really lean into that problem. It centered around mastic gum. [Mastic, a non-Newtonian fluid, is a resin taken from trees], and I displayed the material on steel supports. You really cannot see that it moves unless you hang around for a week or two. The [high viscosity] gum moves very fast when compared to rocks. I often like to inhabit this gap between knowing and seeing, and encourage viewers to understand materiality as something porous and deep.

Your essay draws attention to sedimentation, a kind of slow accumulation. Sedimentation also came up recently when I was speaking to performer and dancer Maria Hassabi. I did a project with her [at Officine Grandi Riparazioni in Turin this past February], and she has these ways of moving incredibly slowly; it takes tremendous skill to stay in one position for very long. She mentioned that, in between these positions, she would experience twitches or muscular spasms. This too made me think about micro movements and micro vibrations within duration, and about vitality at different scales.

ROOSTH She's approaching vegetal time! In my work, I often ask, what are the politics of expanding our notion of vitality? Movements like New Materialism have been attacked from a number of sides in academia, and this has been a big issue in my work. I think a lot about something Mel Y. Chen said in their book *Animacies* [2021]. They argue that you can think about vitality as a spectrum, and that the division between life and nonlife is perpetually being policed in ways that ascribe certain kinds of beings more vitality, while others are ascribed less. Chen pays attention to things like gender, class, race, and especially disability. As I try to write about lively rocks, I feel haunted by the possibility that New Materialism and its efforts to ascribe liveliness to nonliving things can brush against problematic politics. I'm still grappling with this.

CANELL That's a very serious question to consider. I was thinking about Kathryn Yusoff's book *A Billion Black Anthropocenes or None* [2018], which was important for bringing attention to how bodies intermingle with toxins. When it comes to cement, we must speak about mining limestone and remember what kinds of bodies are exposed to those toxins.

ROOSTH That point about miner's lung reminds me that nothing is pure and unpolluted; we have to recognize that we've always been part of this degraded environment, and that chemicals are our kin as much as everything else. So maybe the question is not about life versus nonlife, but what Michelle Murphy calls "alterlife." ●

—Moderated by Emily Watlington

Nina Canell: *Gum Shelf,* 2017, mastic gum and steel, 6 by 10 by 10 inches (gum dimensions variable).

View of *Gum Shelf,* 2017, as the mastic gum slowly spills over the steel frame toward the gallery floor.

Top: Photo Giorgio Perottino/Courtesy OGR Torino (2); Bottom: Photo Charles Benton/Courtesy the Artist's Institute, New York (2)