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ROCK WILL MOVE ROCKS

Rock Moving Rocks, 2015, Portland, Oregon

"...to be a poet in a world arranged like this is to be a tiny rock trying to move on its own legs, when of course rocks don't even have legs, are not moving but moved" —Anne Boyer

I tried to be a rock and move through a city.

Over the course of a day I made my way along the waterfront and through the streets of Portland, Oregon. How does a human rock move? Somewhere between an awkward bumble and a heavy teeter, and every so often a mild sway. It was slow. The pace was labored and meandering. I started in the morning on the edge of a parking lot and traveled along a boardwalk, under bridges, across roads, over a river, through parks, past pedestrians, runners, dogs, homeless encampments, ships, and cars, and in the late afternoon I ended up at the Portland Art Museum. For the duration of my travels that day as a rock, I dragged another rock with me. I thought about the other rock as being equal parts kin, companion, and duty. Because dragging it was a cumbersome task, I put it on wheels, which made it seem like it could also be a pet rock.

This undertaking, which I called *Rock Moving Rocks*, was equal parts imagined embodiment and subversive concealment. As an artwork, it allowed me to think about landscape. Now I want to give the rock more nuance and life (layers and time are things that rocks have mastered). I want to talk about being a rock not only as an object, but also as a way to think about how we make meaning. A way to think about objects and the space around us as always being in relationship. A way to consider how we perceive and experience, control and surrender, produce and struggle with space. Most broadly, this is what I want sculpture to help us talk about.

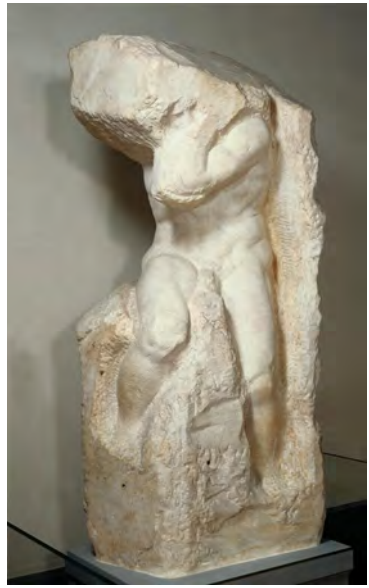
I make objects to open up conversations, and then, if people are willing to meet me there, the objects can carry, intervene, or reflect back thoughts and feelings. Though this small book may read like a meandering exploration, and sometimes I will rely on pictures as if they were my dance partners, I want to carry some of the meaning-making weight this time, and I don't want to poetically obscure the details of the project with the very words and images I hope might expand it. To decide one is a rock, and to navigate our layered and colliding public spheres as a rock, is in some ways simple, but is also convoluted. How we go about seeking meaning or understanding from art is a difficult thing to excavate. We do not often talk *with* art. Perhaps it is a result of our own boredom or impatience, or because of the various power structures that are always at play, but we don't usually rest with artwork, and our explorations of it aren't given much space to meander and teeter on an edge. A concern I have is that in the midst of all the daily crap we endure, a person bumbling along as a rock could be seen as inconsequential. Absurd. A poorly made costume. Who cares about a clown in the midst of it all? It is true that the landscape I moved through holds a great deal of lived violence. But my hope is that a rock, a primordial and basic material of sculpture, might serve as a tool for further examination of what is at stake in and how we might talk about art. Actually, best change that to: *what we can use art to talk about.*

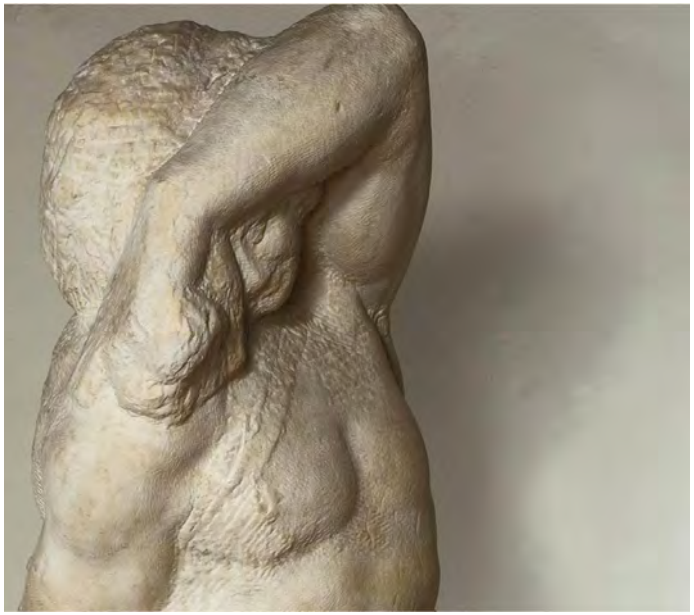
Here's a picture of what I looked like on the day I was a rock:

There is a saying in sculpture about the material telling the maker what it wants to become. Michelangelo is famous for saying he was liberating the form that was within the block of stone, carving to remove all that was extraneous. Noguchi explained the material similarly. I have no doubt that they believed this. The explanation has a beauty to it because it keeps passion in the driver's seat. But protecting the impulse to make by deeming it something unconscious and beyond articulation is also a simple way to avoid examining the impulse. It shirks the responsibility of considering how the work might operate in the world.

From 1520 to 1534, Michelangelo made several sculptures of prisoners, each originally commissioned for a tomb for Pope Julius II: *Awakening Slave, Young Slave, Atlas Slave,* and *Bearded Slave*. Each one was left in varying states of incompleteness (known in sculpture as *non-finito*). There is a lot written about how, by looking at them, one can really study Michelangelo's skill and his approach to carving out the form, particularly because the works were left unfinished. Some people have examined the unfinished works and declared them to be the residue of miscalculation—they claim that technically, those sculptures could never have been completed in that particular block of stone, and that's why they were left abandoned, *non-finito.* Still, there are some who say that's how he intended them, that they were meant to remain just that way, trapped in the material of their making, not yet formed despite the typical exactitude of Michelangelo's normal rendering. They study letters, writing, and visual connections to prove it. They say that he meant to leave them half-finished, never able to fully emerge from the rock, because he was trying to represent the experience of slavery, the inability to be free.

Why is understanding art sometimes approached as if it were an investigatory, proof-seeking science? Why do we teach art interpretation as if each thing is meant to represent something else? Why do we so often halt our analysis of art at the feelings evoked, rather than circling back to examine the very relationships within and from which those feelings are formed? There are so many competing desires for how people want art to function. Why is it so hard to locate those desires within ourselves and consider them a way of looking at art, rather than the way art is looking at us?





Michelangelo, *Atlas Slave* (left), *Young Slave* (right), 1530–34

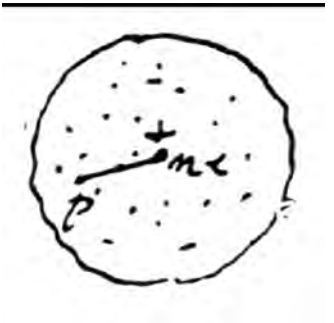
Art cannot be separated from the ideological structures we exist within, even when we try to imagine what it is to dismantle and work beyond them. I contemplate this fact because I really want art to do something, and yet I'm never totally convinced that it can. I don't want an art that can cause a revolution, but at the same time, I don't want one that dissolves completely into the world. I do want one that can help us think about it all or imagine something else. The ways we understand what objects are is not fixed but is only ever really understood through relationship, by examining how the meaning or experience is produced and under what conditions. I was taught to think about ideology and making meaning through a process of decentering—separating myself from any part of the subject, my position unfettered, my whiteness equaling blankness, governing structures able to be separate from my experience. Look out and to the side of the star so you can actually see it better. As if I'm not part of the subject. As if it can all be located outside of our bodies.

Bodies begin and end without the capacity for communicating thinking, but they do have a capacity for proximity and connection. I think of that capacity as body-thinking. The physicality of it can speak so directly to the very desire to make, to give form to experience, and to wrestle with containing this world we are living in, in which sculpture can be a swaddle or a ThunderShirt.

Sometimes materials are everything and nothing at the same time—like Michelangelo with his stone. Sometimes the materials are the very things that make the meaning. Sometimes it's helpful to expand the understanding of what our materials are. Did it matter that to turn myself into a rock I followed an online recipe for how to make a prop rock for a theater set, and then, as a finishing touch, as the flexible urethane coating was drying, sprinkled real rock dust all over? Maybe. But perhaps it's more interesting to think about my body, the shifting context as the rock moved through the landscape, and the audience, intentional or otherwise, as also being primary materials for the work.

The moon is a giant rock in the sky.

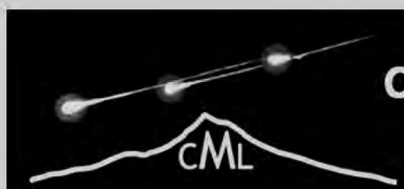
Understanding our galaxy demands an intricate interweaving of myth, observation, and hypotheses derived from analogies. In so many situations, our descriptive models are heuristics for conceptualizing something we can't directly see—visual forms designed to help us understand, even though we have no clue what the thing could look like. The Rutherford-Bohr model of the atom that everyone learns in school is so beautiful. It is knowable, set up like a little solar system, and it shifts our scale of understanding. I wish we could figure out a way to teach from the beginning that models are just our attempts to give form so that we can have a way to talk about things. Theory often comes from models. The fact that models are ways of organizing and making meaning, not actual truth, is not introduced early on in our education and is rarely seen as integral. But children would understand it. They understand storytelling. I can't help but think that if that kind of complexity were taught from the beginning, we could be less violent. At the very least, we could actually have art as a tool for conversation. The reductive clichés that people bring to art about beauty being in the beholder's eye, or whatever you see is just what you see, like a Rorschach test with affirmation as the only outcome, wouldn't survive. The conversation would be more like: Why do we feel this way? How is it that we might know this? What else is this like?



Ernest Rutherford's sketch of the atom, 1910–11

Meteors are small rocks that come flying in from outer space. If they survive the passage through the atmosphere and hit the ground, they become meteorites. If they are super-bright upon entry, they are called fireballs. The American Meteor Society estimates that there are anywhere from ten to fifteen meteorite landings every day. In some beautiful way their continual landing on Earth offers itself like a palatable condensing of space and time—a tease for those of us who hope that the mysterious could possibly become knowable. Because most meteorites land in remote areas or in the ocean, and only half occur at night and thus can be seen, humans don't encounter them often. And they're hard to find. Many meteorites just look like mundane rocks, their only distinctive characteristic being that they don't look like those around them.

A meteorite falling in the Tagish Lake area of northwestern British Columbia, Canada, January 18, 2000, 8:43 p.m. (Photos from the Department of Physics and Astronomy at the University of Western Ontario)



Cascadia Meteorite Laboratory

Portland State University

Portland State University
Department of Geology, 17 Cramer Hall
1721 SW Broadway, P.O. Box 751
Portland, OR 97207-0751
Tel. (503) 287-6733

Fireball Report Form

Your Name, Address & Phone:_____

_____

Observation Date:_____ Local Time:_____

Observer's Name:_____

Address:_____

Phone Number: Home (_____)_____Work (_____)_____

Observation Site: _____ In Car?_____

Direction Observer Was Facing: _____ Fireball Moved: L to R_____ R to L_____

Path: Parallel to Horizon____ Overhead____ Straight Down____ Downward at some angle_____

_____

For definitions of Azimuth and Altitude, and a discussion of angular size, click HERE

First Sighting: Azimuth_____ Altitude_____

Last Sighting: Azimuth_____ Altitude_____

Duration (seconds):_____Apparent Velocity: Fast___ Medium___ Slow___ Not Moving_____

Brightness: Too Bright to Look at_____ Brighter than_____ or as Bright as Full Moon_____

Brighter Than_____ or as Bright as Venus _____ Objects cast shadows_____

Diameter Compared to Full Moon: _____

Color: _____ Shape:_____

Change in Brightness and/or Color and/or Shape:_____

Trail: Sparks_____ Smoke_____ Length_____ Duration_____

Termination: Flared Brightly_____ Fragmented_____(Number of Fragments_____)

Passed out of view while still bright_____(in clouds_____ in trees_____

Behind Building_____ Below Horizon_____) Vanished above Horizon_____

Sounds Heard: With fireball_____ After termination_____(how long after?_____)

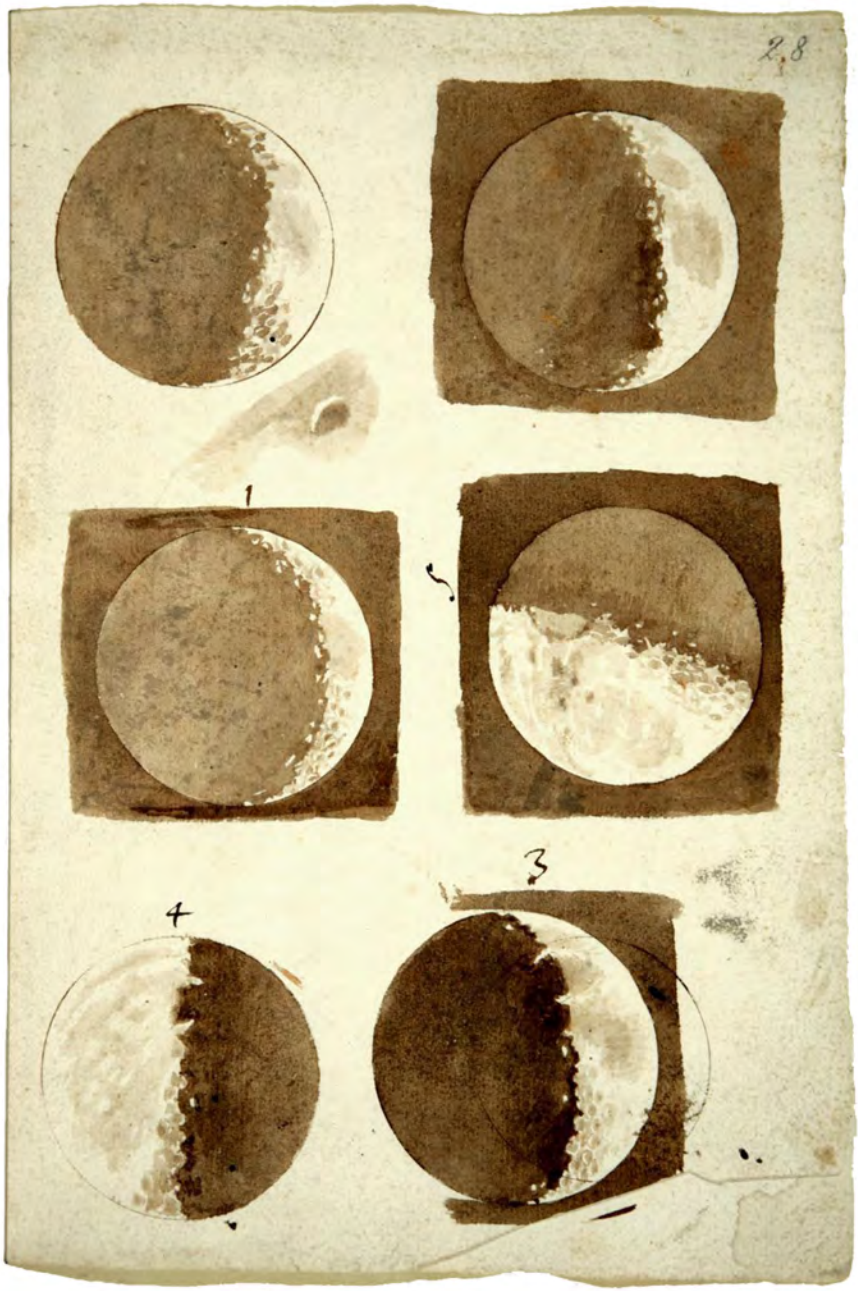
What sorts of sound?_____-_____

Did you feel or experience any kind of strange sensation?_____

_____

Comments and Sketches: Use back of report form.

I like making educated guesses and trying to imagine structures and events beyond my own sense of time. I also like the man in the moon; frozen ancient lava flows from his mouth, eyes, and nose. Lunar pareidolia. Pareidolia is a psychological phenomenon in which our brains see recognizable patterns or images where they don't really exist. Like Jesus appearing on tortillas or the Virgin Mary on french toast. The projection of our own image onto everything we see, including foreign astral bodies, as a way to tell stories and seek understanding is filled with an endearing mixture of hubris and humility. I am convinced I would see a man in the moon even if I hadn't been taught he was there. But in other parts of the world people see other things, such as moon rabbits making medicine, toads, or handprints. We should contemplate the fact that our modes and theories for understanding everything might be considered pareidolic.



Galileo Galilei, *Drawings of the Moon*, 1609

In Greek mythology, Theia, born from Gaia and Uranus (the earth and the sky), is the mother of the sun, the moon, and dawn. There is a working theory that a planet-like body we named Theia collided with the earth and that debris from the collision made the moon. Theia did not survive the collision, but many parts of her can now be found in both the earth and the moon. This theory, known as the Giant Impact Hypothesis, is supported by the finding that some of the rocks on the earth and moon share common traits despite being formed under very different circumstances. Some scientists even think that at first, after this great collision, two moons were made from the debris … two debris moons that eventually merged into one. Who knows how they found each other.

Channel 4 News, September 2016: A giant inflatable moon on the loose in China, showing its dark side as it rolls over cars and pedestrians. “After typhoon winds detached it, the moon began its reign of terror.”

In traditional Chinese folklore, there are many stories about events on the moon, a place where the surface is considered to be like a toad's back. According to one tale, Wu Gang lives there, banished and condemned to endlessly cut down a giant self-healing lunar osmanthus tree. This story about never-ending toil as divine punishment is familiar to Western ears, of course. In Greek mythology, Sisyphus was a king of Ephyra. Punished for his avarice and deceitfulness, he was banished to roll a rock up a hill for eternity.

The story of Sisyphus has been drawn upon to talk about many things, from unfulfilled desire to consciousness. In one common interpretation, Sisyphus represents the movement of the sun, rising in the east at the beginning of the day, setting in the west at the end. The circadian trudge of being alive. The repetitiveness of life colliding with our sense of time as much bigger than our experienced selves. That paradox is obvious in the story of a man, afraid to die, who is banished to roll a rock up to the top of a mountain only to have it roll back down under its own weight, for eternity. In the story of Sisyphus there is a grappling with life that ultimately renders living to be small. In the face of deep time, it is possible recognize both futility and significance as existing at the same time.

Titian, *Sisyphus*, 1548–49

Rubbing of a rock in my backyard, spring 2018.

The Chinsekikan Museum (the hall of curious rocks), in Chichibu, Japan, houses more than 1,700 rocks that resemble human faces.

When I was a rock, I'm not sure what kind of rock I was. Most of the rock on the earth's surface is sedimentary rock, particles of older rocks at the mercy of wind and water, building up with time until the bottom of the pile turns into new rock under the sheer weight of what has arrived above. In that process, gravel becomes conglomerate rock, which is probably what I was. I also looked a little bit like a lump of concrete, a mixture of cement with aggregate. A process the Romans figured out by pulverizing stone.

The day I was a rock I traveled beside and over the Willamette River, along a section that has been changed by sand and gravel mining. In the middle of the river is Ross Island Sand & Gravel, a business located on its namesake, Ross Island, a gutted landmass that has been formed by its own endeavor. It is a mine that dug itself out to build the very city that now surrounds it, as if it were in its own tragic Greek myth, both emerging from and trapped by the material of its making, like the *non-finito* slaves.

Ross Island, 2003 (Image from the Lower Columbia Solutions Group)

How something is made can be as important as why. Sometimes the how is about excavating the form from within the stone, like a god has somehow already intended it to be. But *how* only becomes part of the content of art when it can also be about the actual mechanisms at play in our seeing and experiencing—the various structures that ascribe, produce, or define the meaning we seek to find. For example, a dense tangle of human intervention forms our landscape, and we cannot separate ourselves from that tangle. When we thought our place in the natural world was decreed by divine immanence, our actions bled dominion and abuse. And when we separated ourselves from that notion, we became all the more malleable in the face of competing ideologies. In our constant forming and reforming of the land there lies a seemingly inextricable violence—the legacy of colonialism, structural racism, and our hierarchal ways of understanding.

What is a rock as a witness to the dredging of a river by a company that has purchased permission to ravage it? What is a rock on the edge of a manicured waterfront path, a pedestrian trail intended to shape public space and direct its use? What is a rock as a marker on a bridge: integral infrastructure, trophy of industrialization, wonder of engineering and design, site of suicides?

Alicja Kwade, *Stellar Day,* 2013. The boulder rotates slowly counterclockwise, once every 23 hours, 56 minutes, and 4,099 seconds.

Is there something comedic about turning oneself into a rock? It does seem that for things to be funny there has to be some sort of untethering that happens. The natural order of things subverted, the understood abstracted, something found to be incongruous. In the act of untethering is a desire to be free. In part because of that, I think of humor as being opposed to and at the same time inseparable from pain. A quick search on the internet for "stock footage of sad person with rocks" produces a polished array of images and short videos of what you might imagine, except that all the people are positioned next to water for some reason. The compilation is both amusing and haunting because of its stock-footage attempt to capture emotion. The stills create a bizarre collage of pained-looking people, a collection that could be titled *Heavy Offering*, or *Eternal Contemporary Loneliness*. But pain is not just an emotional state; it is also physical. The experience of physical pain is so tricky. It grounds us deeply in the body, and the interiority of it eludes language and even memory. Chronic pain can leave one numb, despite the actual manifestation being the exact opposite. The word "pain" comes from the Latin *poena*, or "punishment," which implies a relationship to something outside of oneself, despite the sense of total isolation the feeling actually produces. Which may come from how we must grapple with the very lonely experience. Treating pain seems just as tricky. How can we even separate the physical experience of it from the psychological one, and does it matter? When I turned myself into a rock, I got to be rid of my body for a while, but of course, not at all. Maybe I successfully performed a special form of transubstantiation that day.

Myths, human intervention, weather events, and seismic activity move rocks, but really, ultimately, it is time that moves rocks. Being a rock and dragging another rock for a day across a city was obviously slow, and it was also absurd. There was a Pied Piper–like quality to the way people trailed behind me. It became a strange walking tour for the audience—people followed for a surprising amount of time, always keeping at a slight distance. As I traveled I paid attention to what I imagined a rock might notice—shifts in the landscape, other rocks, incursions into pathways.

The trace of a sailing stone's movement. The movement has never been seen in person. (Image by George Jurasek, from Getty Images)

There is a long-studied geological phenomenon known as "moving rocks." Also referred to as sailing stones, these rocks appear to have moved along smooth valley floors all by themselves when no one was looking, inscribing long arcing trails in their wake. Although moving rocks have been found in a number of locations, the most active site has been in Death Valley, the lowest point in North America. The phenomenon has been studied since the early 1900s, but the reasons for it and the proof to go with it were only gathered in 2014, through captured time-lapse footage. Until then, working theories were that wind, magnetism, or aliens moved the rocks, some of which weigh hundreds of pounds. In one scientific article, published in *Live Science*, the frustration of trying to capture the moment that would solve the mystery led the writer to refer to the stones as "shy rocks." Next time you hold a rock, think about it as shy.

A shy rock under the Milky Way in Death Valley in May 2007
(Photo taken by Dan Duriscoe for the US National Park Service)

When I refer to the placement of meaning, time, and how we understand the way things are made, I am also referring to scale. I have always understood sculpture through my body, and I mean this in a very basic way, in the same physical way that I will always long to be held by a parent, or will always know the feeling of my cheek against the bedroom carpet or cool kitchen-floor tile from when I was a child, lying around and waiting for something to happen. Body-thinking.

People have often framed the landscape as a body. Mysterious, majestic, scraped, raped. The world is both a wondrous and tragic place, and bodies are similarly so. We extend our body with hope, desire, and fear. We shape the world to meet the capabilities of our physical selves. We construct bodies as dangerous and desirous, legal and illegal. The body can reproduce a body. They break down and we break them down. They are a way of understanding what it is to be alone, which may be the only way we are able to communicate the opposite, and they keep us separate as much as we may cling to another, longing for some kind of formlessness. Bodies are containers that for some are like prisons, and for others are their only hope. I have longed to escape or control my body, but it's so much work, and I give up quickly.

Dave Hammons, *Untitled (Rock Head)*, 1998

When I was about six years old, there was a drip inside the wall in my bedroom. It was right by my head and kept me awake. I remember my parents took a plastic drop-cloth and put it over my bed and made a hole in the wall with a hammer to see where the drip was coming from. The small investigatory hole became bigger until they finally located a leaking pipe. Though it was fixed quickly, and the giant hole they made was patched and painted, the repair imperceptible, the room was never the same. I had never considered what a room was until that point. I hadn't thought about the room I was in as something constructed. I had never thought about what a wall was and that in the making of a wall, a room is formed. Suddenly I saw the space inside the room as being just as substantial as the walls that contained it. I remember looking at all the neighbors' houses differently, seeing them as play toys, just like a dollhouse. And though this was a phase I thankfully outgrew, for a period of time following the drip in the wall, I would go to bed thinking my body was also somehow indeterminate. I would close my eyes to wait for sleep, and suddenly one part of me, like my hand or my leg, would start to grow, inflating like a balloon and getting bigger and bigger until it risked filling up and bursting the entire room, taking the rest of my body with it. It was only through extremely focused thinking, cutting through the panic, that I would manage, just at the very last moment before it exploded everything, to deflate the body part—*wooooosh*. I could get it to go down to the proper shape and size for one sweet moment of relief. But just like in a half-filled long balloon, when you squeeze the air out of one end, it just goes to the other. And so almost immediately a different body part would start to expand. Eventually, if I couldn't get the inflating seesaw to stop, I would have to get out of bed and shake my entire body down before getting back in to wait again for sleep. I think about this as an early memory related to sculpture. A sculpture memory.

The Venus of Willendorf is a four-and-a-half-inch-tall red ochre pigmented limestone sculpture whose image is often reproduced. This sculpture of a woman's figure is considered an icon of prehistoric art because it is one of the oldest sculptures to date that has been found fully intact. With no real feet or facial features, and small arms tucked behind it, it depicts the body of a fleshy woman, full-breasted, with a large belly and detailed vulva, much discussed as representing a fertility goddess or icon. Though she has no face, her head is wrapped in a textured pattern, something that looks like it could be a woven or beaded cap, or a braid. An archeologist in Austria unearthed the Venus of Willendorf in 1908. Because of the kind of stone it is made out of, it is believed that the object originated somewhere else, was made circa 28,000–25,000 BCE, and was carried to the riverbank where it was eventually found.

As you might expect, there is much theorizing about why a simplified yet accentuated form like this was ever made. And though there is no way to know for sure, theories vary about who the Venus is and what she was meant to represent, whether she is standing or supine, if she is an ordinary woman or some kind of goddess, and again, why her body is so voluptuous. She is much studied for clues and proof, and not enough for how our changing conceptions of sex and gender over the course of history alter the way we consider her. I have always loved this figure because I know that she fits in the palm of a hand. Despite being perceived as some kind of representation, the object can be understood at the scale of the body, and because the statue can be so easily transported, its importance can be imagined on the scale of daily life. Through this sculpture, I am connected to a time that is too far away for me to be able to imagine, and at the same time I can look down at my own foreshortened body, beleaguered by how it is perceived and represented.

On the day that I wandered through the city, I ended my walk at the Portland Art Museum. I made my way through their doors, not bothering to pay the admission fee because I was a rock, and I went directly into a gallery to look at landscape painting. I was exhausted, ready to try to lose myself after the day's journey.

As we struggle with articulating experience, we give it form. If that form includes a physical dimension, we can follow a path to sculpture, and with sculpture, we can come to consider the various containers we create to hold us. The moon looking down; the walls we build to make rooms; the object that fits into the palm of a hand. When I turned myself into a rock to wander through the city, I was thinking about the landscape: how we define it, control it, seek refuge and respite with it. Landscape in art is often discussed in relation to the sublime. The term is an attempt to put a certain kind of experience into language. Or maybe it's also the opposite. There are many things written about the romantic and overwhelming notion of the sublime, sometimes considered to be clearest when it is applied to nature. As we find ourselves grappling with articulating experience and attempting to make meaning, we find ourselves forever located in a position that is unfixed in relation to the experience; a position that can always be examined. The extensive historical discourse about the sublime describes it as circling around but never being able to behold; an experience of the depths of awe and terror; the failure of imagination; or a conclusion for the unrepresentable. Alongside that, let's also have it hold the irreconcilable presence of our bodies, the containers for our alienation and the vehicles for our wonder.

Caspar David Friedrich, *Wanderer above the Sea of Fog*, 1818

Jimmie Durham, *Still Life with Stone and Car*, 2004

Cornelia Parker, *Neither From Nor Towards,* 1992
Bricks from a row of houses that fell off the white cliffs of Dover. Found by Parker on a remote shoreline, the bricks were shaped by the crashing waves over many years.

As a way to extend how we might talk about wandering through the city as a rock, I asked an urban geographer and a pain doctor for their thoughts. Included are contributions from the two practitioners, Jennifer Ridgley and Leonard Kamen. I wanted to see how they would sift through the layers and nuances that arise when trying to understand one's relationship to objects, space, and experience. Through the lens of their research, I asked them how we might think about the construction of our experience, offering us another way to consider the complicated web through which we come to make meaning.

A Geographer's Perspective: The Abstractions of a Wandering Rock

Jennifer Ridgley

As an urban geographer, I often find myself looking at cities in strange ways. Part of my engagement with the built environment involves strained attempts to try to understand the political, economic, environmental, and social relationships that went into producing a particular piece of urban infrastructure, or a neighbourhood or building. These relationships shape the urban landscape in complex ways, but they are often hidden from us. When revealed, they can cause us to see once-familiar parts of the city in new ways, making it strange at first; eventually, though, they seem as embedded in the built environment as the steel and concrete and glass. I believe there is something productive about this process, not only because it helps us understand the city better, but also because it reveals something about our relationships with each other.

A work like Jess Perlitz's *Rock Moving Rocks* can help make these relationships more visible and more present. Her piece encourages us to ask questions about the production of urban space, and helps us look at familiar places in strange ways. Accompanying *Rock Moving Rocks* down the Willamette River, over Tilikum Crossing, and through the city to the Portland Art Museum provides many opportunities for contemplation and questions.

As we walk, we might take a moment to reflect on our relationship with the natural world. We might pause to think about the aspects of nature that go into producing the built environment that surrounds us: the rocks and sand and water and lime and clay that make up the concrete and road surfaces; the iron ore and elements that compose the steel of the bridges overhead; or the fossil fuels that power our transportation systems. We might also think about the global

connections and trade agreements that bring these materials into the city, and the way this ties the city to people and environments around the world.

We are sometimes alienated from nature in the city, tricked as we are into believing urbanization means we have overcome our intimacy with and vulnerability to it. We look to parks and green spaces to help reestablish connection with the natural world, but these are also spaces where nature is intensely managed and controlled. The esplanade along the Willamette River is an example of this. Together with the wilder aspects of the city, there are neatly ordered trees and grasses, and carefully arranged rocks in garden beds.

Rock surrounds us in the city, but we do not always recognize it. To build cities, we remove rocks. We hack at and dig up and move the geological matter, rarely pausing to think about the millions of years that went into shaping it. And then those rocks return to the city in altered form. They make up the concrete and asphalt, and are brought back into the urban setting for aesthetic and landscaping purposes. They decorate gardens and parks and create bolsters to control floodwaters or prevent land erosion. In the city, our relationship to nature is mediated by a host of urban planning, design, and safety concerns, but attempts to control nature are rarely completely successful.

Along the route of *Rock Moving Rocks*, we might also pause a moment to consider the construction of the many bridges that surround us. We could think about the people who slogged to work every day to weld the bridges and pour the concrete, as well as the caregiving and

life-sustaining labor of those who fed and nurtured those workers. We might reflect on the struggles over wages and working hours that went into the building of the bridges, but also the creative labour of the designers, the calculations of the engineers, and the backroom political dealings and financial arrangements that are always part of urban infrastructure projects. What parts of the city are transformed when a new bridge or transportation route is introduced? Who benefits? Who loses out? Relationships around labor and politics get mixed in with the building materials and the stuff of nature to produce urban infrastructure, but once built, infrastructure in the city can take on new meanings and new functions as people use it, interact with it, and reshape it.

Crossing the river with *Rock Moving Rocks*, we might consider the Chinook Wawa name given to Tilikum Crossing, and reckon with the uneasy politics of naming, representation, and memory in the city. Does the adoption of a Native word for "people" serve to remind us on whose land the city is built? Does it help make the histories of the Multnomah, Kathlamet, Clackamas, Chinook, Tualatin Kalapuya, Molalla, and other Native American peoples more visible in the urban landscape? What role do these forms of recognition serve in a city where relationships based on colonialism and racism are still a reality for thousands of people who are living and struggling and thriving in the city? What do they reveal? What do they obscure?

The violent relationships involved in city building and urbanization are often hidden from those who are not directly impacted by them. This is particularly true in a city like Portland, where celebrations of creativity, sustainability, and progressive innovation cloak the ongoing processes of displacement and dispossession that have produced settler-colonial cities in the American West. These processes began with the forced removal and execution of Native people, and the conversion of the land into forms of property that conform to the requirements of capital and empire, but they are ongoing. It is these

property relations that fuel the neighbourhood transformations that displace people of colour and poor people from their social networks and community institutions and livelihoods and homes, and they are related, in complex ways, to the ongoing destruction of the environment. Can paying close attention to the urban landscape help us recognize these violent relationships? Where in the city are they made visible, and where are they hidden from us?

But cities are complex entities. If violence has gone into producing the urban landscape, so, too, have more hopeful aspects of human relations. The built environment has been shaped by powerful forms of resistance, caregiving, and collective endeavour. Poor and marginalized people come together in cities to create livelihoods and community, and in the process, inscribe their collective aspirations onto the urban landscape. Collective resistance and struggles for alternative futures have always been a part of urban life, and the bonds of strength and resiliency that fuel those struggles are woven into the city in complex ways. What kinds of urban spaces nurture these hopeful relations? How can we learn to recognize them?

As we travel through the city with *Rock Moving Rocks*, we engage with an urban landscape that has been produced at the intersection of these complex geographies of nature, labour, representation, violence, and hope. These geographies are often hidden from us, but they become more visible as we gain a better understanding of the relationships that go into the production of urban space. In the process, we gain insights not only into the complex relationships we have with each other, but also the kinds of cities we want to create and live in together. This is one of the beautiful things about Jess Perlitz's intervention in the city: it calls attention to our collective present, to help us build alternative futures.

A Physician's Perspective: The Abstractions of Chronic Pain

Leonard Kamen

After a weekend visit to a Manhattan museum, I was having an animated discussion with an art-savvy patient about a specific abstract canvas that didn't resonate with me. The patient was seeking treatment for chronic low back pain. His resolution to our somewhat tangential discourse on art—"of course, *de gustibus non est disputandum*," i.e., "one's taste is not disputable"—threw me for a loop. It wasn't the Latin. It was the phrase's relevance to my medical focus: consulting on challenging cases of chronic pain. What struck me is how the sensory experiences of both pain and art are uniquely personal—processed by each individual through the filter of their own life.

We develop preferences: white wine over red wine, or a Jackson Pollock over a pastoral Claude Monet. These preferences are formed by a multitude of subtle and dramatic sensory exposures. Elements of nuanced taste may develop in response to the memory of a pleasant night with an influential partner, or a positive association with a color, form, or sound that at some point carved a pleasing groove in the brain. A unique tone is set as a liquid contacts a taste bud on the tongue or a textural sensor in the throat. Similarly, artwork may pleasantly stimulate an optical neuron that relays information from the eye to the brain's limbic system and frontal cortex. Sensory dissonance arises when we anticipate satisfaction from an event and instead perceive displeasure, having our expectations shattered. These expectations are complex constructs emanating from our conscious/subconscious selves, and they can cause us to reject novel experiences that might have otherwise enriched our lives or taught us to avoid harm. Our understanding of what is perceived as "taste," is filtered through this subjective

sensory experience. A most poignant example of this is how our tolerance for touch changes depending on whether the context is one of love or threat. Philosophers have named such experiences *qualia*: sense perceptions influenced by the content of our immersive life experience.

Sensory filters cannot be disputed. We have no better mechanism to gauge the intensity of pain than a subjective number on a scale of 0 to 10. Though our experiences of love and art are equally subjective, we don't rate them in the same way. It is often a struggle for the physician to elicit the character and true impact of chronic pain from a person who lives with the noxious sensations 24/7. For the pain practitioner, uncovering what is generating pain is an artful process. It requires insight into and interpretation of the patient's very personal sensations, which have evolved over a lifetime and are rarely verbalized. That our brain and nervous system can abstract meaning from pain or art is a remarkable bit of biological engineering. Without the ability to adjust to the abstract or unexpected sensory barrage(s) of life, we would be less likely to survive. Making meaning from art or chronic pain requires the same adaptive sensibilities.

My patient, a master plumber by trade, described his pain in a familiar way—as if pain had become part of his body's daily expectations. There was an assumption that others could see his pain, although we could not. He feared that returning to his livelihood would hasten his deteriorating condition. Daily use of pain medications had become his cloak and shield, but they did not improve his function. Physical restoration and exercise was his mantra, but it did not negate his nagging spine. Our visits promoted his awareness of anatomy and

enhanced his biomechanical knowledge in hopes of avoiding re-injury. Our dialogue during visits explored his perception of suffering and loss of function, as well as the diversions and pleasures of art, music, and gardening, all critical elements of coping with chronic pain. Despite our attempts at redirection, he settled into a life with chronic back pain and seemed to embrace his physical impairment for the attention it brought him.

Part of the challenge in treating pain is attempting to sort out the very real perception from the illusion that the anticipation of harm can be as potent as the point of a needle. Likewise, many a good mind has been lost to drug abuse and addiction in pursuit of the elimination of pain. For centuries we have used agents of nature (such as opium) and substances confected by science (such as heroin) to divert our minds from pain. Modern science has purified and amplified chemical transmitters that corrupt the checks and balances of the body, polluting our survival instinct. Concentrations of dopaminergic compounds flood the deep brain, taking lethal hold of the reward systems that keep us motivated and vital.

The biological, psychological, and social makeup of each individual determines our pathways to coping with chronic pain or submission to a crippling multisystem failure. What drives the survival instinct, precisely? Most likely some uniquely human motivational force from deep within for which no simple formula exists. Indeed, this is a Darwinian rational for abstract reasoning and problem solving. Rooting out the source of chronic, unrelenting, non-cancer-related pain requires the pain physician to tap into the limbic process and assess how a patient's beliefs and motivational systems may be best harnessed to inspire adaptation and change. None of this comes from the pills that are available in such abundance.

Colliding colors, textures, sensations, and movements are at the core of our evolved body-mind construct. Abstract variables abound in the anatomic kinetic chain. Bodies come in different shapes and

sizes, and with different experiences, and abstractions of individual physical, mental, and social constructs are the norm. Acceptance of and adaptation to these abstractions are primary human characteristics that can always be further exploited. Communicating sensory self-awareness through movement and the expression of form, sound, and color is a profound aspect of human behavior. Viewing art or chronic pain through the lens of our accumulated biological, psychological, and social life experiences is a reflection of our neuroplastic survival skills. Redirecting our preconceived notions of art and medicine, reformatting the narrative, and stripping our sensory perceptions down to the basic elements are all integral to surviving chronic pain. There are no templates for sensory pleasure or pain.

The master plumber could easily bend to put his palms on the floor, but he wouldn't stop smoking cigarettes or relying on medications that diverted his attention. He never returned to the job that his estranged father had carved out for him. Neither x-rays, MRIs or clinical markers were able to explain why he was unable to resolve the nagging back pain that kept him from practicing his vocation. He gardens now, and raises parrots.

Buster Keaton running away from boulders in *Seven Chances*, 1925

Bios

Jess Perlitz is an artist who makes sculpture as a way to think about how we articulate space, investigating art's usefulness and how we come to make meaning. Within her practice as a sculptor, her projects take various forms, including performance, drawing and video. Recent projects investigate landscape and architecture as manifestations of how we communicate power, place, and desire. Jess is an assistant professor of sculpture in the Department of Art at Lewis & Clark College, Portland, Oregon.

Jennifer Ridgley is an urban geographer and assistant professor in the Department of Geography and Environmental Studies at Carleton University, Ottawa, Canada. Her research focuses on the everyday practices of citizenship and belonging in the city, and how these interact with law, urban policing, and the governance of urban space. She has written on the history of sanctuary cities in the United States, and the ways racialized identities are produced and disrupted in the city.

Len Kamen DO, FAAPMR, FAOCPMR, CAQ Pain Medicine, is a Physical Medicine and Rehabilitation (PMR) physician practicing in Philadelphia at MossRehab Hospital. Dr. Kamen has specialized in the evaluation and treatment of chronic pain from a cognitive, rather than an interventional perspective. Dr. Kamen has been the president of the American Osteopathic College of PMR and has authored several papers and chapters in his field. Dr Kamen teaches at both Temple and Thomas Jefferson Universities in Philadelphia and lectures on topics that are intriguing to those interested in this sort of pain science.

Acknowledgments

"The world is going to pieces and people like [Ansel] Adams and [Edward] Weston are photographing rocks!" —Henri Cartier-Bresson, in the 1930s

The initial daylong performance of *Rock Moving Rocks* occurred during *A Day In Paradise*, as part of the 2015 Portland Art Museum exhibition *Fallen Fruit of Portland,* presented by Caldera and Fallen Fruit (David Burns and Austin Young) and the Portland Art Museum.

The patience and attention of those who helped with the photography and rock handling for the *Rock Moving Rocks* performance is deeply appreciated: Emily Squires, Paul Susi, Garrick Imatani, Mike Treffehn, and Holly Andres.

Thank you to Allison Dubinsky for copyediting and Gary Robbins of Container Corps for the production of this book.

Thank you to Len Kamen and Jen Ridgley for contributing their thoughts and words to this endeavour; Brigid McCaffrey, Liz Asch Greenhill, and Dan Perlitz for the feedback I can hear; Rory Sparks for being such a graceful and wise rock tumbler; Emily (Fireball) Squires for the commitment and confidence; and to my friends and family for their continued care and love, all of which makes this body worth it. We are conglomerate rock, made of many things.

Much of this was written while in residency at the Vermont Studio Center, supported by an Oregon Artist Fellowship from the Ford Family Foundation and sabbatical leave from Lewis & Clark College.

Regional Arts & Culture Council

This book was funded in part by a project grant from the Regional Arts & Culture Council.