THE TASTE OF TIME:
SALT AND THE
SPIRAL JETTY

Recent visitors to Robert Smithson’s Spiral Jetty (1970), which has reemerged for the moment from beneath the surface of the Great Salt Lake, have found it clad in a glistening white armor of salt crystals (fig. 1). This thick bristling exoskeleton now dictates every aspect of the Jetty pilgrim’s experience of the site: it crunches satisfyingly beneath the hiking boots, mingles (depending on the ambient temperature) with salts from the traveler’s own sweat, and sets the Jetty into a stunning color contrast with the blood-red water of the lake.

Even so, it may seem odd to devote an entire essay on the Spiral Jetty to the salt that has been deposited upon it. After all, the salt cannot, in any traditional sense, be considered a part of Smithson’s work. It was not originally immanent to the Jetty’s physical form (a spiral built with heavy machinery from 6,650 tons of basalt and earth) but only later formed a gentle crust or scale skirting along the spiral’s surfaces. It functions as an appendix, a light-footed natural afterthought, to Smithson’s own heavy production. Indeed, the salt is the only physical attribute of the Jetty that Smithson and his work crew did not manipulate directly. The salt is not quite the Jetty but rather a species of patina (arguably the most spectacular example of patina in the history of art).

Yet Smithson, who had an abiding interest in geology and crystallography, clearly anticipated the effect that the natural deposition of salt crystals would have on the work as a whole. In the essay he wrote about the Spiral Jetty, Smithson treated salt as a motivating factor for the entire project—the first paragraph of the essay is devoted to his search for an appropriate salt lake in which to place his planned earthwork. He sketched out other prospective salt pieces throughout this period, such as Island of Salt Crystals in Red Water (1970) (fig. 2). He insisted that salt crystals be listed along with rock, earth, and water as one of the Spiral Jetty’s primary media. And, as Smithson knew, his earthwork would serve (if nothing else) as a functional saltworks. The sheltering arms of the spiral would increase the concentration of brine in the surrounding water, allowing for a higher rate of crystal deposition. It is fair to say that Smithson’s earthwork was built in explicit anticipation of its further seasoning by the lake; it was built, in short, in order to be salted.

From Gold to Salt:
The Substance of Time at the Spiral Jetty

Because it articulates a perpetual belatedness in relation to Smithson’s own work, the salt at the Jetty serves as a material index of the passage of time. And it is as a proposition about the passage of time—its shape, course, and implications for history—that the Spiral Jetty interacts most profoundly with its site. In his essay “The Spiral Jetty,” Smithson claimed that “each cubic salt crystal echoes the Spiral Jetty in terms of the crystal’s molecular lattice. Growth in a crystal advances around a dislocation point, in the manner of a screw.” By referring to “the manner of a screw,” Smithson alludes here to a common flaw in crystal structures known as the screw dislocation. In a screw dislocation, a slip or misalignment in the normal sequence of molecular deposition perpetuates itself throughout the crystal by causing a pattern of growth that spirals around the initial dislocation. As described in Charles Bunn’s Crystals: Their Role in Nature and in Science (1964), one of Smithson’s favorite books, this form of dislocation (fig. 3) produces a helical structure: “There is one type of imperfection which is self-perpetuating; this is the type of imperfection known as a screw dislocation.... Molecules readily add onto the edges of layers, and if this happens on the edge of the step formed by a screw dislocation, it can go on happening indefinitely; the layer is never

2. Ibid., 147.
3. Ibid., 145.
completed, and the crystal, so to speak, grows up a spiral staircase.\textsuperscript{4} In another of his crystallography books, Smithson underlined a passage that made this an explicitly temporal metaphor: "when growth takes place the step can advance only by rotating round the dislocation point somewhat like the hands of a clock.\textsuperscript{5} Indeed, Smithson had long been exploring what he called the "crystalline structure of time," and this spiraling growth pattern became an essential part of his understanding of that structure. The deposition of salt at the Jetty provided for the construction of millions of "spiral staircases" atop the earthwork. Each of these serves as both an abstraction and an enaction of the operation of time.

Smithson’s crystalline model of time disregards linear, progressive, or triumphant models by imagining time as an opaque encrustation around a fault or fracture. Here time has no connection to an animate origin or center; it begins with a "dislocation" and merely accumulates from without. Time does not "pass" or "fly," it builds up as a material sediment that remains on hand indefinitely. The historical implications of this crystallographic time at the Spiral Jetty are best understood by examining the explicit dialogue that the Jetty initiates with another nearby monument: the Golden Spike National Historic Site. The Jetty lies just seventeen miles from Promontory Summit, the famous site of the driving of the Golden Spike that marked the completion of the transcontinental railroad in 1869.

As I have argued elsewhere, the Spiral Jetty functions in part as Smithson’s specific response to the Golden Spike National Historic Site and the model of history and memory that it embodies.\textsuperscript{6} That model centers around a desire to orchestrate a return to a privileged point in historical space. The original "wedding of the rails" ceremony in 1869, captured most famously by Andrew J. Russell’s photograph (fig. 4), fostered the illusion of punctuality: it purported to produce a single point of adequation where the entire nation would be present to itself, a single "now" that would be centered and marked with the clang of hammer on spike. By the time Smithson arrived in Utah to begin building Spiral Jetty in 1970, the regular reenactment of this golden historical moment had become part of the Golden Spike’s mission of historic interpretation. It is as if, by drawing visitors to the precise spatial coordinates of the original event, the original temporal coordinate (12:47 PM on 10 May 1869) might also become observable. While driving past the visitor’s center on his way to the Jetty site Smithson would have seen, probably many times, an abbreviated reenactment of the “wedding of the rails” (in this regularly and noisily staged spectacle, still performed hourly today, two replica engines leave their positions at opposite ends of the short run of track, approach each other, and, with great fanfare and exhalations of steam, nudge noses before backing up to take their positions for the next show). In fact it was just ten months before Smithson’s arrival that nearly thirty thousand people had converged on the area in order to celebrate the centennial anniversary of the original spike-driving ceremony. The highlight of the centennial celebration was a scripted and costumed reenactment of the original ceremony, featuring the real Golden Spike, which had been shipped back to Utah from its usual resting place in the Leland Stanford Junior Museum (now the Iris B. & Gerald Cantor Center for Visual Arts at Stanford University) (fig. 5). Smithson knew that despite its remoteness, the Jetty would come to occupy not some mythic Western "wide open space" but rather a space that had already been shaped by a conspicuous historical event and the mechanics of its continual commemoration.\textsuperscript{7}

Against retrospection

Against the model of return and redemption embodied in Golden Spike, the Spiral Jetty and its salt crystals proffer a different historical sensibility. At the Jetty, time is additive, cumulative, and material, preventing, by virtue of its sheer opaque accumulation, any attempts to produce history by returning to or re-viewing the

\textsuperscript{4} Charles Bunn, Crystals: Their Role in Nature and in Science (New York: Academic Press, 1894), 45.


Smithson arrived in Utah in March 1970 and built the Jetty during the month of April (appointment book for 1869, Smithson Papers, reel 3832, frame 561). Smithson was likely aware of the centennial even before arriving in Utah, since the ceremony had been national news. The New York Times ran at least two articles: "Rail Fans’ Pilgrimages to Promontory," 23 March 1869, sec. 10, 1, and: "Rail Spanning of Nation in 1869 Is Observed," II May 1869, sec. 1, 60.
Clockwise from top: detail of Stills from Spiral Jetty Movie, 1970; Spiral of Cinnabar, 1970; Robert Smithson building Spiral Jetty, April 1970
Gyrostasis, 1968

Entropic Pole, 1967

Leaning Strata (foreground) and Sinistral Strata (background), both 1968