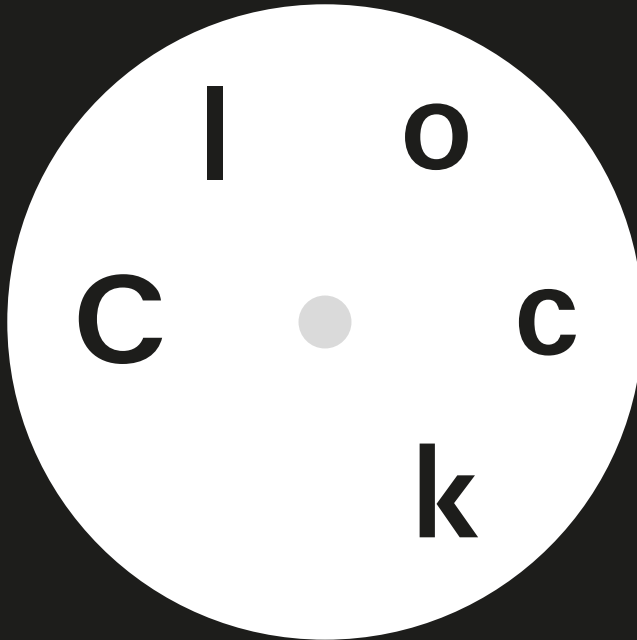


Size determines  
an object, but scale  
determines art.

Robert Smithson



**l o**  
**C ● c**  
**k**

Craig Dworkin

Tick. Tock. Lock snap. Clock clasp clicks. Diecast cogs acquit their tasks. Gears chew with congruent, tooth-meshed, lockstep movements. Twitching in staggered, ratcheted laps of agitated fits they spin in graduated advance. A pocket tachometer of the planet's orbital engine tracks its path and predicts its lot as the taut spring's tension slackens. The Eighteenth-Century conception of the *Machina mundi* transmigrated from the universe to the earth itself, understood as a beautiful machine of peculiar construction: a terrene, subastral heat engine of regulated water, ice, and steam. With relief valves of pyroclasis and seismotic tectonic shifts, the earth maintains its clockwork system, but the metaphor of the machine is a dangerous plaything, carrying with it not only regularity and precision and stamina but also fatigue and friction and depreciation: the parts warping and wearing down – bending and breaking off and melting. If the clocks that measured the motions of the natural world had been in turn used to understand geology, they were also vectors transmitting pathologies of decline: hosts to the entropic drop of torque curves, akinesic stasis, and heat death – even if earth could evade the startling snap of sudden catastrophic failure, like a watch-spring brittle with repeated winds and tightened one too many times – fating it to enervation and the impotent detumescence of molecular chalastics . . . with its narrative of inevitable decline, the mainspring is an elegy to time.

Since demons of lassitude lurked among the Breguet hairsprings, jeweled escapements, and golden timing screws of his chronometers, two sextants joining brass and glass with silvered scales graded every twenty minutes corroborated with doubled reflection the asynchronous rates that spread between the phases of the other instruments as the time they sought to measure passed: the Parkinson & Frodsham keeps its pace, while the Walsh slips behind in increments increasing by the day, as inevitable as the Rio Buenaventura had been to every explorer and cartographer before Bonneville, none of whom could conceive that the engine of the Great Basin – gridded with rigid lines of latitude and longitude even before it had been explored – could maintain its regulated state without an outlet to the sea, not realizing that the tributary feeds and seasonal evaporations of its lake might construct a clepsydra all their own.



Helicoprion, a genus of extinct, shark-like eugeneodontid holocephalid fish, whorl-toothed, early Permian, approximately 270 million years old. Would have swum in the oceans right above the future site of Robert Smithson's Spiral Jetty, Utah. Field House of Natural History, Vernal, Utah, USA.

But Captain Howard Stansbury, who knew better, watched the distant Wasatch pass as he piloted, serpentine, his ship counter-clockwise round the lake, at ease in his prime, his personal timepiece to a satchel stashed, the company's chronometers safely placed in their soft-cushioned, velvet-lined case, prepared for the purpose, and always strapped, on the trail, with care in the middle seat of an easy ambulance or spring-wagon, allowed to play freely in the gimbals, with only a sufficient quantity of curled hair placed in rings upon their faces so as to restrict their oscillations within proper limits inside the box, bowing his head again to gaze at the coated rocks and gravel, their semblance a symbol of the waters' stillness, visible beneath the shallows of the lake as if calculating the craft of the movement beneath a beveled crystal, where the pressurized displacement from the passing hull of the *Salicornia* stirred the silt of the lake bed like callis sand – reddish and suspended in the water – eddying into swirls and reverse currents and the counter-curles of vortices unfurling in the surfless, torvid waters with the turbulent, nonlaminar flow regime of the dynamic fluid strata of the salt-chilled thermocline like the calculated cycles and counter-revolutions of cams and nested wheels before resettling with a siren twist, in a rain of pluvial sediment felled beneath the tyrant's fist of gravity like the red alluvium of strife.

If he reversed course with exquisite precision, straking in a perfect backward circle, wake rushing in to meet the stern turned prow, would each grain rise and resettle exactly where it had been, he wondered, lost in thought, absentmindedly smoothing his hair, furrowing his brow, squinting his eyes ... when suddenly, scotomatic, the sun opacified his view with an actinic glare taining the lake into a vertiginous mirror, until he was unable to distinguish light from water – the mirror kept changing places with the reflection and the reflection with its mirror in a structural blindness where all boundaries and distinctions lost their meanings in an ocean of slate, the present falling backward into a petrified sea until the sun has turned to glass and the surface of the water fused in the helium sheen of a thermonuclear crucible of fifteen-million degrees – but looking away for relief offered only the steady erosion of figure and ground, a frictionless glide of purely optical movement across the uninterrupted desert horizon and the sublation of sand to steam, air shimmering in heat, so that he was forced to admit that the crystal is the seat of greater disorder than its parent liquid in a scene where even *to see* becomes an intransitive

verb and the future will have been forgotten as yet one more vanished theory, compressed and layered in the closed pages of shelved tomes, the strata of so many forgotten books – maps, charts, advertisements, art books, science books, money, architectural plans, math books, graphs, diagrams, newspapers, comics, booklets and pamphlets from industrial companies, gaudy prints, passé literature, church Latin, erotica full of spelling errors, novels our grandmothers loved, fairy tales, little children’s books, old operas, leaflets, papers, cards, circulars, *etc.* – until later, standing watch while the ship lay at anchor, as all the hands aligned with the clack of a midnight clap, abraiding him from his idle fancies with a start, Stansbury suddenly understood what he had never been able to recognize, the previous year, looking out across the marginal sea of the Atlantic off the Florida Keys, its waters churned by the spiraling arms of the terrible Tampa Bay Hurricane of 1848, the year of revolutions: the vastest sea is simply a desert basin in reverse.

He would issue his report on the torrid lake just one year after Rudolf Clausius published his first formulation of what would be codified as the Second Law of Thermodynamics, an equivalence value of mechanical heat diffused through the working bodies of fluids, which he christened *entropy*, from the Greek *ἐντροπή* [‘turning in,’ like the coils of a spiral], a transformational content in opposition to the ‘work content [*Werkinhalt*’] that he took to be the etymology of *Energie*, with the transformation of the state following the disgregation of molecules, as they spread in fugitive dispersion, content to drift, preferring not to organize, unavailable for concentrated work, or what Ludwig Boltzmann, himself the grandson of a clockmaker and son of an accountant, would see a quarter-century later as the anarchic disorder into which the Austro-Hungarian Empire was also descending around him from his Styrian outpost in Graz, where the Uhrturm had struck the hour without fail for one-hundred-and-sixty years, despite having exchanged its minute and hour hands, the regulation of the number of its strokes effected by means of a snail, and with warning signs everywhere of its noonday: Franz Joseph’s little brother dead in Cerro de las Campanas, the Commune in Paris; Bakunin challenging Marx in the Hague and then the veritable schism of the First International and the regrouping at St. Imier; народники in Russia; insurrection throughout Benevento; the Spanish translator of Proudhon, of all

people, elected President of Spain, where *Federaciones* were forming; circulation of an *Arbeiter Zeitung*; gatherings of *torcedores* in Cuba, cigarette workers in Cairo, and printers in Alexandria; clubs in the barrios of Buenos Aires; the Mexicans, again, in *Congresos Generales de Obreros*; the assassination attempts on Wilhelm . . . but what kind of puritanical imagination would see the perfect rest of thermodynamic inertia as threatening decline or lamentable degradation rather than a divine release from the dizzying spin of the steam-driven knitting machines turning out work without respite and without thanks, a universal refutation of the right to work as the mill wheels assemble to construct miraculous time machines, reversing the hands of clocks in a backwards blur, generating a month’s vacation every seven-and-a-half minutes while the slackening winding down of every other horologe, beginning with laches of murcid and socord rathymia, acceding to the slowing seconds’ continuing attenuation, despite the wrath of lurid sermons against the so-called sin of acedia and its uncertain melancholias, announces the decay of the carcass of time, subverting the infinite accumulation of equivalent intervals, opening the way to fleeting federations of irreversible moments, until a stopped clock becomes the symbol of the ultimate triumph of playful simultaneity and the promise of a true uchronia, a paradise of exhaustion where one might dwell among the ruins of the hours, freed from the tyranny of time itself and the colonization of every tenth of a second by Capital, which took over from the parish bells and canonical hours of Religion with a zealous relish no ecclesiastical had ever managed to rouse, introducing minute-hands to clocks with the rise of Mercantilism in the Seventeenth-Century and then second-hands with the rise of Industry in the Eighteenth-Century, with further subdivisions to follow, down to the once invisible and inaccessible hundredths of a second snared to settle the idle wagers of robber barons who would ride toward the shores of Great Salt Lake bearing golden spikes and ties of laurel, or the constant vigilance of a scientific management that would marionette every movement of the limbs and digits of the bodies of wage earners by steel company clerks working for mills on the outskirts of northern Philadelphia neighborhoods . . .



Nick Thurston, Photograph of Spiral Jetty from the wing mirror of Craig Dworkin's Jeep, Utah, USA, 15, June, 2016, 15:05.

Among the laborers who laid the final ties on the Central Pacific side of the transcontinental railroad, settled in cinder and destined to be spiked with ceremonial gold, one – nystagmic, genteel – still, though old, nostalgically recalled a phrase from his earlier trade: 鋼腸 [*metal entrails*], or, to be specific: ‘steel intestine,’ the term for a watch-spring, which, were it scaled to the extension of Robert Smithson’s *Spiral Jetty*, would stand as a 1.625 meter high wall, half-a-foot thick, extending from the bridal of the shore to an arbor around which the final turn of its coquillonage curves, to reach 1,466.75 meters, weighing over three-million kilograms – five-hundred times the weight of the material moved by Bob Phillips to construct the *Jetty* – so that the force required to wind the massive spring, applied by some monumental bench key, would reach a torque equivalent to the tension needed, as calculated by the principle of levers, for the neck of the *Diplodocus* that freely roamed the western edge of the Morrison Formation in the late Jurassic, bending to drink among miniature forests of tree-ferns, horsetails, displotted cycadics, conifers and ginkos, growing over what are now the shores of Great Salt Lake, to balance the weight of its head, a force nearly enough to break *ligamentum nuchae* were the neck muscles not bearing some of the load, equivalent to the pressure exerted on the road by a cold-war era Soviet tracked artillery trailer, or the maximum thrust of the engine of the F-111A developed to penetrate such mobile defenses, one of which collided with a Montana Power Company turboprop near Kingston, Utah in 1974, killing the pilot, months after Smithson himself died in a plane crash, morbidly surveying the site for an earthwork to rival the *Jetty*, or the main engine of the Orbiter shuttle that would have been built in the training range across the lake from his sculpture that same year but scuttled by NASA’s decision to use jettisoned solid fuel boosters, the survival of which required a water landing in something deeper than the shallow pool of the Great Salt Lake’s scant cushion, the force of each being greater than the impact of a train car traversing the Lucin cutoff, and when that torque has been applied to wind the chain to power the train of the scaled watch the spring will store the potential energy of 509,595.6 Joules, the energy needed to raise one kilogram of ice on the surface of Triton, the coldest of Neptune’s moons, revolving in its retrograde orbit, disrupting its hydrostatic equilibrium, from 35 Kelvin to its melting point, equivalent to one million kilograms of trinitrotoluene (TNT), or the kilowatt hours in the bolt from an average lightning strike, or one and three-quarters tons

of coal equivalent, the amount moved per minute up to the height of a revolving screen pitched steeply enough, at about twenty degrees, to cause the coal to slide (requiring about 0.017 horse power and not including the power needed to overcome the friction between the coal and the screen or to turn the pinion shaft and drive the conveyering belt, at a cost of about twenty-five pounds of coal per hour, which amounts to 0.00012255 of the total coal shuttled down the conveyer in that time), or about a ton of petroleum product, or 197.25 gallons of gasoline, sufficient for a jeep to drive over class D county roads for 3,550 miles, or 113 round-trips between *Spiral Jetty* and the Golden Spike National Historical monument, derived from 17,750 tons of prehistoric biomass – archaens and the ancestors of planktonic organisms, algae and protozoa – despite the appeal of imagining some sore-necked diplodocus liquified to gasoline, as the Sinclair mascot in Corrine, the nearest station for the jeep to refuel, would have it, and an energy sufficient to power Stansbury's watch for 2,446,058,880 minutes: as long ago as the construction of the first Egyptian pyramid ever built, for the burial of Pharaoh Djoser, in Saqqara, or the Assyrian temple in Bismya, near Babylon, or the Neolithic village of Huerta Montero outside of Cabeza de San Marcos in what is now Spain, built at the time of the first observation of Essouan (formerly Syane), the frontier between Egypt and Nubia, to be directly under the arc of the Tropic, at the moment of the founding of the greatest university of the ancient world, in Heliopolis, near Matariah during the twilight of Elb-Havel, Bernburg, and Globular Amphora cultures, replaced by Corded Ware and Single Grave cultures contemporaneous with the origin of Dravidian languages, according to the latest phylogenetic studies, just as two Koryaks split from a common subclade ancestor in the Haplogroup C-M48 of the Y-chromosome DNA, while Thylacine, pouched, disappeared from the Australian mainland, coinciding with the introduction of the Dingo, a span measured by the half-life of isotopic <sup>18</sup>O, or the life of Alerka, rival to Prince Yudrishi, as the sacred authority of the Sama-Veda vouches, which would make his age 115 × 30 or 155 Seds, while the demigods have 300, or 10 Seds, the gods 2250 or 75 Seds, and the Cynic cycle 2100 or 70 Seds, thus firmly establishing a mystic factor of 140, or the sum of the average life lost in Denton County, Texas, due to premature death, or by Latinos in Boston, or the average period of the modulation of the 1,800-year oceanic-tidal cycles, a span that would stretch back to the end of the arid Holocene climate and the return of humidity, the time,

some reckon, using population doubling algorithms, from the biblical Flood, when rhyolitic tephra erupted around Lake Taupo, in what is now New Zealand, during the New England Elm collapse and the last iceberg-triggered Florida pine burst, when the seed of what would someday be the world's oldest, continually standing tree, a bristlecone pine in the snow-coated fault-block White Mountains, was first implanted in sandy soil surveying the Great Basin below.

