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“Still Glowing”: A New York Childhood around 1980, Or, Ilana Halperin’s Excavations.

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‘Language has unmistakably made plain that memory is not an instrument for exploring the past, but rather a medium. It is the medium of that which is experienced, just as the earth is the medium in which ancient cities lie buried. He who seeks to approach his own buried past must conduct himself like a man digging.... And the man who merely makes an inventory of his findings, while failing to establish the exact location of where in today’s ground the ancient treasures have been stored up, cheats himself of his richest prize. In this sense, for authentic memories it is far less important that the investigator report on them than that he mark, quite precisely, the site where he gained possession of them.’

— Walter Benjamin¹

‘No matter how long you have been here, you are a New Yorker the first time you say, That used to be Munsey’s, or That used to be the Tic Toc Lounge. That before the internet café plugged itself in, you got your shoes resoled in the mom-and-pop operation that used to be there. You are a New Yorker when what was there before is more real and solid than what is here now.’

—Colson Whitehead²

‘Nature, like a person, is not one-sided.’

— Robert Smithson³

On the occasion of William Hunter's tercentenary in 2018, The Hunterian—named for that Enlightenment polymath and founded by the bequeathing of his encyclopaedic collections to the University of Glasgow in 1783—threw him a party. It took the form of a museological reassembly, within the Hunterian Art Gallery, of Hunter's original collections in all the rich complexity of their relations to each other. Paintings by Rembrandt, Chardin and Stubbs (among others) joined anatomical preparations, numismatics, fossils, casts and prints from Hunter's work as an obstetrician, artefacts from the South Seas purchased from Captain Cook's voyages, correspondence with luminaries such as Benjamin Franklin, drawerfuls of entomological specimens, myriad scholarly books, corals, and minerals. If the prerogatives of collection care and conservation meant Hunter's three-hundredth birthday party was a restrained affair, his collection, though securely encased behind glass and Perspex, was at least latently a riot of *stuff*, organic and inorganic. Material residues emergent from millennia of natural processes and centuries of human culture jostled together, as they had not done since the twentieth-century modernising of The Hunterian into separate anatomical, archaeological, artistic, scientific and zoological venues and displays.

Some of the most compelling 'guests' at the party were also the most troubling. Hunter's casts, drawings and etchings of dissections performed on the truncated bodies of women who had died in advanced stages of pregnancy were unsurpassable in this regard. They fully lived up to Ludmilla Jordanova's unflinching description: 'The body is realistically whole, but also amputated to show human flesh resembling chunks of meat [...] somewhere between the full vitality of life and the total decay of death.'⁴ Less spectacular, less violently visceral, but unforgettable nonetheless, was a small display showing a by-product of one of Hunter's dissections. In a cylindrical glass jar, only twenty three centimetres tall and nine wide, were over one thousand gall-stones or *calculi*, found in 1765 within the body of an anonymous woman; she had died due to haemorrhaging in labour. The stones were mounted upon a piece of paper; the largest set at the top in neatly ordered rows, the number of *calculi* in each row increasing as the specimens themselves decreased in size, until the smallest were gathered, teeming, in circular clusters at the bottom. Accompanying the specimen jar—within which the paper was curled, some of its contents now missing from their places on the grid—was a representation of its original state in a red chalk drawing. Annotated by Hunter, this was one of many such illustrations contained within three bound volumes in his library. 'While Hunter's primary focus was surely medical,' the exhibition catalogue commented of his collecting of such items, 'he is known to have had philosophical and scientific interests in the property of "stoniness" in living creatures, crossing, as it does, the boundary between non-living and living in respect of the doctrine of the "Great Chain of Being".'⁵ If the precocious number and estranging bodiliness of the concretions meant something of the *wunderkammer* attended the display of the *calculi*, then the catalogue pulled Hunter firmly back into the camp of modern science. And indeed, as an exemplar of the 'Classical episteme' theorized by Michel Foucault, Hunter was working on a fundamentally different basis to the collectors of 'curiosities' and their play with relations of sympathetic resemblance.⁶ With the advent of the Classical age, Foucault

argues in *The Order of Things*, 'a knowledge of empirical individuals can be acquired only from the continuous, ordered and universal tabulation of all possible differences.'⁷ It is tabulation in Foucault's sense which structures the presentation of the *calculi* in a gridded sequence, as it structures their place within Hunter's larger investigation of the maternal body, and within his encyclopaedic collection. If we wonder at these human stones now, we do so through the prism of Enlightenment thought, which refracts our gaze just as much as the curved glass in which they are offered to sight. And we do so, Foucault states in *The Birth of the Clinic*, on the other side of pathological anatomy's passage through dissection; a decisive event meaning that 'the first scientific discourse concerning the individual had to pass through this stage of death. Western man could constitute himself in his own eyes as an object of science... only in the opening created by his own elimination.... from the integration of death into medical thought is born a medicine that is given as a science of the individual.'⁸

I commence, then, with an ordering of bodily (but fragmented) artefacts, claimed for science from within a human body, housed within a museum collection, and displayed at a moment of institutional commemoration. I do so because this example seems to me to open up a number of issues germane to Ilana Halperin's work. Specifically, it might illuminate, by contrast, some facets of her distinctive approach to handling the material traces of human and natural history. It may illuminate too her renegotiation of their framing within instituted knowledge and institutional displays to make conceptual space for a quite different 'science of the individual.' I do recall her excitement at seeing the *calculi* during a preparatory visit ahead of the installation of *Minerals of New York* at The Hunterian in 2019. And The Hunterian's collection has been a muse of sorts for Halperin (a Glasgow resident since departing her native New York), for some time. But, to be clear, I am not making any claims of influence or direct relevance for the *calculi* here—in any case, Halperin had found her own way to working with gall-stones in the *Steine* project of 2012, her interest piqued by 'the idea that we as humans are also geological agents, we form geology.'⁹ This invocation of what Halperin names—in a typically subtle formulation—'geologic intimacy,' already establishes a first contrast between her practice and the *calculi* as museum objects. It points us towards Halperin's tendency to bring human and non-human actors closer than an Enlightenment taxonomy would allow. In her work they are held in relation in ways foreclosed by its tables and laws, prised out of their period enframing and into proximity to deep time and the anthropocene alike. It directs us also towards her entangling of inner and outer worlds, her insistence on the body as a site of geological becoming and on geology as an emotional landscape within which personal experience is inscribed and upon which it is projected. This sounds technical, arcane; in Halperin's art it can turn on acts as simple as holding an aeons-old meteorite in her hands, 'to make physical contact with something that predates the ground you stand on.'¹⁰

To further draw out this contrast, let us briefly consider the works that Halperin added to *Minerals of New York* specifically for its Glasgow iteration. Firstly, a set of minerals from The Hunterian's holdings that doubled the particular types featured in the eighteen pairs of drawings in the exhibition's eponymous centerpiece. Like those drawings, the minerals—black tourmaline, green muscovite, garnetiferous gneiss, serpentine and more—were arranged as if to correspond to a rudimentary cartography of New York City, albeit one shifted from its familiar vertical north-south orientation to a horizontal disposition fitted to the gallery walls. Like the drawings, then, they functioned as a map whose contours were derived from Halperin's personal memories of growing up in the city. These works are detailed elsewhere in this book, so I needn't labour my account of them here. I would note, though, that the artist's memories were cross-referenced with specific locations at which minerals had been excavated from beneath New York's streets during public works, before ending up in the collection of the American Museum of Natural History, where she would eventually encounter them. The addition of these actual mineral specimens makes at least a half-rhyme with Hunter's *calculi* and *their* doubling in an illustration of almost *trompe l'oeil* naturalism and shows us something of Halperin's absorption of scientific method into her artistic practice. It also allows us to appreciate anew how important are the more impressionistic watercolour works-on-paper within *Minerals of New York* in making manifest Halperin's own way of seeing minerals.

The meticulously rendered monochromatic observational studies Halperin made of the eighteen 'minerals of New York' chosen from the American Museum of Natural History conform remarkably well to the precedent of the eighteenth-century chalk drawing in their restraint and appeal to objectivity. Foucault urges us not to attribute such qualities to a simple increase in attentiveness and acuity of vision emergent in the Classical age, but rather to understand them as forged by 'a new field of visibility,' one predicated on a narrowing of focus. 'Natural history did not become possible because men looked harder and more closely,' he writes. 'One might say, strictly speaking, that the Classical Age used its ingenuity, if not to see as little as possible, at least to restrict deliberately the area of its experience.'¹¹ Hence, therefore, the elimination of senses other than vision from the perception of the object of study. Hence too, that the pictorial illustration of an object of study would be monochrome, the better to emphasise aspects of inherent structure over mere incidental appearance. Halperin's pairing of each observational drawing with an abstracted form of subjective colour spectroscopy of her own invention, a *felt* perception of each mineral's characteristics translated in paint, complicates the consolidation of tabulated perception at work in the *calculi*'s representation for the viewer's gaze. Her principles of selection and sequencing likewise stressed subjective taxonomy and topology—the flow of memories parsing New York's grid, the minerals becoming fragments of a self-portrait—over the neutral tabulations of natural history or minerology. It seems not insignificant that Halperin wrote the scientific names and geographical provenances for each mineral on the *watercolour* of each pair. Inscribed thus, these pragmatic, grounding details contrasted with the effervescence and unboundedness of the artist's improvised forms. Rather than securing

the objective character of each monochrome drawing, reiterating their facticity, these annotations insisted instead on the importance of sensory apprehension to Halperin's knowledge of each form—and to our knowledge of them in turn.

In *Minerals of New York*, The Hunterian's geological specimens were displayed in Perspex cases repurposed from the William Hunter tercentenary exhibition. They were collectively titled—with a nod to Robert Smithson and the several 'mirror displacements' he made—*Mirrored Minerals*. Also acknowledging Smithson's importance to Halperin was a suite of works, acquired by The Hunterian some years prior, from her 2005 *Nomadic Landmass* project. These included a photograph and three painstaking drawings that invoked the formation of the Eldfell volcanic cone in an eruption on the Icelandic island of Heimaey on 23rd January 1973, visualizing its uncanny reprise of the alluvial immersion of architecture in Smithson's famed 1970 work *Partially Buried Woodshed* at the campus of Kent State University.¹² The *Icelandic Mineral Sample*, a tiny fragment of uncertain composition (possibly volcano-formed mineral; possibly stray shard of manufactured glass), was presented in a wall-mounted glass case, accompanied by an explanatory text panel. Written by the artist, this panel was itself integral to the work. Finally, a 'map drawing,' precursor to that which orientates *Minerals of New York*, plotted Smithson's lifetime—beginning in 1938 and abruptly cut short by his death in an aircraft accident in 1973—along with that of Eldfell and Halperin, each 'born' in that same year. A section of geological strata at the top of the work suggested a drilling down through layers of time of an extractive or scientific kind (and echoed Smithson's use of such a device in his *Strata: A Geophotographic Fiction*, of 1970). An annotated timeline running left to right across the work, meanwhile, communicated events of a more personal nature, including the death of the artist's father—a catastrophe that might well be figured, for his kin, as an arresting of time, a submersion of normality, a petrifying, Pompeian immuration of life. That the *Nomadic Landmass* project documents Halperin's ingenious decision to make her thirtieth birthday a double celebration with the Eldfell volcano, and to turn her pilgrimage there into an act of grieving for her father, points to the fact that for her the boundaries between the living and non-living can indeed be productively crossed in acts of geological intimacy. This intimacy takes place not just through the formation of 'inner stones,' for example, but in vivacious acts of bonding and commemoration situated firmly in the external world.

The capacity for geological events to function as an affective Richter scale (or in this case, more appositely, a 'Volcanic Explosivity Index'), whether marking loss or growth and transformation, was extended brilliantly into a gesture of self-representation that called up the traditional genres of art history, even as it subverted them: Halperin's inclusion of her *Self-Portrait as a Lava Bomb* (1973/2019). This work, again including its Perspex case and its interpretive text as intrinsic elements, was the final addition to The Hunterian version of *Minerals of New York*. As the text recounted for the viewer's benefit, the piece of lava in question was from Eldfell, 'taken ... while "still glowing" on 17 June 1973,' and was a 'gift

to the artist from Gísli Pálsson, an Icelandic Professor of Anthropology who was born on the island of Heimaey and whose childhood home was devoured by lava during the Eldfell eruption.' Let us now set Hunter's *calculi* alongside this self-portrait. Halperin's is above all a chosen representation of the self, realized through the nomination of a piece of abstract raw material as akin to her in some measure. This portrait is delivered via a piece of gifted—and not appropriated—stone that was once, not so very long ago, in the moment of Halperin's gestation, still molten, yet-to-be-formed. Hunter's *calculi* are extracted, mined even, from the interior of a human body, a woman's body, and come to instantiate *his* gaze, *his* knowledge in an institution that bears *his* name. That there is a gendered—perhaps, more pointedly, feminist—dimension to Halperin's work with the natural world, is one implication that this comparison suggests. Such a dimension is largely beyond the scope of the present essay, but I suspect it does undergird a feature of her practice that I will try to treat more fully, namely the assimilation and transformation of museological acts of collection-building, curatorial juxtaposition and textual interpretation into a project of self-representation-in-becoming. I underscore here too the contrast between Halperin's mnemonic repurposing of the didactic means of the museum (its cases, timelines and text panels) to resituate and restate her biographical experience, and the extraction and *effacement* of personal history intrinsic to Hunter's glass jar and its gridded *calculi*, as well as to the chalk drawing and its distillation of body-geology into the language of impersonal observation and knowledge.¹³

One key aspect of the *Self-Portrait as Lava Bomb* deserves further comment in relation to gender and bodily materiality, however, before we move on to other matters. In *Mother Stone*, her indispensable account of modern British sculpture, Anne Wagner calls up Hunter's casts of the dissected 'gravid uterus' to position them within a history of lithic representations of maternity. 'The tone is empirical, the verisimilitude relentless,' Wagner notes of the casts; they appeal to an artless honesty that makes them seem to have almost formed themselves after nature, though some sculptural sleight-of-hand was probably involved, she suspects.¹⁴ Wagner proceeds to trace a seam running through modernist sculpture in which such implicit parthenogenesis is forcefully thematised within works that take maternity as a subject and do so at a historical juncture in which the maternal body was understood as a political site, 'opened to and penetrated by its surrounding world.'¹⁵ By the first decades of the twentieth century, Hunter's naturalism will no longer do in relation to these concerns, thematically or aesthetically; abstraction reigns. In Jacob Epstein's *Matter* of c. 1907, for instance, in which a male figure holds up a piece of stone inscribed with the outline of a fetus. 'Of the body so abruptly curtailed in Hunter, not a trace remains...,' Wagner points out. She continues:

Without a human mother, the rock fetus still looks uncannily animate, vital enough to give the stone its full measure of life. Yet it also reads like a sign or blazon impressed on the mother stone. Behold, it declares, a new schema for sculpture, a principal that

reshapes the medium in a fundamental way. Here is a dream that links medium and image, while condensing matter and form. And it envisions somehow tapping or assimilating female procreative power by equating, even eliding, mother and stone.¹⁶

Now Halperin's lava bomb certainly shares something of this animism, but emphatically without the recourse to the impress of signs (other than via the parergonal text which clearly declares it as an object formed without the artist's intervention and only retrospectively nominated as a portrait). And in so far as the lava bomb too is 'born without a mother,' this is not because of any technological overcoming of the maternal or the transfer of its powers to an autotelic, autogenetic male creator. It is simply because it was formed in a geological event far beyond any human agency, let alone that of the artist who would come to adopt it as her own double. I hesitate to say that it was made by 'Mother Nature,' for such platitudes traduce the intricacy and originality of Halperin's project, not to mention trading in a problematic association of unformed matter and femininity.¹⁷ Rather, we might think of it as 'made' by its excavation from a memory site that is itself a highly imbricated layering of time, matter and culture (Heimaey), and via its re-presentation and reinscription within another such site (The Hunterian). Its abstraction is at the service of embodying a multi-faceted, textured, but integral sense of self, and at recovering the possibility of the representation of such a self beyond either the incomplete viscera of Hunter's anatomical project or the putative purity and wholeness of modernist sculpture.

The 'readymade' aspect of *Self-Portrait as a Lava Bomb*, plainly declared in its label, emphasises that it is not a work brought into being by manual labour. Alberto Giacometti's *Caresse* (1930), also known as *Malgré les mains* (*Despite the Hands*), offers Wagner a much more ambiguous instance of the maternal thematic in modern sculpture than Epstein's *Matter*, one which connects precisely to the question of sculpture's figuring of its own creative processes. She directs us to 'look at the marble's gravity, hands notwithstanding,' as evincing its claim to be made without a maker. And to observe, cutting against that sense, the interruptions and crenellations that the artist carved into one side of the form. 'Here is a strict geometry of angles which leaves no room for aliveness or embodiment, and on that side of the sculpted figure, anyway, none can be imagined to survive,' Wagner avers.¹⁸ But the hands tell a different story. They bothered some of Giacometti's critical supporters, apparently, who thought they compromised the proper abstraction of the work. Setting such propriety against the biomorphic example of Arp's work, Wagner writes of the hands that

They recall a moment before pure plasticity, when aliveness and fecundity were qualities imagined for stone. "Stones are full of entrails, bravo, bravo." The lyric is Arp's, a hymn not to nature but to sculptural fantasy, to a process of concretion as the means to imagine an extreme aliveness, in which nothing can be abstract or inert. The

wish is all the more perversely utopian given that stones, however improbably, accomplish the animating trick.¹⁹

This is an infinitely subtle account of the kinds of rhetoric, visual and verbal, playing out in the artists Wagner attends to. At the risk of losing that subtlety, let's transpose this into the terms established so far in contrasting Hunter's *calculi* with Halperin's drawings, mineral samples, maps and lava bomb. Hunter's display of concretions from within the body imposes geometry and order on them as the price of their visibility. The literal death of their maternal maker is the condition of their entry into public view, extracted and abstracted, where they instance the light cast by scientific knowledge. Halperin's works share with Cresse a faith that sculptural processes of concretion—and I think she would claim the *calculi* as part of this history, every bit as much as Hunter's casts—can indeed body forth aliveness. But no sleights-of-hand or trickery attends *her* animating of stone, because she works on the assumption that it is already animate, just as she is already 'stony.' Stones can be full of entrails and, indeed, vice versa; a lava bomb can be a self-portrait. This is not to say that no artifice or artistry is at work in Halperin's oeuvre, but to note that this happens elsewhere than in processes of manufacture. Her practice is singularly alert to how formation takes place without human hands, and how bodies coexist and are articulated by institutional gestures, from encasing to labelling. And her acts of reinscription—performed through annotation, interpretation, abstract and representational drawing, the construction of timelines, and so on—double and difference the very means by which a museum habitually arranges and describes its objects.

This detour into the history of sculpture is prompted above all by the fact that Halperin herself trained in that medium. Her practice has long-since departed from any restricted sense of 'medium specificity,' though certain sculptural values still inform it: her prints and drawings, for example, having a weight and gravity that belies their two-dimensionality. We glean as much from one element of the *Minerals of New York* installation absolutely vital to its functioning—a narrated slide show of demolition sites and soon-to-be-gone storefronts in mid-1980s Manhattan. Halperin's slideshow fuses the once-ubiquitous pedagogic apparatus of art history—the slide projector—with the personalised, domestic uses of that device to share family photos and childhood memories. Already out of time in its recourse to this analogue technology, the piece continually layers temporalities within its recounting of incidents from Halperin's girlhood, from the architectural and socio-cultural life of New York, to a panoply of the artist's later life experiences. As she guides us aurally around *her* New York, the photographs her mother took of their neighbourhood as gentrification and rebuilding uprooted its fabric pass before our eyes, intersecting differently with the narration on each revolution of the slide carousel. The images are melancholic in their attachment to a lost world, and the narration suffused with a similar bond to the past and its losses. Most of what follows takes this work as its subject. Here is what Halperin says within it of her early artistic training:

GARNET (ALMANDINE)

Found on 65th Street and Broadway

Very near Music and Art, or High School of the Arts, a.k.a. LaGuardia, a.k.a the lifesaver after years of bullying, a.k.a. where I started stone carving and found my family by choice. Mr. Greenberg would blast opera and teach us how to sharpen tools. Mr. Bing talked about Florence, about Michelangelo. I thought of him years later when I finally went there. My gay role models = deep love and zest for wonders of life, the world, art, everything. Mr. Bing died of AIDS in 1992. The lost generation, just – gone.²⁰

There is much that might be remarked on here, but note in particular the linking of ‘stone carving’ and ‘lifesaver’ within a passage otherwise much marked by death and absence. Note also the specific equation made between vivacity and gay role models. Note, finally, that the phrase which articulates sculpture, queer inspiration and ‘zest for the wonders of life’ is ‘my family by choice.’ I will return to this telling phrase at the conclusion of this essay. For now, it’s sufficient to take stock of the way sculptural fantasies of ‘extreme aliveness’ here cede priority to reveries of gay self-fashioning, and to a necessary work of mourning. Remembering here displaces the dismembering so starkly acted out by Hunter, and so elegantly sublimated by Epstein and Giacometti. Later in the narration, Halperin relays her apprenticeship in stone carving at Peter’s Sculpture Supply (‘on 12th Street between First and Second Avenue’). ‘We polished, planed and sanded,’ Halperin recalls; ‘We loved stone.’²¹ It is this disarming avowal of love, and its recollection and sharing within Halperin’s monologue, that I think the artist has retained as her medium from the formative moments she describes, rather than the materials, tools and conventions of the carver’s trade. That affirming, animating love necessitates, in its very care for the world, a reckoning with and sharing loss is made clear in the passage immediately following this description of Peter’s Sculpture Supply. It deserves to be cited at length:

CHRYSOTILE (ASBESTOS)

Found on Staten Island

... I used to go to Snug Harbor with a picnic for my birthday. Much later, I took Alison on the Staten Island Ferry – as my mother used to say – the cheap date of choice in New York. Then we went on the East River Ferry, in the deep, hot summer, the river was the best way to get around. We picked up straws from a sperm bank on Wall Street and hopped back on the ferry, heading to 34th Street and sat on the top deck. I was going to get inseminated, so I laughed and said well this might be the only boat trip we get to take with our kid. I did get pregnant, but it didn't stay. Second

miscarriage. We were the bridge generation on this side of the ocean - allowed on paper to try and become parents, but nobody bothered with us. Two gay women. They let my body drift. Years wasted. My mineral body too tired by the end. No next generation. No productive grief. Just - no one. When my father died, I made work about the Eldfell volcano in Iceland - born the same year I was born - a way to think about lifespans and generations much longer than yours or mine. But this was different. Instead, over years, an awareness that I am part of the mineral city. Minerals grow on Broadway, and so did I...²²

This gives the proper flavour of the *Minerals of New York* slide show I think: its frankness, its arresting emotional resonance, its capacity to glide from matters geological to the personal-as-political and back. Its form, the articulation of an ongoing life through a set of memory images flashing up, each one figuring a city in ruins, each calling up at once a childhood memory and the contemporary circumstances of its recovery, brings nothing to mind so much as the luminous biographical fragments written by Walter Benjamin in the 1930s and posthumously published as *Berlin Childhood around 1900*. Like Halperin's paean to New York, these reflections on the urban setting of his own upbringing, with their unsurpassed excavation of history from the cityscape, were a work of exile, in his case enforced. They first took shape in 1932 in Ibiza, as their writer realized that his old life might be foreclosed to him by the incipient fascist seizure of Germany. The first version—drafted under the title 'Berlin Chronicle'—was later described by Benjamin as functioning for him like an inoculation against homesickness, with immunity sought in the exposure to precisely the most piercingly painful of memories, those based in his childhood sense of belonging within the city of his birth.²³ He wrote to Gershom Scholem on Sept 26th 1932, expressing no little pride in the texts, but lamenting the prospects for their publication now that the *Frankfurter Zeitung* no longer replied to his letters. Benjamin explained that the pieces were short and that 'the subject matter seems absolutely to demand this form,' for they concern 'not narratives in the form of a chronicle but ... individual expeditions into the depths of memory.'²⁴ It was within the first draft of 'Berlin Chronicle' that Benjamin would sketch the fragment later excised as 'Excavation and Memory,' which serves as one of my epigraphs here. The suggestion in both letter and fragment that what is at stake in is an excavation of the past with memory as its medium, and in which the marking of places of discovery is in itself revelatory, already chimes with *Minerals of New York*. Moreover, within the 'Berlin Chronicle' we find Benjamin, in uncanny anticipation of Halperin's own cartographies of Heimaey and New York, claim that:

I have long, indeed for years, played with the idea of setting out the sphere of life—*bios*—graphically on a map.... I have evolved a system of signs, and on the gray background of such maps they would make a colorful show if I clearly marked the houses of my friends and girlfriends, the assembly halls of various collectives, from the

“debating chambers” of the Youth movement to the gathering places of Communist youth...²⁵

Michael Jennings has proposed that the ‘Berlin Chronicle,’ which Benjamin abandoned in an incomplete state, was already a rewriting, in explicitly biographical terms, of his fragmentary portrait of contemporary urban life in the 1928 *One-Way Street*.²⁶ Jennings notes that reworked into *Berlin Childhood* in 1932-34, and especially once revised again in 1938, Benjamin’s text exactly reprises the sections that made up the earlier book. In the *Childhood* draft, ‘persons and events yield to places and things,’ with these more oblique vectors of *bios* condensing and displacing the fuller narratives of the Chronicle, as if through the agency of a historical dreamworks.²⁷ One image-fragment from the *Berlin Childhood* recounts Benjamin’s memories of visiting the so-called ‘Imperial Panorama’ to view stereoscopic photographs of exotic locations. The panorama was already near-obsolete at the turn of the twentieth century, surpassed by cinema’s moving images, but, Benjamin notes:

‘there was a small, genuinely disturbing effect that seemed to me superior. This was the ringing of a little bell that sounded a few seconds before each picture moved off with a jolt, in order to make way first for an empty space and then for the next image.’²⁸ Once the bell had tolled for an image, Benjamin tells us, it was ‘suffused with the ache of departure.’²⁹

Under the sway of this ache, Benjamin would convince himself that he should return to view the picture, for he ‘formed the conviction that it was impossible to exhaust the splendours of the scene at just one sitting.’³⁰

Just this aching, inexhaustible quality embedded in the passage of memory images, and its inculcation of the desire to see them return, is structural to the *Minerals of New York* slideshow. Halperin as narrator of the work takes up the positions both of the adult Benjamin as he summons the remembered Imperial Panorama, and of the child who knows each image is fated to depart and wishes for it to hold on. And, crucially, the source of Halperin’s ache is not, or not only, nostalgia for the New York of her childhood—powerfully though the photographs evoke it—but precisely the circumstance of her discovery of the photographs. For, as the narration informs us near its start, they were unearthed when clearing out her family home. The marking of the sites where New York minerals were found reprises and refracts this other act of discovery, a memory-jewel of indissoluble compression in its own right. And to return for a moment to the topos with which we began this discussion, Halperin’s slideshow retains and figures forth here a maternal body understood not as viscera, or as mute matter, or even strictly as a single biologically related

individual, but as a whole network of formative activities and experiences, extending across a familial and metropolitan infrastructure: what Donald Winnicott termed a 'holding environment.'³¹ And, with great poignancy, it is through Gayle Portnow Halperin's own perceptions of that world that we picture the maternal environment her daughter cathects and narrates in *Minerals of New York*.

In Benjamin's 'Imperial Panorama,' Jennings carefully observes, the technical basis of the panorama is at least alluded to. As the images are brought up into the viewer's visual field by a system of mirrors, in looking ahead and into them, he gazes 'into the faintly tinted depths of the image.'³² This intimation of a gaze moving down into depths can be overlaid, Jennings suggests, on a parallel section in *One Way Street* in which the description of a particular house turns up—figured grimly as an corpse interred in its foundations—the memory of a deceased friend of Benjamin's. Esther Leslie has wonderfully glossed this passage by suggesting that 'the house of the self carries in it a mausoleum or museum,' and that excavating that mausoleum means that 'we can pick up the shards and scraps and try to make something from them.... not in order to compress ourselves into a banal rationality, but rather so that we may perceive the present as the culmination of all that has gone before.'³³ This excavating, recollecting and synthesising activity—achieved through a palimpsest-like rewriting of memory images—is what I see as at work in *Minerals of New York*, and most directly so in the combination of images and narration in the slideshow. And reversing the terms Leslie sets out, so that within the museum or mausoleum we find the house of the self, we get the other crucial coordinate of Halperin's project, in which museological *techne* is recast so as to afford intimate encounters with life and mortality across vast expanses of time and space.

It is important for their reach that the setting for Halperin's excavations is the city, and that her emblem is the mineral. Benjamin was famously a thinker of and through cities, and he frequently had recourse to crystal imagery to convey his perceptions of urban experience. 'For Benjamin, the urban complex is the quintessential site of modernity,' Graeme Gilloch notes: 'The social totality is crystallized in miniature in the metropolis.'³⁴ And if the excavation of this crystallization is a mnemonic project, then Gilloch points out that for Benjamin, 'to remember the city and to write about it, one must lose oneself in mazes that correspond to the very structure of the metropolis itself.'³⁵ It is not difficult to see the parallels here with Halperin's digressive wandering in memory through a New York that no longer exists. And the 'crystallization in miniature' that centres her slideshow is the redesigned Mineral and Gem Hall in the American Museum of Natural History, with its ziggurats and 'dark lit passageways of diamonds and petrified trees'—a childhood playground and a dream-image to place beside Benjamin's panorama.³⁶ For Halperin, so *Minerals of New York* tells us, the 2017 renovation of the mineral displays in the Museum of Natural History was a catastrophic event. Robert Smithson, equally influenced by the Museum in *his* childhood, did not live to see the transformation of the Mineral Hall in the

mid-1970s from its original incarnation to what Ann Reynolds describes as a configuration modelled on the jewellery store, a setting imagined as the gems' natural 'habitat'. Reynolds invites us to see Smithson's elaboration of concepts of 'Site' and 'Non-Site' as shaped more by his affection for the display strategies of the Natural History Museum than by any art gallery context: 'His optimism about the process of direct engagement with the landscape "as it really is" and the possibility of creating images that allow nature to speak of its own conditions as part of history—geological, environmental, political, and aesthetic'—consistently depended on that museum,' Reynolds contends.³⁷

Smithson made a wonderful, laconic slideshow work of his own in the 1972 lecture *Hotel Palenque*, with its yoking of images of dereliction to speculative reminiscence. I'm sure this figures somewhere in Halperin's choice of the format in *Minerals of New York*. And like Benjamin, Smithson too had frequent recourse to the metaphoric force of the crystal in his thinking of urban and exurban environments, something evident from his first published writings. As Mark Linder helpfully details:

In May 1966 Smithson published "The Crystal Land" in *Harper's Bazaar*. Illustrated with a single photograph of one of his "mirrored crystal structures" of 1965, the essay describes the suburban architecture, landscape, and infrastructure of New Jersey in terms of crystalline repetitions of form." The narrative leads from his first encounter with Donald Judd's "pink-plexiglass box" of 1965 (which "suggested a giant crystal from another planet") to his joint "excursion" with Judd, Nancy Holt, and Julie Judd to New Jersey, where "the entire landscape has a mineral presence. From the shiny chrome diners to glass windows of shopping centers, a sense of the crystalline prevails." Acting out what could be described as a version of Dali's paranoid-critical method, Smithson encounters crystals everywhere, from the ice in his ice cream to the car radio's "row of five plastic buttons in the shape of cantilevered cubes," and finally in the "countless cream colored square tiles on the walls" of the Lincoln Tunnel as the four artists reenter New York City.³⁸

Smithson's crystallizations, and Benjamin's for that matter, undercut the breathlessly glitzy—and unmistakably patronising—tones with which Le Corbusier reported his first encounter with Manhattan. From an 'immaculate office on the fifty-sixth floor,' the arch-modernist beheld the city: 'It is a titanic mineral display, a prismatic stratification shot through with an infinite number of lights.... A diamond, incalculable diamonds.... a limitless cluster of jewels.'³⁹ Corbusier's lapidary words, which decorate his larger argument that New York is yet to achieve its full rational modernity, that its skyscrapers are simply too small (!), bring Halperin's very different apprehension of her hometown's minerality into focus, and again show her kinship with Benjamin (in his attention to ruins and to the natural history of the city) and Smithson (in his deflationary view of the city's overreach, his seeing suburbs and ice as

equally crystalline). 'The streets of New York are not paved with gold,' Halperin states, 'but with mica.'⁴⁰ Preciousness is not the point of her interest in New York minerals, they are rather images of recovered experience.

More turbidly, should we wish to further differentiate Smithson and Halperin's mineral world from that of Corbusier, we can find within the former's 'A Sedimentation of the Mind' the statement that 'one's mind and the earth are in a constant state of erosion, mental rivers wear away abstract banks, brain waves undermine cliffs of thought, ideas decompose into stones of unknowing, and conceptual crystallizations break apart into deposits of gritty reason.'⁴¹ We have seen several times already that Smithson is a frequent, and frequently acknowledged touchstone for Halperin. These passages from his writing, considered alongside the transition made here from Benjamin to Smithson, suggests at least one reason why. Smithson's ruthless, rigorous attack on art's claims to monumentality and permanence, his invocation of entropy and de-formation, and the deep dialectical irony of his writing, all provide models by which Halperin's affective and mnemonic concerns keep their hold on the art historical present, and avoid falling into the sentimentality which a more Benjaminian, saturnine disposition alone might risk. The logic of the 'Non-Site' is at work in her presentations of excavated minerals, her geographically specific drawings and maps. It attends, too, her presentation of a fragment of signage which seems to come directly from a museum's mineral display, but which was presented within *Minerals of New York* as pointing only to an absence, to the space of desire in which something might appear. It is a souvenir of something lost to the mud of time.

When Benjamin was revising his *Berlin Childhood*, he extracted from his ongoing attempt to submit an essay on Baudelaire that his New York colleagues would accept for publication, a fragmentary set of notes that he entitled 'Central Park,' with an eye to his hopes of starting a new life in New York if the arrangements could be made. 'The souvenir (*Das Andenken*) is the relic secularized,' runs one of the notes collected therein.⁴² If, as has been proposed, 'the souvenir moves history into private time,' we might conclude that Halperin's *Minerals of New York* is itself a collection of souvenirs.⁴³ Maybe so, but these are also souvenirs from outwith the time of Halperin's memory, beyond her existence. And in her hands they move private time into vast dimensions of geological history. Smithson, in his 1973 essay on Central Park, began with just such a movement, asking his reader to imagine themselves one million years previous, 'on a vast ice sheet' as it imperceptibly 'advanced south, leaving great masses of rock debris in its wake.'⁴⁴ In a bravura act of claiming Olmsted's picturesque conceit of rectangular nature as a fore-runner of his own earthworks, Smithson would claim that 'dialectics of this type are a way of seeing things in a manifold of relations.'⁴⁵ This way of seeing is essential to Halperin's work, which richly—dialectically—expands on Smithson's claim that 'nature, like a person, is not one-sided.' Hence, therefore, the profound aptness of the metropolitan mineral as emblem of her project.

Smithson, for his part, had no time for secularized relics. This becomes abundantly clear in an interview conducted in 1973 shortly before his untimely death, during which he expresses his frustration with the 'Duchampitis' rife in American art in these terms: 'His objects are just like relics, more like the relics of the saints or something like that. It seems that he was into some kind of spiritual pursuit that involved the commonplace. He was a spiritualist of Woolworth's you might say.'⁴⁶ Halperin, I want to propose, draws together Smithson's acid scepticism and Benjamin's willingness to linger with forms like that of the souvenir, to see them as subjected to processes of redemption in the very disorder of the collector's treasuring of them apart from their exchange value. 'Every passion borders on the chaotic,' Benjamin writes, his own addiction to book-buying firmly in mind, 'but the collector's passion borders on the chaos of memories.'⁴⁷ Halperin's memory-work with the stuff of museums is a passionate project, as I hope the excerpts from her slideshow narration make quite clear. But the means of its execution, its strategic adoption of scientific visualities, of museological displays and means of interpretation, learns from the attitudes evinced by Smithson, as in his mordant observation that 'history is representational, while time is abstract; both of these artifices may be found in museums, where they span everyone's own vacancy.... Those with exhausted memories will know the astonishment. Visiting a museum is a matter of going from void to void.'⁴⁸ The American Museum of Natural History in its renovated form is such a void for Halperin no doubt, and her appropriated signage enters into a dialogue with Smithson's 'void thoughts.' But they exceed them too, the museal void being a space that Halperin sees as rich with possibility, and as a space to be filled with excavated things, stories and projections of all kinds. But perhaps only on the condition that they speak to matters of experience, of life and death. She takes up its spaces and structures with precisely this project in mind, I believe.

Ilana Halperin is not an artist given to the fantastical, then. It is only in fantasy that Walter Benjamin could enter into conversation with Robert Smithson — though a recent book invites us to imagine that he managed to make his escape to New York in 1940, and quietly, anonymously reconfigured his life's work as 'The Manhattan Project.'⁴⁹ Had this happened, might he have made his way to the front bar at Max's Kansas City, to debate the entropic and crystalline with Smithson et al? Counterfactuals aside, Benjamin and Smithson are *made kin* by Halperin's work, where they join a constellation of others—human and non-human—in geological intimacy. Hence, to recall an example encountered earlier, her act of memorialising her father's death by twinning with a volcano, and making an epic journey to celebrate her birthday with it. I conclude with a few notes on this gesture of making familiar and intimate, of assembling a 'family by choice.'

This essay began with the museal display of the maternal body, and detoured into certain modernist sculptural revisions of that topos. We might usefully return to these issues in

conclusion. In Anne Wagner's account, by the early twentieth century, the maternal was unmistakably a political site for figures such as Epstein, Moore and Hepworth, 'opened to and penetrated by its surrounding world.' Their work would 'seem to answer to this intuition of a female body become porous,' Wagner writes, but not by simply miming it, nor by repairing it. 'Rather, the primordial physical terms of human conception and identity, not just openness and closure, or fullness and emptiness, but also origin, relation, distance, and time—are declared the very essence, the new definition of sculptural form.'⁵⁰ If we can hardly say that the maternal body is less political today, we may at least think that it is differently political. This is no doubt in part because the 'primordial physical terms' of human procreation and embodied existence appear less securely (and less formidably) grounded in sex, gender and 'nature' than they once did. The scientific project within which Hunter played his part by mining the female body has by the early twenty-first century forced us to consider that 'maternity' may now consist of processes and affects that transform terms like origin and relation considerably. Halperin's practice is not geared to model sculpture after the bio-technological forms emergent today, but rather to rethinking what the primordial means in this light. It weighs how we might accommodate 'origin, relation, distance, and time' beyond modernism and enmeshed in what theorist Donna Haraway, in her recent *Staying with the Trouble*, calls the 'Chthulucene' age, a neologism that conjoins the chthonic with *Pimosa cthulhu*, a Californian spider, figuring both earthly emergence and tentacular reach.⁵¹

Haraway bestows this name to counteract the sense that with the 'Anthropocene' our perspectives constrict in a way symptomatic of the very problem it tries to identify: 'Man plus Tool does not make history,' she tells us: 'History must give way to geostories.'⁵² In contrast to Anthropocene and Capitalocene narratives, with their inbuilt fatalism, Haraway writes that 'human beings are not the only important actors in the Chthulucene, with all other beings able simply to react. The order is reknitted: human beings are with and of the Earth, and the biotic and abiotic powers of this Earth are the main story.'⁵³ One way to fathom this, and Halperin uses it often as we have seen, is to reconsider the ontology of human existence within deep geological time rather than the shorter evolutionary and teleological spans of natural or national histories. We simply *are* mineral entities in this view, in relation to both the material ground of the earth and the structures of advanced urban civilization. Philosopher Manuel de Landa writes of human existence as supported both by a 'mineralisation' within us—the evolution of bone as a support for flesh and for movement—and one without, namely the creation of towns and cities that function as complex social exoskeletons. His reading allows us to see Halperin's reference to a 'mineral biography' as more than a metaphor:

We live in a world populated by structures—a complex mixture of geological, biological, social, and linguistic constructions that are nothing but accumulations of materials shaped and hardened by history. Immersed as we are in this mixture, we

cannot help but interact in a variety of ways with the other historical constructions that surround us, and in these interactions we generate novel combinations, some of which possess emergent properties. In turn, these synergistic combinations, whether of human origin or not, become the raw material for further mixtures. This is how the population of structures inhabiting our planet has acquired its rich variety, as the entry of novel materials into the mix triggers wild proliferations of new forms.⁵⁴

Minerals of New York certainly offers a history that looks back at these formative mineralisations and asks us to recognise ourselves in them. But the note de Landa strikes when he writes that we 'cannot help but interact' within the miscibility of the world is too passive to capture the vitality of Halperin's practice perfectly. More profoundly, I think, her work corresponds to the urgent call made by Haraway to act with deliberate agency in the face of ecological catastrophe and mass extinction. Haraway compellingly sets out the need for new ways of grasping our place within the intermixed man-made and natural worlds we inhabit today, beyond conventions derived from scientific taxonomy and grand political narratives. 'All the thousand names are too big and too small; all the stories are too big and too small,' Haraway writes, 'we need stories (and theories) that are just big enough to gather up the complexities and keep the edges open and greedy for surprising new and old connections.'⁵⁵

Among the consequences of such a rethinking of complexity is a shift from seeing familial and genealogical relations as the most fundamental bonds shaping our existence. We need, Haraway declares, a slogan for this project:

I propose "Make Kin Not Babies!" Making—and recognizing—kin is perhaps the hardest and most urgent part. Feminists of our time have been leaders in unraveling the supposed natural necessity of ties between sex and gender, race and sex, race and nation, class and race, gender and morphology, sex and reproduction, and reproduction and composing persons ... it is high time that feminists exercise leadership in imagination, theory, and action to unravel the ties of both genealogy and kin, and kin and species. Bacteria and fungi abound to give us metaphors; but, metaphors aside (good luck with that!), we have a mammalian job to do, with our biotic and abiotic sympoietic collaborators, colaborers. We need to make kin symchthonically, sympoetically. Who and whatever we are, we need to make-with—become-with, compose-with—the earth-bound...⁵⁶

And as we start to locate ourselves within a Chthulucene that is all too easy to mistake for an Anthropocene or Capitalocene, Haraway contends that 'it is past time to practice better care of kinds-as-assemblages (not species one at a time). Kin is an assembling sort of

word.¹⁵⁷ In assembling the materials of her own life in a co-composition with New York's mineral history, Halperin weaves together stories that encompass vast durations and epic processes, but which are pitched intimately enough to land with her audience. In this perspective, The Hunterian's rocks, corals, fossils, gall-stones, become grievable, not just interesting. And to see a gifted rock as a self-portrait, a volcano as a twin, the excavation of a city's jewels as a memorializing of a maternal environment that includes, but is not limited to, the maternal body—all this is the praxis of making kin that animates and moves. Being human, in Halperin's art, takes place within geological horizons, where presumptions about human reproduction and mortality, along with conventions of artistic production and museum display, pale next to the possibilities of choosing kinship with others of all kinds.

¹ Walter Benjamin, 'Excavation and Memory' in Michael W. Jennings, Howard Eiland and Gary Smith (eds), *Walter Benjamin: Selected Writings, Volume 2 Part 2, 1931-1934*, (Cambridge, Mass., and London: Belknap Press, 2005), p. 567.

² Colson Whitehead, *The Colossus of New York: A City in Thirteen Parts*, (New York: Anchor Books, 2003), p. 3.

³ Robert Smithson, 'Frederick Law Olmsted and the Dialectical Landscape,' in *Robert Smithson: The Collected Writings*, (Berkeley: University of California Press), p. 161.

⁴ Ludmilla Jordanova, 'Gender, Generation, and Science,' in Jordanova, *Nature Displayed: Gender, Science and Medicine 1760-1820*, (Routledge, 1999), p. 184.

⁵ Maggie Reilly and María Dolores Sánchez-Jáuregui, 'Facetted gall stones, from one case,' (catalogue entry), in Mungo Campbell and Nathan Flis (eds), *William Hunter and the Anatomy of the Modern Museum*, (New Haven and London: Yale University Press, 2018), p. 232.

⁶ On the differences dividing the Foucauldian Classical epoch and its museums and art galleries from the private worlds of the *wunderkammer* see Douglas Crimp, 'This Is Not a Museum of Art,' in Crimp, *On The Museum's Ruins*, (Cambridge, Mass. and London: MIT Press, 1993), pp. 200-234) and Giorgio Agamben, 'The Cabinet of Wonder,' in Agamben, *The Man Without Content*, trans. Georgia Albert, (Stanford: Stanford University Press, 1999), pp. 28-39.

⁷ Michel Foucault (1966), *The Order of Things: An Archaeology of the Human Sciences*, (London: Routledge, 1997), p. 144.

⁸ Michel Foucault, *The Birth of the Clinic: An Archaeology of Medical Perception*, trans. A. M. Sheridan, (London: Routledge, 1989), 197.

⁹ Ilana Halperin, 'Autobiographical Trace Fossils,' in Elizabeth Ellsworth and Jamie Kruse (eds), *Making the Geologic Now: Responses to Material Conditions of Contemporary Life*, (New York: Punctum Books), p. 156.

¹⁰ 'Ilana Halperin interviewed by Janet Mackenzie,' *Studio International*, (5 March 2015). www.studiointernational.com/index.php/liana-halperin-interview-geological-phenomena-volcanoes-drawing-photography-gallstones (last accessed 3 July 2020).

¹¹ Foucault, *The Order of Things*, p. 132.

¹² Smithson himself remarked on the resemblance in 'Entropy Made Visible: Interview with Alison Sky,' (1973), in *Robert Smithson: The Collected Writings*, p. 305. With characteristic dry humour he notes that 'It created a kind of buried house system. It was quite interesting for a while.'

¹³ These issues were thoughtfully discussed by Lauren T. Cross in her 2019 M.Litt Dissertation 'Dislocation Devices,' which addressed Halperin's work in *Minerals of New York* along with the practices of Charlotte Prodger and Simone Kenyon.

¹⁴ Anne M. Wagner, *Mother Stone: The Vitality of Modern British Sculpture*, (New Haven: Yale University Press), p. 57.

¹⁵ Ibid, p. 2.

¹⁶ Ibid, p. 56.

¹⁷ This conflation is brilliantly discussed and deconstructed in Judith Butler's *Bodies That Matter: On the Discursive Limits of "Sex"*, (London: Routledge, 1993), pp. 27-55.

¹⁸ Wagner, p. 183.

¹⁹ Ibid, p. 183-84.

²⁰ Ilana Halperin, *Minerals of New York*, 2019. Slides, audio.

²¹ Ibid.

²² Ibid.

²³ Walter Benjamin, (1932-34), *Berlin Childhood Around 1900*, translated by Howard Eiland, (Cambridge, Mass. and London: Belknap Press, 2006), p. 37.

²⁴ Walter Benjamin to Gershom Scholem, Sept. 26, 1932. In Scholem (ed.) *The Correspondence of Walter Benjamin and Gershom Scholem, 1932-1940*, translated by Gary Smith and Andre Lefevere, (Cambridge, Mass.: Harvard University Press, 1992), p. 19.

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- ²⁵ Walter Benjamin, 'Berlin Chronicle,' in *Walter Benjamin: Selected Writings, Volume 2 Part 2, 1931-1934*, p. 596.
- ²⁶ Michael W. Jennings, 'Double Take: Palimpsestic Writing and Image-Character in Benjamin's Late Prose,' *Benjamin Studien*, No. 2, pp. 33-45.
- ²⁷ Howard Eiland, 'Foreword,' in Walter Benjamin, *Berlin Childhood Around 1900*, trans. Howard Eiland, (London: Belknap Press, 2006), p. viii.
- ²⁸ Walter Benjamin, *Berlin Childhood Around 1900*, p. 43.
- ²⁹ Ibid.
- ³⁰ Ibid.
- ³¹ Donald Winnicott, 'The theory of the parent-infant relationship,' *International Journal of Psycho-Analysis*, No. 41, (1960), pp. 585-595.
- ³² Ibid, my emphasis.
- ³³ Esther Leslie, *Derelicts: Thought worms from the wreckage*, (London: Unkant, 2013), p. 10.
- ³⁴ Graeme Gilloch, *Myth and Metropolis: Walter Benjamin and the City*, (Cambridge, Polity: 1997), p. 5
- ³⁵ Ibid, p. 68.
- ³⁶ Halperin, *Minerals of New York*.
- ³⁷ Ann Reynolds, 'Reproducing Nature: The Museum of Natural History as Nonsite,' *October*, Vol. 45 (Summer, 1988), p. 127.
- ³⁸ Mark Linder, 'Sitely Windows: Robert Smithson's Architectural Criticism,' *Assemblage*, No. 39 (August 1999), p. 9.
- ³⁹ Le Corbusier, *When the Cathedrals Were White*, translated by Francis E. Hyslop Jr, (New York: MacGraw Hill, 1964), p. 42.
- ⁴⁰ Halperin, *Minerals of New York*.
- ⁴¹ Smithson, 'A Sedimentation of the Mind: Earth Projects,' (1968), in *Robert Smithson: The Collected Writings*, p. 100
- ⁴² Walter Benjamin, 'Central Park,' (1938), translated by Lloyd Spencer and Mark Harrington, *New German Critique*, No. 34 (Winter, 1985), p. 48.
- ⁴³ Susan Stewart, *On Longing: Narratives of the Miniature, the Gigantic, the Souvenir, the Collection*, (Durham and London: Duke University Press, 1993), p. 138.
- ⁴⁴ 'Frederick Law Olmsted and the Dialectical Landscape,' p. 157.
- ⁴⁵ Ibid, p. 160.
- ⁴⁶ 'Robert Smithson on Duchamp: Interview with Moira Roth,' in *Robert Smithson: The Collected Writings*, p. 311.
- ⁴⁷ Benjamin, 'Unpacking My Library,' in *Illuminations*, ed. Hannah Arendt, trans. Harry Zohn (London: Pimlico, 1999), p. 61-62.
- ⁴⁸ Robert Smithson, 'Some Void Thoughts on Museums' (1967) in *Robert Smithson: The Collected Writings*, p. 41.
- ⁴⁹ David Kishik, *The Manhattan Project: A Theory of a City*, (Stanford: Stanford University Press, 2015).
- ⁵⁰ Wagner, *Mother Stone*, p. 2.
- ⁵¹ Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene*, (Duke University Press, 2016).
- ⁵² Ibid, p. 49.
- ⁵³ Ibid, p. 55.
- ⁵⁴ Manuel de Landa, *A Thousand Years of Nonlinear History*, (NY: Swerve, 2000), p. 25-6.

⁵⁵ Haraway, *Staying with the Trouble*, p. 101.

⁵⁶ *Ibid*, p. 102.

⁵⁷ *Ibid*, p. 103.