

Topologies of Exclusion

Within the vicissitudes of knowledge and knowledge production, there exists the confrontation of not only the unknown, but also the unknowable. Even—or perhaps especially—within this current era of unprecedented overabundance of information, we increasingly encounter the uncanny specter of things that may never be revealed to our cognition or understanding, as well as the unnerving realization that things at one time thought to be among the realms of the known, have at some point slipped back into a *terra incognita*.

INTRODUCTION: KNOWLEDGE AND ECOLOGY

To exemplify the latter, ecologist, forester, and geographer Benton MacKaye observed in 1925 that industrial activity and urbanization had so drastically reconfigured the American landscape, that although America no longer possessed a “frontier” of wilderness (in the sense of Frederick Jackson Turner’s thesis), one could identify a new internal frontier of hybrid industrial lands that, through human actions, had been made so unknown to us, that their rediscovery would be like charting a new land; MacKaye called this “The New Exploration.”¹ His observation is perhaps even more relevant now than it was then, as human activity transforms terrestrial landscapes at an unprecedented rate. Philosopher Alfred North Whitehead wrote that the world is composed of processes, of states of becoming, and this constant state of becoming produces a continual state of novelty that needs to be continually re-explored.²

With regard to the unknowable, a case in point would be the science of ecology, where ecologists warn that there is no way of predicting what form a complex system (such as an ecosystem) will take once it deviates so far from equilibrium that it bifurcates and reorganizes itself.³ Arguably, ecological awareness—the interdependence of phenomena and the embeddedness of humans within the processes of nature—is compelling re-evaluations of knowledge and practice, as well as recalibrating ontological frameworks, not only within the fields of architecture and landscape, but also in other fields and in culture at large.⁴

“Ecological awareness is weird,” claims philosopher Timothy Morton. Weird, not only in terms of being uncanny or non-sensical, but also in the sense of the word as being twisted, in a loop; “a strange causal loop.”⁵ The theory of the Anthropocene renders the concept of nature as a stable, non-human background relative to human history no longer possible.⁶ Thus, humankind, as well as things we produce, now necessitate being conceived of as both things in themselves, and also as parts of a vast thing, distributed through time and space, whose reality remains hidden and obscured from our the majority of our perception, experience and understanding.⁷ At the same time as our ability to describe objects and things—geometrically, performatively, materially, relationally—has increased radically, philosophers of speculative realism have thrown into question our ability to actually know them.⁸

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INTRODUCTION: KNOWLEDGE AND ECOLOGY

Topologies of Exclusion is the title of a graduate thesis unit run by the author at the University of Michigan in 2014/2015 that was situated within this constellation of ideas. The broader goals of the thesis unit were to cultivate ways of operating based within an ecological epistemology, framed within contexts of the post-natural and the post-human. This entails an intellectual shift away from a subject-orientated ontology and socio-politics to an object-oriented one, where agency is shared between human and nonhuman actors. The implication for design is that intervention could be conceived of through synthetic material, architectural, and landscape practices and that students would be encouraged to work fluidly and promiscuously between the design of landscape processes and operations, architectural formation and figuration, and material synthesis.

The title, *Topologies of Exclusion*, implicates a contradictory territorial condition of being both topologically smooth—interconnected spatially, geologically, ecologically—at the same time as being striated—disconnected by the state or political apparatus.⁹ Exclusion refers also to the literal sites wherein thesis projects were to be situated. ‘Territories of exclusion’ were posited as terrestrial geographies that have been expelled or excluded from the world as a result of anthropogenic violence. In her recent book *Expulsions: Brutality and Complexity in the Global Economy*, Saskia Sassen describes the complex global processes that are rendering increased portions of land as biologically “dead” and thus expelled from the possibility of life processes within conceivable timeframes.¹⁰ Keller Easterling uses the terms “quarantine” and “subtraction” to describe the condition of territories no longer considered productive or humanly inhabitable, and thus cast from economic and thereby cultural frames of reference.¹¹

One of the first bodies of research undertaken by the students was to compile a compendium entitled the “Atlas of Exclusion.” This included sites of military operations and weapons testing, active and former sites of extraction, sites of industrial activity and accident, and waste landscapes that have been rendered too environmentally hostile to inhabitation. The territories compiled within the atlas were documented through a combination of geospatial mappings, histories (official and non-official narratives, media reports), environmental conditions and effects, agencies implicated in their production and control, and the spatial and nonspatial strategies of creating boundaries and envelopes of inclusion and exclusion.

Many of these sites possess an alien beauty consisting of strangely formed geographies; acres unnaturally colored fields of substances produced by processing and extraction, and uncanny relics of large-scale industrial activity that has fuelled the landscape photography genre often referred to as the “post-industrial sublime,” that can also be seen as a landscape equivalent of *ruin porn*.¹² The thesis group was challenged to explore forms of critical, ecologically-aware design practice that would be skeptical of both the aestheticization of environmental violence and the conventional paradigms of progress such as techno-scientific environmental management. In the case of the latter, the territories we focused on were specifically chosen so that their scale and extent of environmental degradation would resist any attempt to ‘fix’ them through technological means, or, at least, expose the hubris of the desire to bring these exiled sites back into human productivity or usefulness, and to re-normalize them into social processes. Instead, students were asked to experiment with bringing disciplinary knowledge from both the fields of architecture and landscape, combined with a material sensibility, into dialogue with these new proving grounds — testing, crossbreeding, allowing existing knowledge and theories to be reformulated as they are applied to new questions, and assessing what traction they hold and what new languages they might avail.

The design work that materialized from a four-month seminar in the Fall of 2014, and a four-month design studio in the Winter of 2015 can be loosely grouped as three forms of approach: *metaphysical devices*; *material orchestrations*; and *speculative narratives*. While

students worked on the projects individually, the work emerged from intensive weekly discourse among the group and through the shared theoretical and disciplinary literature that was introduced during the seminar.

METAPHYSICAL DEVICES

The idea of the Anthropocene, in disrupting the inherited ontological division between previous ideas of 'culture' and 'nature,' introduces a renewed opportunity to re-establish relations with the environment and ourselves. We might ask the question of how to inhabit the new landscapes that we have created, not from a practical sense but from a metaphysical one. Several students explored how a role for design might be to provide an apparatus through which we might explain the world that we have created to ourselves. Projects appropriated disciplinary tropes from both architecture and landscape that have traditionally operated as such devices, such as the house, the garden, and the picturesque.

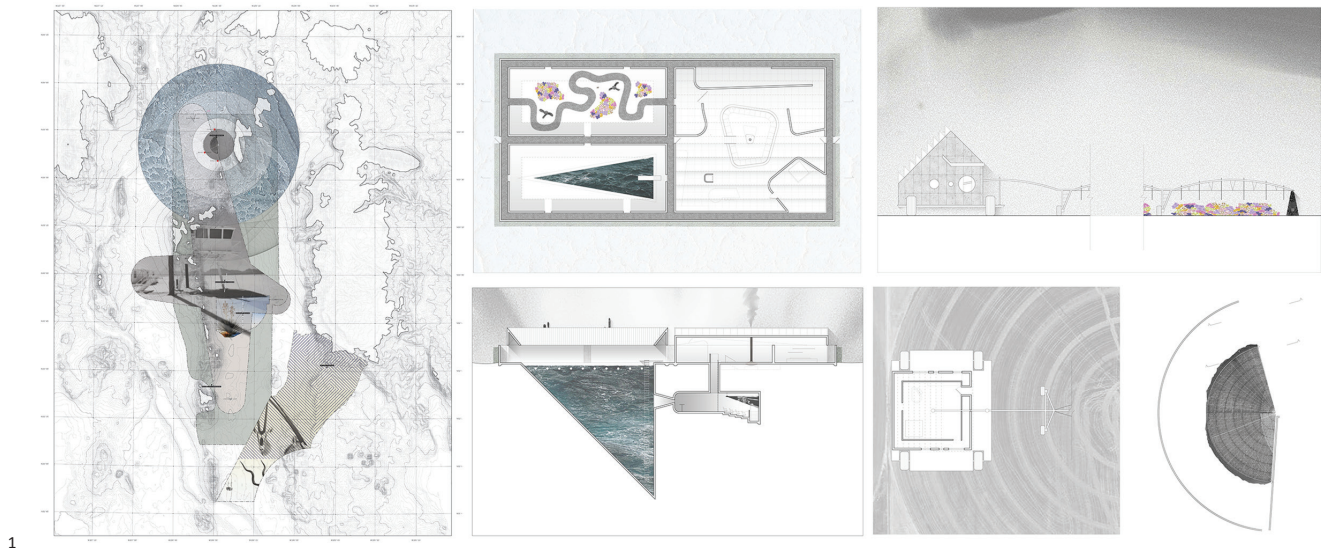
James Joslin's thesis, entitled "Dwellings," is situated within the White Sands Missile Range in New Mexico, one of the largest restricted military installations within the U.S., located on part of the world's biggest gypsum dunefield. The project approaches the question of dwelling within an undwellable terrain not as a technical problem, but one that is entangled with the conundrum of our technological history. (Figure 1) He writes, "the successful detonation of the first atomic weapon occurred at the Trinity Site of White Sands Missile Range on July 16, 1945. Its success exponentially increased the rate at which we can remove dwelling from the world."¹³

The White Sands territory is remote, alien, unserved, and mostly restricted to civilians. The first act of the project is that of naming; of taking the smooth, unmapped, and unnamed territory and colonizing it through naming and renaming. Walter Benjamin, in his essay on language argues that it is through the act of naming that the "language of man" is "bound to the language of things."¹⁴ With self-conscious reference to Banham's four ecologies of Los Angeles, Joslin's project delineates five "ecographies" of the White Sands territory: "Most Dangerous Range," "Shooting Gallery," "Dry Beach," "The Docks," and "Holy Land." The names amplify a human 'layer' on this landscape. The subsequent design of a speculative dwelling for each ecography heightens the perhaps irreconcilable estrangement between the landscape and humankind.

The "Home and Garden" is a dwelling that inhabits the restricted territory of the "Most Dangerous Range." It performs multiple acts of conscious separation through the design of a walled garden, or *hortus conclusus*. As a space that turns the outdoors inside, the *hortus conclusus* "seeks to understand the landscape it denies, explain the world it excludes, bring in the nature it fears and summarize all in an architectural composition."¹⁵ The house and garden do not serve to understand, or to reconcile landscape or context, and the post-domestic design produces a sense of increased discomfort. The garden contains "two saguaro cacti and desert flora. There is a triangular lap pool with a diving board. The pool is severely deep, keeping it cool in the unforgiving Tularosa Basin. The pool was made subterraneanly observable at the request of a guest."¹⁶

The "Holy Land" is the ecography in which the first atomic weapon was assembled and detonated. The Trinity Obelisk, now a National Monument, was erected at point zero of the first detonation. About two miles away, is the MacDonald Ranch House, the former home of the MacDonald family where the "Gadget" bomb was assembled, reportedly in what was the master bedroom. The contaminated material of the 1200ft diameter crater created by the detonation has since been removed and stored in an underground bunker nearby, and the site has been backfilled with new soil. The site is open to the public only on two days a year—on the first Saturdays of October and April. The design of the "Pivot House" is a mobile dwelling attached to a standard pivot irrigator that rotates around the Trinity Obelisk,

cultivating a garden of desert flowers in the space of the original crater. Using the language of industrial agriculture, and mobilizing the apparatus of the aerial view and its associated modernization, colonization and instrumentality, the garden of the Pivot House now makes the detonation site legible from the air.¹⁷



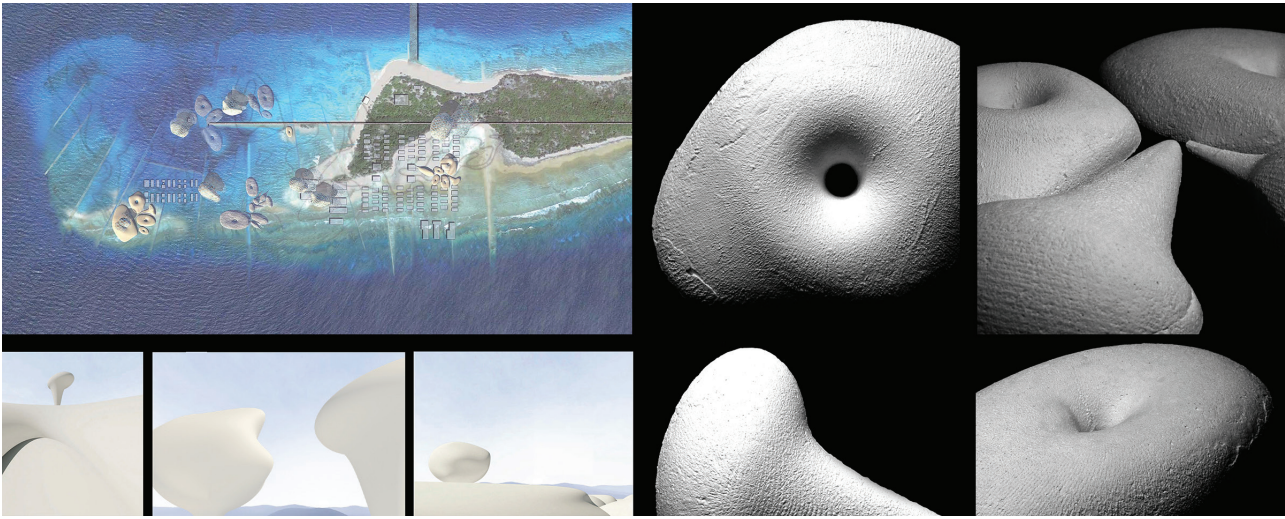
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The aerial view is also probed in aspects of Justin Ping’s thesis, “Enigmatic Islands,” situated within the post-atomic landscape of Bikini Atoll. This is the island nation of the Pacific Marshall Islands where the US military initiated an occupation for the purposes of extensive nuclear weapons testing from 1946 to 1958. The thesis, drawing on Peter Eisenman’s early work in “Eros, Arrows and Other Errors” and “Cannaregio” projects, began by drawing a palimpsest mapping of the site: geologic traces seen simultaneously with the traces of lands obliterated by the blasts, the relics of the military inhabitation, former land use and ownership by the islanders. The design project grafts a new layer onto this landscape: a series of forms in the shapes of mounds, tumuli, implosions, and explosions. (Figure 2) They collide with the indexical mapping, demand to be seen from other viewpoints, to be examined materially. Their formal ambivalence blurs their association with a singular thing.¹⁸ The deliberate opacity and unknowability of these objects combined with their tacit materiality, makes it impossible for them to be, in the terms of Graham Harman, either undermined (explained as symbols of something larger) or overmined (explained by their parts, make-up, performance, or sum of relations).¹⁹

The intention, according to Ping, is to create a dialogue between land, architecture, and politics, through the creation of new, equivocal, objects both intertwined with and alienated from the landscape. In this way, the thesis adopts a materialist position similar to Robert Smithson’s later work, and especially in his essay, “Frederick Law Olmstead and the Dialectical Landscape.” The picturesque landscape becomes a trope for materializing multiple temporal consciousnesses, and for producing a dialectic between human activities — particularly industrially scaled ones — and natural processes.²⁰ The picturesque garden is a landscape practice that produces relations that are continually dynamic, that present multiple and contradictory perspectives, and that resist a Gestalt or unified understanding of the composition.²¹

The picturesque, which has become somewhat of an anachronism in the most recent turn toward instrumentality within landscape practices, seemed to gain refreshed relevance within the discussions and work of the thesis unit. Cory Heck’s thesis, “The Claude Mirror:

Figure 1: “Dwellings,” James Joslin, 2015. (l-r) Geography of the five ecographies of White Sands; Home and Garden plan and section; Pivot House elevations.



2

An Architectural Approach to the Fourth Nature Picturesque” makes a proposal for the site of the Lusi mud volcano in East Java, Indonesia. Lusi began erupting in 2006, allegedly as a result of geological disruptions caused by natural gas drilling. (Figure 3) The mudflows have engulfed over 600 acres of land with mud over 10ft deep, and displaced more than 12 villages. Within this site of ongoing ecological and human disaster, Heck’s thesis responds by re-occupying the site with a series of follies and grottos, situated among the uncanny caked mud landscape and partially engulfed structures of the former villages. The follies and grottos, like the picturesque apparatus of the Claude Glass, present displaced, atmospherically altered images of what is being viewed, calling attention to the construct and artificiality of the view. Confronting both the matter of the mud itself, as well as the matters of the former structures, allows for an experience and set of relations to be formed with the site that becomes more nuanced, more complicated, and more problematic. The dialogue is uncomfortable. These offer no facile narrative of victim and perpetrator, nor do they propose solutions. As in Ping’s thesis, Heck mobilizes the aesthetics of the picturesque towards a form of politics, creating shared, sensible experiences that re-situate humans within the world that they have been complicit in creating.²²



3

MATERIAL ORCHESTRATIONS

Material consciousness is growing among aesthetic philosophers, as well as the design disciplines. Jane Bennett argues for a “vital materialism’ that seeks to counter the privileging of a specifically human agency or politics by emphasizing the agentic contributions of the nonhuman forces in shaping the world.”²³ Timothy Morton’s theory of hyperobjects proposes not a reality composed of a relational mesh, but a coexistence of “vast, scary, discrete, irreducibly strange and opaque objects;” Morton’s hyperobjects slip between what we conventionally call objects, materials and phenomena, and include global warming, the BP oil spill in the Gulf of Mexico, evolution, plutonium 239.²⁴ These theories stimulate new design questions

Figure 2: “Enigmatic Islands,” Justin Ping, 2015. (clockwise from left) layered site drawing with previous and new island formation; enigmatic island series, physical casts and illustrations.

Figure 3: “The Claude Mirror,” Cory Heck, 2015. (l-r) Views of the Lusi “garden”; “The Well”; “The Grotto”; views of the landscape framed by the Well and the Grotto.

and approaches to the conception and formation of architectural objects, their qualities and behaviors, and the broader systems and thermodynamic processes they are part of.

The projects by Jennifer Ng and Lucien Menair began not with sites as a departure point, but with matters: specifically, with CO₂, the byproduct from emissions, and U-238, the byproduct from nuclear energy production, respectively. CO₂ is currently distributed among the upper atmosphere as well as in the oceans at an annual rate of increase of 2.11ppm per year. 100,000 tons of U-238 is planned on being stored within ten square miles of tunnels of the nuclear waste repository of Yucca Mountain in Nevada; the material will continue to emit radiation for almost 4.5 billion years. The landscape practices that these two projects mobilize are further from the aesthetic practices of the garden, and are closer to the cultivation practices of agriculture and its perpetual cyclical production and stewardship, as well as the design of objects, territories and instruments at multiple scales. Both confront the question of how an ecology of knowledge — in the Baetsonian sense of knowledge being constructed and perpetuated over time — can produce hybrid architectural landscapes using techniques based on continual processes of formation and transformation.

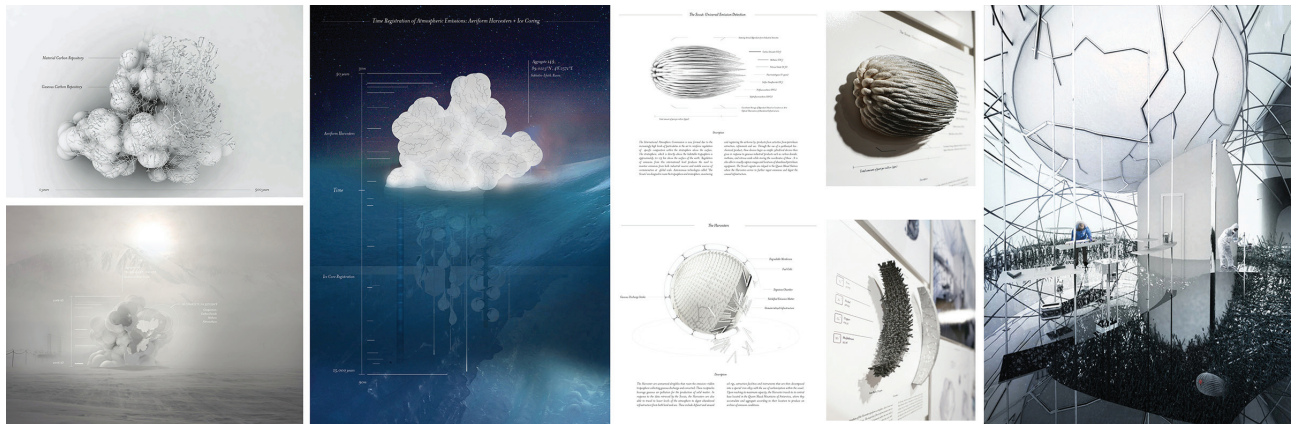
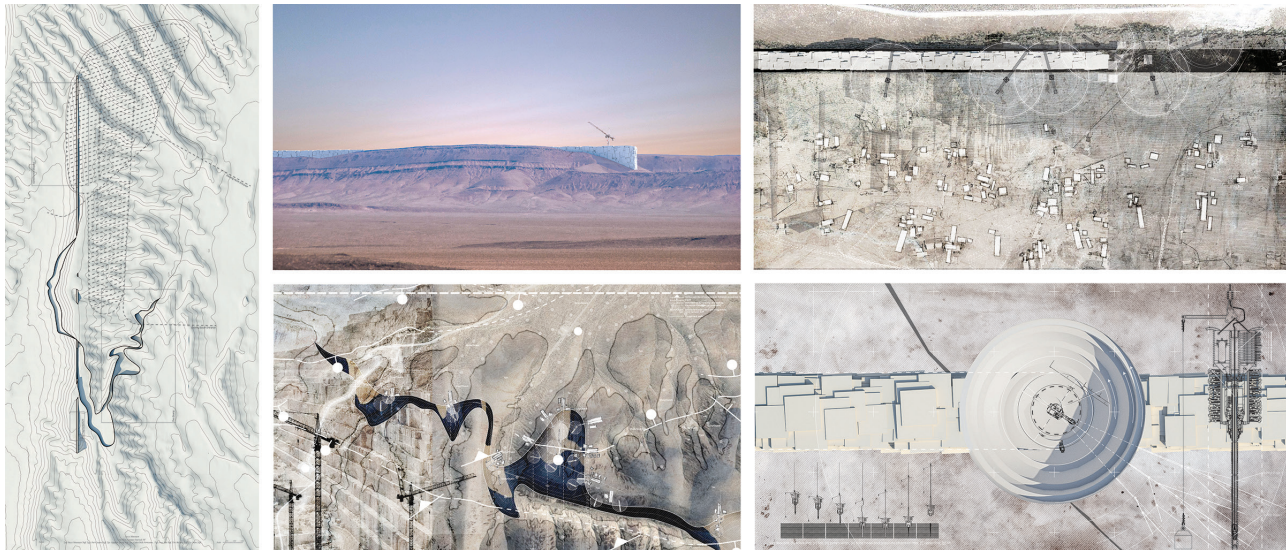


Figure 4: “Aeriform Ecologies,” Jennifer Ng, 2015. (l-r) Aggregate Growth of Atmospheric Repositories from Harvester CO₂ synthesized shells; Projected Condition of Queen Maud Aggregate 066; Weathered State of Atmospheric Archives in 60 years; Details and materials studies of the Scouts and Harvesters; Queen Maud Station 066’s Laboratory and Testing Pod

Jennifer Ng’s thesis, “Aeriform Ecologies,” “speculates on the viability of designing architectural space through the curious and primal undertones of inhabiting a pseudo-geological landform comprised of aeriform matter.”²⁵ (Figure 4) Working from recent advancements in science where carbon nanotubes can now be synthesized from airborne carbon dioxide, Ng developed an ecology of design interventions that include the deployment of drone-like dirigibles she called ‘Scouts’ and ‘Harvesters,’ that locate, collect and synthesize petroleum emissions byproducts from the air, and transport this material to a research station located in Antarctica that serves as a repository for the sequestered carbon as well as a site of atmospheric study. Here, the CO₂ sequestered from the atmosphere and transformed into carbon that forms on the skin of the dirigibles, using them as a type of mold, and is then deployed in a quasi-autonomous process of self-construction of the research station. Beginning from physical studies in crystal growth and structures, Ng’s design was developed through studies and digital models of self-forming structures and aggregate processes. In the thesis, matter is transmuted from the air into novel architectures at the scale of landscape.

Working with the material U-238, Lucien Menair’s thesis “Perennial” confronts the question of the preservation of knowledge over geologic time. (Figure 5) Menair’s project addresses the design question of how to communicate the danger of nuclear repositories to human generations, or even nonhuman visitors to the planet, in deep future time when current language and knowledge may be lost.²⁶ Building on the history of land art, the thesis proposes a geologically scaled monument to be located at the Yucca mountain repository site. The Yucca mountain range formation itself is the product of violent volcanic activity more than twelve

million years ago, the materialization of deep time. The new structure, extending four miles in length, is never intended to be finished, but instead is enacted through a ritual, cyclical construction and reconstruction process. Here, knowledge will be passed on in both the builders themselves, and within the geological body of the site. In the spherical Boullé-inspired space of the fragmentarium, the history of language is continually etched within the stone.



5

SPECULATIVE NARRATIVES

The recent turn toward narrative and speculative fiction within the design fields is a form of practice that aims to understand and reflect on alternative possibilities for how we might operate in relation to the world. Throughout the thesis semester, students were encouraged to engage speculative fictions to tell tales and stories in order to provoke discourse, debate, and new perspectives, as opposed to offering solutions. The skepticism regarding solution-driven design is articulated by Anthony Dunne and Fiona Raby:

Faced with huge challenges such as overpopulation, water shortages, and climate change, designers feel an overpowering urge to work together to fix them, as though they can be broken down, quantified, and solved. Design's inherent optimism leaves no alternative but it is becoming clear that many of the challenges we face today are unfixable and that the only way to overcome them is by changing our values, beliefs, attitudes, and behavior. Although essential most of the time, design's inbuilt optimism can greatly complicate things, first, as a form of denial that the problems we face are more serious than they appear, and second, by channeling energy and resources into fiddling with the world out there rather than the ideas and attitudes inside our heads that shape the world out there.²⁷

In her book *Vibrant Matter*, Jane Bennett urges a mode of practice that recovers a kind of naïveté, in order to be able approach matter in new ways that operate with its vitality. She suggests that one possibly productive tactic could be to “become temporarily infected by discredited philosophies of nature” and other “premodern attitudes.”²⁸ Sean Niu's thesis, “Tide of Salt,” engages the construction of epistemes — systems of thought and knowledge — and speculates on how extreme environmental situations might produce new epistemes, as well as new material artifacts, architectures and landscapes. (Figure 6) He constructs a story that takes place in Namie, Fukushima, a city largely abandoned after the accident of the Daiichi Nuclear Plant in 2012. However, in Niu's fiction, certain citizens refuse to leave the place of their home, and are quarantined in this contaminated land. Here, an unscientific

ENDNOTES

1. Benton MacKaye, “The New Exploration,” *Survey Graphic* 7 (May 1925): 153-157, 192-194.
2. Steven Shaviro, *The Universe of Things: On Speculative Realism* (Minneapolis: University of Minnesota Press, 2014): 2-3.

3. Eric D. Schneider and James J. Kay, “Complexity and Thermodynamics, towards a new ecology,” *Futures* 26:6 (1994):642-643.
4. Fritjof Capra, “Systems theory and the New Paradigm,” in *Key Concepts in Critical Theory: Ecology*, ed. Carolyn Merchant (Amherst, N.Y.:Humanity Books, 1994): 334-341.
5. Timothy Morton, “Wellek Lectures 2014: Lecture 1” (MP3). Accessed September 28 2014, <http://ecologywithoutnature.blogspot.com/2014/07/the-wellek-lectures-2014-lecture-1-mp3.html>
6. Timothy Morton, “Ecological Awareness 101” (MP3). Accessed September 28 2014, <http://ecologywithoutnature.blogspot.com/2014/02/ecological-awareness-101-mp3.html>
7. Timothy Morton, *Hyperobjects: philosophy and ecology after the end of the world* (Minneapolis: University of Minnesota Press, 2013).
8. Graham Harman, *The Quadruple Object* (Alresford: Zero Books, 2011).
9. Gilles Deleuze and Félix Guattari, *A Thousand Plateaus: Capitalism and Schizophrenia* (Minneapolis: University of Minnesota Press, 1987): 474-500.

Figure 5: “Perennial,” Lucien Menair, 2015. (clockwise l-r) Site model; view from Death Valley; construction orchestration plan; Fragmentarium plan; Quarry plan.

10. Saskia Sassen, *Expulsions: Brutality and Complexity in the Global Economy* (Cambridge: Harvard University Press, 2014).
11. Keller Easterling, *Subtraction* (Berlin: Sternberg Press, 2014).
12. Photographers of “industrial sublime” landscapes include Edward Burtynski, Richard Misrach, and Louis Helbig.
13. James Joslin, unpublished MArch thesis, 2015.

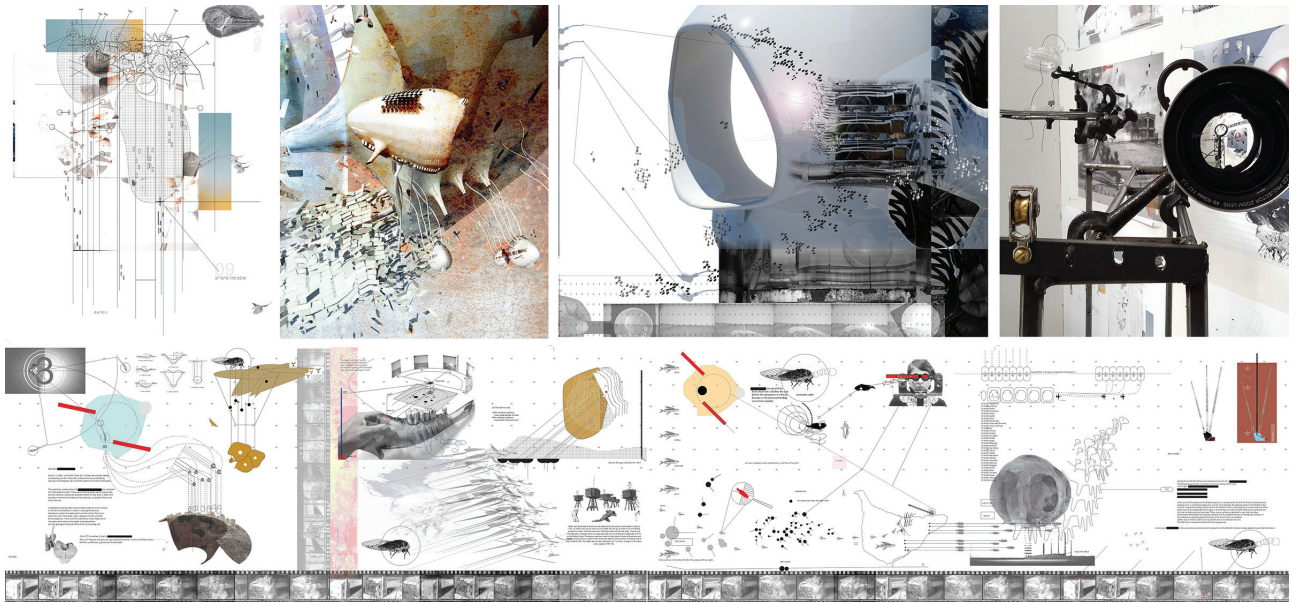
but socially powerful belief spreads that salt can neutralize nuclear radiation. The project explores, through film, writing, drawings and artifacts the spatial and cultural consequences of this belief system within this narrative of exclusion. The project is developed at multiple scales: the scale of the landscape (a salt factory and funerary landscape of salt surrounding the quarantined city, aimed to protect it from the radiation); the scale of the building (a bath house where salt as opposed to water is used for therapeutic rituals); and the scale of objects (the design of a salt kimono that is believed to protect the wearer). Hauntingly drawn and photographed images displace the viewer into the space of the narrative, and the spatial and material consequences of the design.



Figure 6: “Tide of Salt,” Sean Niu, 2015. Above: film and design drawing sequence. Below: unfolded landscape drawing of design project from the salt mines to the sea to the salt bath house in Namie.

Figure 7: “Chrysalis,” Mauricio Cornejo, 2015. (clockwise from top left) The Drones; Temple Construction Series; Apparatus; Garden Series.

Mauricio Cornejo’s thesis, “Chrysalis,” develops a speculative, operatically scaled, world-making ecology constructed in the language of montage. (Figure 7) The project is situated within a post-catastrophe mythical site and time, perhaps somewhere between the Aral Sea and the Nevada Test Site, where colonies of information gathering drones cultivate a landscape of strange biological gardens, and contribute to the perpetual construction of a massive temple to house the hordes of data. Humans make pilgrimages to this landscape, which operates as a kind of runaway construction and biotic ecology, that continues breeding, speciating, accumulating, and propagating without them. The drawings coningle multiple histories and temporalities — premodern mythical allegories and taboos coexist with informational and statistical records, residues of war and violence, technologically advanced machines, aberrant biologies — their boundaries fluid, thoughts and ideas becoming matter. Resisting fixity, simplification, or full explication, the work allies itself with the lineage speculative design and experimental drawing, from Lebbeus Woods to contemporary practices, where technologically modified natures and urbanities position the visualization of future societies and provide reflection on our present ones.



CONCLUSION

In terms of how the design works and approaches presented here might contribute to the questions posed by the “Knowledge Fields: Between Architecture and Landscape” panel, I borrow a few thoughts framed by Bruno Latour with regard to how to tackle the question of operating between worlds (such as disciplines or knowledge fields). Latour conjures an image of two banks between a tumultuous river; instead of trying to build a bridge between the banks, he suggests that one might canoe, or kayak, those turbulent waters, and that this might also provide a much different perspective of the two banks themselves.²⁹ “What counts is your ability to equip yourself with the right paraphernalia so that you can go down the river without drowning yourself,” he states.³⁰ In the projects presented within this paper, the paraphernalia commandeered include re-appropriated conventions, practices, histories, and mediums from both disciplinary fields, combined with design thinking that is agile across temporal and operational scales, as well as across the boundaries of fact and fiction. In the words of Jane Rendell, these projects, and the references that they draw on, aim to “produce knowledge which questions rather than affirms.”³¹

This work presented here is intended to open discourse within a shift in attitudes regarding design praxis, including architecture and landscape, paralleling disciplinary transitions in response to increasing ecological, cultural and technological uncertainty. Theories of speculative realism and ecological awareness expand new ontological frameworks for design practices, eliciting design approaches that engage technology without technological positivism, ecology without ecological hysteria, and modes of working that attempt to navigate new courses between the disciplinarily defined fields of architecture and landscape, and that operate through the intertwinements and the estrangements, the affinities and the antagonisms, between what we used to call nature and ourselves.

14. Walter Benjamin, “On Language as Such and on the Language of Man,” (1916) in *Walter Benjamin Selected Writings, Volume 1 1913-1926*, eds. M. Bullock and M.W. Jennings (Cambridge and London: Belknap Press Harvard, 1996): 69.
15. Rob Aben, Saskia de Wit, *The Enclosed Garden: History and Development of the Hortus Conclusus and Its Reintroduction Into the Present-day Urban Landscape* (Rotterdam: 010 Publishers, 1999): 22.
16. James Joslin, unpublished MArch thesis, 2015.
17. On the instrumentality of the aerial view in landscape architecture see the beginning of James Corner, “Aerial Representation and the Making of Landscape,” in *Taking Measures Across the American Landscape*, James Corner and Alex S. MacLean (New Haven: Yale University Press, 1996): 15-19.
18. Jason Payne, “Variations on the Disco Ball, or, The Ambivalent Object,” *Project*, Issue 2 (September 2013): 20-27.
19. Harman, *Quadruple*, 8-13.
20. Robert Smithson, “Frederick Law Olmsted and the Dialectical Landscape,” *Artforum*, February 1973: 62-66. See also: Timothy D. Martin, “Robert Smithson and the Anglo-American Picturesque,” *Anglo-American Exchange in Postwar Sculpture, 1945-1975* (Getty Museum, LA, 2011): 164-174.
21. Yve-Alain Bois and John Shepley, “A Picturesque Stroll around “Clara Clara,”” *October*, Vol. 29 (Summer, 1984): 32-62.
22. Jacques Rancière, *The politics of aesthetics: the distribution of the sensible* (London: Continuum, 2004).
23. Jacques Rancière, *The politics of aesthetics: the distribution of the sensible* (London: Continuum, 2004).
24. Timothy Morton, “Unprimed 1: The Emergence of Hyperobjects,” (video) Accessed August 20, 2015 <http://ecologywithoutnature.blogspot.com/2011/02/unprimed-emergence-of-hyperobjects.html>
25. Jennifer Ng, unpublished MArch thesis, 2015.
26. See “Into Eternity,” 2010, directed by Michael Madsen, as well as Peter Galison and Rob Moss’s recently released 2015 film “Containment” (<http://containmentmovie.com/>).
27. Anthony Dunne and Fiona Raby, *Speculative Everything: Design, Fiction and Social Dreaming* (Cambridge: MIT Press, 2013): 2.
28. Jane Bennett, *Vibrant Matter: a political ecology of things* (Durham & London: Duke University Press, 2010): 18.
29. Bruno Latour, *What is the Style of Matters of Concern?* (Assen: Van Gorcken, 2008): 13-14.
30. *Ibid*, 13.
31. Jane Rendell, “Architectural research and disciplinarity,” *ARQ*, 8:2 (2004): 145