ARCHITECTURAL STORYTELLING

Chapter 2
Architectural Storytelling: A Space between Critical Practice and Fragile Environments

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In their 2017 book *The Environmental Humanities: A Critical Introduction*, Robert S. Emmett and David E. Nye list a range of alternative practices that can help to "put the brakes on" the impending climate disaster.[1] These practices, including "localization," "degrowth," and "from cradle to cradle," speak directly to environmental architecture and urban design.[2] For example, localization is a hallmark practice in Sim Van der Ryn's ideas for "emphatic design" and, with Stuart Cowen, for "ecological design."[3] Cradle-to-cradle has for a long time been at the heart of design approaches based on recycled and consciously sourced materials. Also the question of how architecture can support degrowth is pertinent in architectural debates; for example, the 2019 Oslo Architecture Triennale was themed "Enough: The Architecture of Degrowth."[4] From the point of view of the critical posthumanities, Astrida Neimanis, Cecilia Åsberg, and Johan Hedrén, in their 2015 paper "Four Problems, Four Directions for Environmental Humanities: Toward Critical Posthumanities for the Anthropocene," identify "alienation and intangibility" as a primary problem (the first of four identified problems).[5] The authors point to the alienation often felt toward environmental problems. They argue that such alienation is caused by environmental problems being complex, large, extending over long periods of time and often being perceived as intangible in their full workings and effects. Because the resultant alienation, or "the difficult[y] of literally grasping these phenomena and effects," can make it difficult to engage and invest, environmental work requires more than technical solutions.[6] Neimanis, Åsberg, and Hedrén propose four directions, the first of which is "attention to diverse environmental imaginaries"—understood as "sites of negotiation that can orient material action and interaction."[7] Similar to sociocultural imaginations (Neimanis et al. refer to the work of, among others, Ursula K. Heise), such imaginaries can offer "a cultural terrain for collective dreaming, aspiration, collaboration, and negotiation."[8]

What can "environmental imaginaries," understood by Neimanis, Åsberg, and Hedrén as "not (always) speculative [but] also alternatives that are lived and experienced in many ways, globally," look like in architecture and urban design?[9] This is a question that seems to be at the heart of *Infrastructural Love* and offers

1 Robert S. Emmett and David E. Nye, "Putting the Brakes On: Alternative Practices," in *The Environmental Humanities: A Critical Introduction* **(Cambridge, MA: MIT Press, 2017), 117–36.**

2 The other two practices are "ecological economics" and "commodity regionalism and environmental art."

3 Sim Van der Ryn with Francine Allen, *Design for an Empathic World: Reconnecting People, Nature, and Self* **(London: Island Press, 2013), esp. ch. 5, and Sim Van der Ryn and Stuart Cowan, Ecological Design (Tenth Anniversary Edition) (Washington, Covelo, and London: Island Press, 2007 [1996])**

4 See "Enough: The Architecture of Degrowth," *Oslo Architecture Triennale***, http://oslotriennale.no/en/aboutoat2019.**

5 Astrida Neimanis, Cecilia Åsberg, and Johan Hedrén, "Four Problems, Four Directions for Environmental Humanities: Toward Critical Posthumanities for the Anthropocene," *Ethics and the Environment* **20, no. 1 (Spring 2015): 67–97.**

a prompt for this chapter to unpack some of the opportunities and challenges offered by the meeting of the critical posthumanities and architectural design around shared ambitions toward alternative environmental imaginaries.

The critical posthumanities can provide novel lenses for revisiting architecture's agency in response to questions of environmental and social justice and invites architectural research to explore new—and revisit forgotten or overlooked—entanglements of nature and culture, of human and non-human agency. While this offers an occasion to reclaim radical imaginaries from architectural *histories*, this chapter directs attention toward the development of imaginaries *for the future*, such as those that can be explored in the educational context of an architectural design studio.[10] The chapter reflects on the meeting of critical posthumanities and architecture in a way that is speculative rather than based on empirical research. That does not mean the chapter has no empirical grounding. I draw from my experience as a reviewer for the Infrastructural Love studio at KTH Stockholm, where I was privileged to review student design projects in two consecutive years. I also use my ongoing research on environmental imaginaries in (hi)stories of architecture as empirical grounding for the chapter, including the Ducklands proposal developed by Cedric Price Architects for the Hamburg docklands in Germany (1989–1991) and Metro/Education, a proposal developed by urban designers Michel Lincourt and Harry Parnass in 1970 to reprogram downtown Montreal's infrastructures into spaces for teaching (rather than building new structures).[11] The chapter is additionally grounded by roundtable discussions and conference panels focusing on exchanges between architectural studies and the environmental humanities, as well as my own efforts to integrate environmental humanities in the teaching of architecture.[12]

I draw from these empirical terrains, albeit largely implicitly. I start with a discussion of storytelling, in which I recognize one instance of "environmental imaginaries" and a critical design tool. I highlight three important components of critical storytelling for design: collective worldmaking, messiness, and hope. In addition to the empirical terrains mentioned above, I draw conceptually

6 Neimanis, Åsberg, and Hedrén, "Four Problems, Four Directions for Environmental Humanities," 74.

7 Neimanis, Åsberg, and Hedrén, "Four Problems, Four Directions for Environmental Humanities," 81.

8 Neimanis, Åsberg, and Hedrén, "Four Problems, Four Directions for Environmental Humanities," 81.

9 Neimanis, Åsberg, and Hedrén, "Four Problems, Four Directions for Environmental Humanities," 82.

10 One such occasion to study histories was offered through my participation in the multidisciplinary research program "Architecture and/for the Environment," directed by the Canadian Centre for Architecture in Montreal with the support of the Andrew W. Mellon Foundation (2018–2019).

11 For more on Ducklands, see Isabelle Doucet, "Anticipating Fabulous Futures," in "Overgrowth," special project, ed. Nick Axel, Matthew Dalziel, Phineas Harper, Nikolaus Hirsch, Cecilie Sachs Olsen, and

from Neimanis, Åsberg, and Hedrén's notion of "environmental imaginaries," Thom Van Dooren and Deborah Bird Rose's "storying," science fiction writer Ursula K. Le Guin's quest for "Yintopia," and Benedikte Zitouni's call for "brewing." At the end of the journey, I return to reflections more specifically connected to *Infrastructural Love*.

Storytelling as a Critical Design Tool

In a blog entry from April 2015 called "Utopiyin, Utopiyang," Ursula K. Le Guin writes, "Perhaps in order to be able to write a utopia we need to think yinly."[13] She argues that, while we are used to utopias and dystopias being written from a yang perspective—masculinist, controlling—we have yet to discover what a "yintopia" would look like. If utopias rely on control ("yang"), then "yin" would instead inform "acceptance of impermanence and imperfection, a patience with uncertainty and the makeshift, a friendship with water, darkness, and the earth."[14] By making a distinction between yintopia and yangtopia, Le Guin points to the capacity of stories to bring different critical potentialities into play. Different stories allow for different sensitivities vis-à-vis the questions, problems, hopes, and realities we work from. Stories can induce a sense of care, concern, and responsibility. And, as critical historiographers and ethnographers, among others, have argued, (hi)stories can also overlook and ignore and therefore make one forget events. Stories can create hope as much as they can mislead. When focusing on their critical capacity, storytelling offers one possible tool for exploring different imaginaries. In the environmental humanities, multispecies storytelling offers both a way to expose the problems, injustices, and potentialities of a specific situation and a path toward imagining other possible futures. Scholars in cultural studies, ethnography, and science studies, including Heise, Van Dooren and Rose, Anna Lowenhaupt Tsing, and Donna J. Haraway, have convincingly emphasized the importance of "storying" climate issues.[15] Storytelling is believed to complement any techno-fixing or technocratic approach to environmental problems; that is, to make complex

Maria Smith, e-flux Architecture, September 2019, https://www.e-flux.com/architecture/overgrowth/284918/anticipating-fabulous-futures/. On "Metro/Education," see Isabelle Doucet, "Metro/Education Montreal (1970): Rethinking the Urban at the Crossroads of Megastructures, Systems Analysis and Urban Politics," Washington, Covelo, and London: Island Press, 2007 [1996] 7, no. 2 (2019): 179–96.

12 For example, the roundtable "Cautious Encounters? Architecture and Urban Planning meet Environmental Humanities," which I hosted at the Swedish Research Council's Symposium on Artistic Research 2020—*Working Together*; my participation in "The Future of the Architectural (post)Humanities" roundtable organized by Hélène Frichot and Tilo Amhof at the Society of Architectural Historians, Australia and New Zealand conference 2020; and the conference session "The Future Will Not Be Exhausted," organized by Elke Krasny and Lara Perry at the Political Ecology Network's Third

Biennial Conference held in Brighton in 2020. At the School of Architecture and Civil Engineering (ACE) at Chalmers University of Technology, I teach about environmental humanities for architecture in both lecture courses and design studios.

environmental and scientific problems more accessible to a larger public and, in doing so, to trigger awareness. With the help of stories, situations can be evaluated in a more complex, entangled, and situated manner. Situated-embodied stories and situated knowledges, as Haraway, Isabelle Stengers, Rosi Braidotti, Maria Puig de la Bellacasa, and others propose, embrace connectedness, subjectivity, positionality, and complexity rather than dualistic thinking. Situated perspectives resist making generalizing observations about a situation that do honour the specific circumstances of that situation. In architecture, consider, for example, the "best practices" approach whereby opportunities (including benefits and profits) generated through buildings in one place are believed to be transferrable to seemingly similar situations elsewhere. Situated stories resist such generalization, instead drawing attention to the details and intricacies that compose a specific situation; and inviting to give voice to the many actors and stakes that matter to that situation. Storytelling, whether situated or otherwise, is at the heart of architecture.

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When imagining future scenarios, architects tell—and sell—stories. Narration and visionary storytelling are important components of architectural culture. Architects' stories can conform and also critique; they can embrace continuity and also induce radical change. Architectural storytelling, when understood as a tool for critical exposure *and* for exploring future scenarios, can open a fascinating space of encounter between critique and speculation. However, as I will now explore, such encounters do not come without challenges.

13 Published in a collection of Le Guin's blogs. Ursula K. Le Guin, "Utopiyin, Utopiyang," in *No Time to Spare: Thinking about What Matters,* **85–87 (2017; New York: Mariner Books, 2019), 87.**

14 Le Guin, "Utopiyin, Utopiyang," 87.

15 Donna Haraway, *Staying with the Trouble: Making Kin in the Chthulucene* **(Durham, NC: Duke University Press, 2016); Anna Lowenhaupt Tsing,** *The Mushroom at the End of the World: On the*

Stories for Collective World-Making

As part of a masterclass in 1989, Cedric Price Architects began developing a proposal for Hamburg's inner-city harbor, which became known as "Ducklands."[16] The architects did not adhere to a logic of urban waterfront regeneration through extensive renovation and newbuilt structures. Instead, they proposed to remove existing structures and return the developed area to nature, thus creating a large nature reserve that would include breeding grounds for migrating birds (e.g., ducks). The proposal shows a fascinating sensitivity to interspecies relationalities. One drawing, for example, using what we could today call emojis, shows the possible rapports between the (nonhuman) birds that inhabit the nature reserve and its (human) visitors, seemingly indicating that the nonhuman perspective takes priority. The proposal further supported this prioritization by calling for mobile walkways that would allow visitors to access the reserve but could be moved according to breeding and nesting needs. Rather than offering the developers of the Hamburg docklands a lucrative deal, the Ducklands proposal hoped to encourage residents to reconnect with their river, and with nature, and to provide space for migratory birds. Following my enthusiastic writing about Ducklands, its interspecies qualities, and its vision for a different environmental future that questioned growth, a few new questions came to the fore. Is the project not still a case of architects acting *on behalf of* nature and human beings? Where are the voices of the residents, the birds, the river, the ornithologists? How central to the project is Cedric Price's persona as a visionary architect—that is, what is his authorial agency in a project that I would very much like to consider as an instance of collective world-making? I am indebted to Benedikte Zitouni for prompting me to consider such questions in her comments on my essay dedicated to Ducklands.[17] Rather than being seduced by the bold gesture offered by Ducklands (as I definitely was!), Benedikte was curious to hear more about the possible continuities Price had worked with, such as existing ecological connections in Hamburg, as well as whether, and if so how, Price had

Possibility of Life in Capitalist Ruins **(Princeton, NJ: Princeton University Press, 2015); Thom Van Dooren and Deborah Bird Rose, "Lively Ethography: Storying Animist Worlds,"** *Environmental Humanities* **8, no. 1 (May 2016): 77–94, and Ursula K. Heise,** *Imagining Extinction: The Cultural Meanings of Endangered Species* **(Chicago: University of Chicago Press, 2016).**

16 Doucet, "Anticipating Fabulous Futures."

17 Benedikte kindly permitted me to include observations she had shared in email conversations we had in 2019.

18 Zitouni builds on Bruno Latour and Michel Serres's work on "brewing times." Valérie Pihet and Benedikte Zitouni, "Shuffling Times," *Parse Journal* **2, no. 4 (2016): 37–51, https://parse-journal.com/article/shuffling-times/.**

19 Pihet and Zitouni, "Shuffling Times," 45.

contributed to what she called "thickening the brewing." In her part of a paper written with Valérie Pihet, Zitouni refers to "brewing" in terms of "shuffling times"—a form of nonlinear storytelling that weaves connections between past, present, and future in experimental rather than fatalistic or deterministic ways.[18] Storytelling then becomes, for Zitouni, a "continuous re-enactment of these stories and experience" as a way "to thicken our present and multiply its possibilities and potentialities."[19] Brewing, for Zitouni, is akin to the relationalities between past, present, and future that are found in Haraway's call for "staying with the trouble" as a way of being "truly present" (rather than breaking with past and present when imagining the future).[20]

20 Haraway, *Staying with the Trouble*, **1.**

Asking how architectural stories can become more "utopiyin" therefore means to ask how they can thrive on the collective voices of humans and nonhumans, how they can "brew" rather than "author," and how they might nurture collective rather than individual world-making. In the intense environment of a masterclass, such as the one that led to the Ducklands proposal, design teams are tasked to develop proposals in just a few days or weeks. In such settings, to patiently "brew" intricate stories of *shared* world-making—narrated through the *many* voices of not just designers, users, and residents but also birds, rivers, ornithologists, activists, and natural resources—may be challenging. A question architects may be forced to ask is how they might turn a "cacophony of troubled stories," as Tsing called this in a different context, into a convincing—simplified, stripped back—project pitch?[21]

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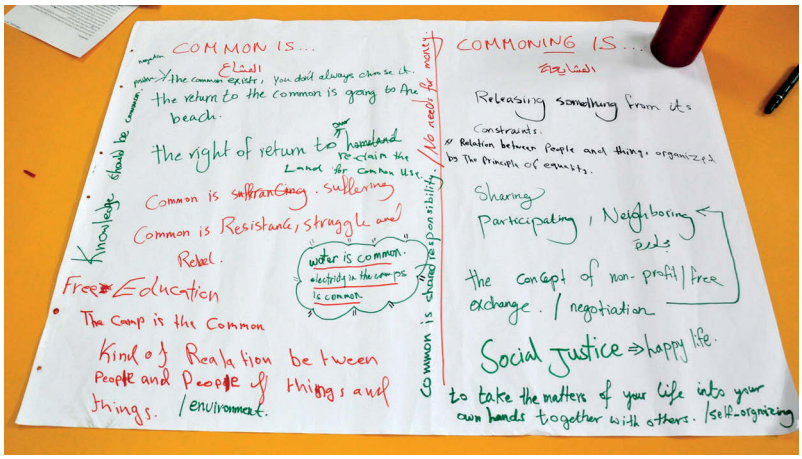
21 Tsing, *The Mushroom at the End of the World*, **34.**

Even in the context of a design studio offered as part of an architecture degree, such as Infrastructural Love, where projects are developed over longer periods of time (typically one semester) but still amid intense work schedules,

pedagogical plans, and time pressures, teachers and students may struggle to carve out ample time for learning about the sites or situations at hand, in and through their complexities and their many voices. And if they do find the time: How do they keep those complexities alive when suggesting an intervention, design, or action? As feminist pedagogies have shown, collaborative work is one such way to keep complexities alive. For example, through group work in design education and through honoring collective efforts and achievements—and not just among students and members of design teams but also with other stakeholders.[22] In her study of a design education experiment in the West Bank, Bianca Elzenbaumer calls this "speculating with care," a collective exercise in speculation whereby designers adopt a more humble position, both vis-à-vis the limitations of their knowledge—about everyday circumstances and conditions to which they have little lived-in and embodied access—and vis-à-vis their position of relative privilege—when engaging with the everyday livelihoods of others, livelihoods that architects might not (have to) inhabit.[23] Teaching students of architecture a sense of care and humbleness vis-à-vis the worlds they operate in is important, and studio environments such as Infrastructural Love are showing the way.[24] Rewarding collaborative world-making, already as part of architectural pedagogy, is crucial.



Collaborative notes related to discussions and actions around commoning as part of the Campus in Camps study program at the Westbank. Photo: Brave New Alps, October 2012.

22 Among many great references, two recent edited volumes stand out: Meike Schalk, Therese Kristiansson, and Ramia Maze, eds., *Feminist Futures of Spatial Practice: Materialisms, Activisms, Dialogues, Pedagogies, Projections* **(Baunach, Germany: AADR Art Architecture Design Research, an imprint of Spurbuchverlag, 2017); and Hélène Frichot, Catharina Gabrielsson, and Helen Runting, eds.,** *Architecture and Feminism: Ecologies, Economies, Technologies* **(London: Routledge 2017). Many feminist scholars and commentators have emphasized the importance of making and keeping visible the traces of work by team members, not just as a way of celebrating collective authorship but also to avoid having those contributions be systematically written out of the (hi)stories of architecture.**

23 Bianca Elzenbaumer, "Speculating with Care: Learning from an Experimental Educational Program in the West Bank," *Architectural Theory Review* **22, no. 1 (2018): 100–119.**

Away from architecture, Van Dooren and Rose help explain the benefits and rewards of collective world-making. In their 2016 paper "Lively Ethnography: Storying Animist Worlds," they explain how local volunteers need good storytelling to mobilize others around the practices of care that are required for conserving the vulnerable Hawaiian monk seals. They argue that good stories—being good storytellers but also "good listener[s]"—enable volunteers "to discuss conflicting views about monk seals in a manner that does not exacerbate conflict."[25] Stories are here presented as vehicles for expressing the "multiple and diverse forms of intentionality" that come with an "ecological animism" worldview.[26] These are stories that "would give *others* vitality, presence, perhaps 'thickness' on the page and in the minds and lives of readers."[27] Rather than transmitting one strong message by the storyteller, stories are intended to induce curiosity and attentiveness. Stories therefore promise to "open to other ways of constituting, of responding to and in a living world."[28]

Messy Stories

With Van Dooren and Rose's important work in mind, architects can produce stories that serve as "powerful contributors to the becoming of our *shared* world."[29] They can do this in addition to, or even instead of, using stories for the purpose of convincing audiences of one account of the world—their own or that of a few privileged others. Such stories can be both visionary and deeply engrained in everyday practices of world-making. Everyday world-making can, however, be messy, so here comes another challenge!

Architectural stories are not always given the opportunity to show traces of messy world-making and struggle. In the context of competitions, tenders, and client presentations, for example, showing messy struggles seems counterproductive. Stories therefore often risk taking the shape of what Le Guin calls, again in the context of science fiction, "extrapolative" stories. By this she means a common observation about and definition of science fiction, whereby "The science fiction writer is supposed to take a trend or phenomenon of the

24 I am fortunate to have had great experiences with such design studios at my current (institutional) home, ACE at Chalmers, where I have taught seminars in the Social Inclusion studio (with Emílio da Cruz Brandão) and the Transformation Projects and Environmental Care studio (with Elke Miedema and Oscar Carlsson).

25 Van Dooren and Rose, "Lively Ethography," 79.

26 Van Dooren and Rose, "Lively Ethography," 81–82.

27 Van Dooren and Rose, "Lively Ethography," 85; emphasis (in italics) added.

28 Van Dooren and Rose, "Lively Ethography," 85.

29 Van Dooren and Rose, "Lively Ethography," 89; emphasis (in italics) added.

30 Ursula K. Le Guin, introduction to *The Left Hand of Darkness* **(1969; London: Gollancz, 2017), xiii.**

31 Jeremy Till, *Architecture Depends* **(Cambridge, MA: MIT Press, 2009), back cover and 60–61, where he also refers to Haraway's "situated" perspectives.**

here-and-now, purify it and intensify it for dramatic effect, and extend it into the future."[30] When applied to architecture, extrapolative stories would prevent designers from showing stories in and through their messiness and complexity. And messiness matters, as Jeremy Till so convincingly shows in his 2009 book *Architecture Depends*, a wonderful celebration of messiness considered not as a threat but rather as an opportunity that allows architecture to remain situated in the "real world"—composed of "people, time, politics, ethics, mess"—on which it always depends.[31]

I found evidence of opportunities for situatedness when reading the 2007 edition of Van der Ryn and Stuart Cowan's 1996 book *Ecological Design* while preparing for a teaching seminar at my university. I was delighted to discover that the authors set the scene for their five principles of ecological design with a story of a compost privy.[32] This is a story of learning (at home, as individuals and communities) how to compost human waste and reduce water wastage. It is also a story of learning about and adjusting building codes and regulations that make it difficult to implement such toilets on a larger scale; for example, because building codes define "habitable dwellings as having flush toilets"[33] Moreover, their fifth principle of ecological design, "Making Nature Visible," is an excellent case in point of the messiness that comes with inspiring ecological stories. The privy, with its requirements of hands-on learning (dealing with smell, turning over the pile) offers an important form of learning when compared to flush toilets; as Van der Ryn and Cowan argue "'Flush and forget' technology does not encourage mindfulness or a sense of responsibility."[34] Because messiness and direct engagement make us mindful, caring, and responsible, Van der Ryn and Cowan's ecological design aims to show the messy workings that are otherwise typically kept invisible, including sewage plants, garbage dumps, slaughterhouses, and electrical stations. As Van der Ryn and Cowan argue, "Making nature visible is a way of reacquainting us with wider communities of life, but it also informs us about the ecological consequences of our activities."[35] They explain how a design project can have such informative purpose and can trigger awareness, for example, in preserving wetlands,

32 "The Compost Privy Story," in Van der Ryn and Cowan, ***Ecological Design*****, 68–74.**

33 Van der Ryn and Cowan, *Ecological Design,* **71.**

34 Van der Ryn and Cowan, *Ecological Design,* **74.**

35 Van der Ryn and Cowan, *Ecological Design,* **189.**

36 Van der Ryn and Cowan, *Ecological Design,* **189. Elsewhere, as one way of understanding the complexities of city-making, I have narrated the messy story of the conception, design, construction, use, and maintenance of a public urinal as part of a neighborhood renewal project in Brussels.**

37 Many writers have made similar points before me, and I fondly recall the earlier-mentioned conference session "The Future Will Not Be Exhausted" in Brighton in 2020.

incorporating drainage ponds, and teaching, visually and through experience, "about the potential symbiotic relationship between culture, nature, and design works."[36]

Such approaches as these sound encouraging to me because they not only invite us (teachers and students) to think broadly about different ways in which architects can contribute to environmental futures (beyond designing buildings); they also ask how design proposals can do justice to the everyday, complex, messy practices of world-making in which environmental work is deeply engrained. When processes of extraction, manipulation, and exploitation of both natural and human resources are kept at a distance, then we also risk turning a blind eye to environmental and human suffering.[37] When, by contrast, projects make available the various (ethical, aesthetic, technical) choices made by the designer, then those who come to be affected by the design can also begin to inhabit these choices, triggering the possibility of a shared sense of responsibility. As Heather Swanson, Anna Tsing, Nils Bubandt, and Elaine Gan argue in the introduction to the "Monsters" section of their book *Arts of Living on a Damaged Planet*, "Some kinds of stories help us notice; others get in the way."[38]

Which Stories? Whose Futures?

Messy, thick, and collective stories prompt the question, Whose futures are being imagined? As Neimanis, Åsberg, and Hedrén argue, imaginaries need to work with multiple, even competing, worldviews and should explore the different goals, values, and actions pursued by these different imaginaries in order to ask who benefits from them.[39] Heise demonstrates, in her book *Imagining Extinction*, how stories (of extinction) can be both important (e.g., leading to conservation) and problematic (e.g., when "certain kinds of species are taken as a shorthand for all species").[40] Being attentive to these hidden mechanisms of power, bias, or preference in the (counter)stories we produce is important. Especially in creative and visual fields such as architecture, stories

38 Heather Swanson, Anna Tsing, Nils Bubandt, and Elaine Gan, "Introduction: Bodies Tumbled into Bodies," in *Arts of Living on a Damaged Planet: Monsters of the Anthropocene*, **ed. Anna Tsing, Heather Swanson, Elaine Gan, and Nils Bubandt, M1–M12 (Minneapolis: University of Minnesota Press, 2017), M8.**

39 Neimanis, Åsberg, and Hedrén, "Four Problems, Four Directions for Environmental Humanities," 82–83.

40 Heise, *Imagining Extinction*, **23.**

41 Meike Schalk, Ulrika Gunnarsson-Östling, and Karin Bradley, "Feminist Futures and 'Other Worlds': Ecologies of Critical Spatial Practice," in *Routledge Handbook of Gender and Environment*, **ed. Sherilyn MacGregor, 447–63 (New York: Routledge: 2017), 450. Till also developed ideas on hope and change not through distant utopia but, drawing on Roberto Mangabeira Unger, imaginations that are not "the imagination of the detached dreamer; it grows out of the real." Till,** *Architecture Depends*, **192.**

can become captivating vehicles of mobilization leading to action, but they also risk becoming seen as blueprints, thus reducing the opportunity for other possible stories to emerge. For this reason, too, stories and imaginaries are to be situated and resituated in everyday realities. Architectural imaginaries of hope, rather than being projected onto distant futures, can operate as what Meike Schalk, Ulrika Gunnarsson-Östling, and Karin Bradley call "lived utopias," which they define as "lifeways in the here and now that practice alternative ways of living, producing, and consuming, that deviate from mainstream market economies."[41] And the "environmental imaginaries" envisioned by Neimanis et al. are indeed also not just speculations but also alternatives, as they exist already in everyday life.

Le Guin points to stories as "thought-experiments." When reflecting on her book *The Left Hand of Darkness*, she describes "thought-experiments" that prompt us to "open up an alternative viewpoint, to widen the imagination" rather than reflect only on what we want to happen, as is often the case in depictions of utopia.[42] Le Guin helps us to understand that thought-experiments, which she also calls "experiments in imagination," allow us to speculate on what kinds of existing exploitations would cease to exist under the scenario imagined.[43] Architects, for example, might imagine a (built) world free of extraction, exhaustion, precariousness, exploitation, or injustice. Even if such a world may not be realized in the foreseeable future, thought-experiments can help us to believe in the possibility of such worlds.[44] Such stories can offer an important gateway toward what Elke Krasny calls "architecture as care"; namely, architectures that thrive on an ethics of human-nonhuman interdependence rather than on the historical legacy of independence (from nature).[45] Stories can help us to believe in the possibility of such ethics of interdependence and provide the confidence needed to resist those pressures on the profession that prevent such ethics of interdependence from becoming a reality.[46]

One story that does just that is the Crochet Coral Reef Project begun in 2005 by Christine Wertheim and Margaret Wertheim. Inspired by how mathematician Daina Taimiņa in 1997 used crochet to create a physical visualization of

42 Ursula K. Le Guin, "Is Gender Necessary? Redux" (1976/1987), in *Dancing at the Edge of the World: Thoughts on Words, Women, Places,* **7–16 (New York: Grove Press, 1989), 9, 16.**

43 Le Guin, "Is Gender Necessary? Redux," 9, 16. Le Guin gives as an example of exploitations that would cease to exist, "exploitation of the woman, of the weak, of the earth" (16).

44 I here think also of "ficto-critical approaches" in architectural writing. See Hélène Frichot and Naomie Stead, eds., *Writing Architectures: Ficto-critical Approaches* **(London: Bloomsbury 2020).**

45 Elke Krasny, "Architecture and Care," in *Critical Care: Architecture and Urbanism for a Broken Planet***, ed. Angelika Fitz and Elke Krasny, 33–41 (Vienna: Architekturzentrum Wien; Cambridge, MA: MIT Press 2019), 40.**

46 Krasny lists "financialization, commodification, gentrification, touristification and aggressively iconic spectacularization." Krasny, "Architecture and Care," 40.

47 Just a quick search online shows an offer of free downloadable patterns for coral reef crocheting.

"hyperbolic geometry" (a branch of non-Euclidean geometry), they began to crochet a coral reef. Since its inception, the project has turned into a worldwide (and still ongoing) effort by many to crochet colorful coral reefs using wool, cotton, and all kinds of plastic waste and trash.[47] Haraway discusses the project in her chapter of the edited volume *Arts of Living on a Damaged Planet*, where she particularly values the project's collectivity, "probably the world's largest collaborative art project," and the ways in which, through a process of "intimacy without proximity,"[48] it triggers awareness of natural environments under threat. Haraway observes how the practice of crocheting induces a sense of embodied care (both in the crafters and those experiencing the works) that affords feelings of being involved with and caring for environmental issues without prompting feelings of "neediness of touching [the actual reef] by camera or hand in yet another travelogue of discovery."[49]

Margaret and Christine Wertheim and the Institute For Figuring. *Coral Forest* **with** *Latvian Reef Pod* **and** *Hyperbolic Sea Snake* **at the Museum of Arts and Design (NYC). Photo courtesy MAD by Jenna Bascom.**

A Good Time for Collective Struggling and Learning

In the pedagogical space of the Infrastructural Love design studio, I sensed a genuine effort to develop "architectures of care" and a commitment to shared struggling and collective world-making. I recall the productive struggles of the students and teachers to discover ways of combining critical imaginaries for environmental care with the production of articulate design projects—a struggle I recognize in my own teaching.

Such struggles are indeed productive, because we learn so much from them and because they lead to excellent work. For example, what to do, as a student, when the imaginaries for environmental care you have developed do not lead to any need for construction or building? One student in Infrastructural Love had, based on a thorough and situated reading of the site (a nature park open to visitors) and its challenges, concluded that no built work was required to optimize the park's eco-balance. All that seemed to be needed was some sign-posting (for the visitors) and a few light-touch interventions to create places to rest. The student's hesitation to accept that conclusion (at least that is what I sensed) is in my view telling of the real and/or perceived expectations of design studio work. Architecture students may indeed wonder whether they will face consequences if they propose to build nothing at all.

Productive struggles also point, yet again, to questions of time. In the specific setting of a design studio in architectural education, with its demands on outputs, semester schedules, and student experience, the challenge to reconcile critical storytelling and situated knowledges with excellent, detailed design, can be very real. To encourage productive struggles—between critical situated readings and design, between and among students and tutors—ample time is needed. Time is essential

Maria Johansson, The Kymlinge Institute of Nothing and the Neglected. Infrastructural Love Studio, Critical Studies in Architecture, KTH Stockholm, Sweden, 2018.

48 Donna Haraway, "Symbiogenesis, Sympoiesis, and Art Science Activisms for Staying with the Trouble," in *Arts of Living on a Damaged Planet*, **M25–M50 (here M36, M39). Haraway refers to Jacob Metcalf, "Intimacy without Proximity,"** *Environmental Psychology* **5, no. 2 (2008): 99–128. Haraway also discusses the project in an earlier version of the essay published in** *Staying with the Trouble*, **76–81.**

49 Haraway, "Symbiogenesis, Sympoiesis, and Art Science Activisms for Staying with the Trouble," M39.

for collective learning: within one studio, between editions of studios, within and between student groups, between students and teachers, and with the many stakeholders outside the studio. One needs time to familiarize oneself with knowledge taken from outside architecture, such as the critical posthumanities and to develop detailed interventions inspired by such knowledge. One semester of fifteen weeks does not allow much time to do all that! Still, I was encouraged to observe how the Infrastructural Love studio fostered the sharing of experiences, knowledge development, and learning; for example, by having reviewers come in for several editions of the studio and by publishing a book—*this book*—which, in addition to being a beautiful opportunity to collect thoughts and reflections from various interlocuters, guests, and protagonists of Infrastructural Love, also serves as a record of collective, and hopefully continuing, learning.

Acknowledgments

In addition to the events listed in footnote 12, some ideas developed in this paper found an initial sounding board in the "Inhabiting Other Futures: Environmental Humanities Meets Architecture and Urban Planning" seed project, funded by Urban Futures at Chalmers University of Technology in 2020 (with Karl Palmås and Kristoffer Ekberg); and in my teaching at the Department of Architecture and Civil Engineering at Chalmers. Some speculations on storytelling developed in this paper benefitted, at an earlier stage, from feedback received from Mark Dorrian and from seminar discussions with colleagues at the Division of Science, Technology and Society at Chalmers. The invitation to contribute to the *Infrastructural Love* book then offered a welcome occasion to tie things together into a chapter.