Hanna Musiol: Industry, Postcolony, and the Immersive Arts of Environmental Storytelling

(A keynote talk delivered at the Global Digital Humanities Symposium organized by Digital Humanities at Michigan State University (DH@MSU) on March 24, 2022.)

Abstract

This talk addresses the challenges of doing environmental and digital humanities (D&EH) work in the space of “high Nordic” colonialism and extractivism in Norway (Lars Kiel Bertelsen, qtd. in Arke, Ethno-Aesthetics 9). Trondheim, a burgeoning silicon fjord smart city in the throes of overdevelopment and (post)colonial conflict, and NTNU, Norway’s largest public research university and a “story factory” often tasked with providing eco-solution plots to the nation’s extractive industries, serve as the background. And yet, even in this sacrificial humanities landscape, disobedient D&EH storytelling that extends beyond the necrotic industrial plots, that transcends the city/university divide, and that brings transient and permanent city residents together does happen. This talk will explore the craftwork of such ephemeral, immersive, and public storytelling work that engages diverse participants in acts of narrative reciprocity and, often, moves beyond the narrative limits into somatic, embodied reflection. Specifically, it will draw on recent small- and large-scale immersive environmental storytelling projects inspired by the work of feminist and postcolonial digital media practitioners and EH scholars—Nancy Mauro-Flude, Kyle Powys Whyte, Roopika Risam, Anna Tsing—the “undisciplined” institutional work of KTH’s EH Laboratory (Armiero; Barca; Velicu), and the indefatigable labor of local storytellers and activists, and efforts to bring D&EH and digital art into close “sensorial touch” (Manning). Finally, it will explore how public humanities can reveal the poetic, ethical, and non-instrumentalist affordances of digital tools in the era of neoliberal “wasteocene” and environmental injustice (Armiero, Wasteocene). We will also ponder what makes such work possible. And worthwhile.

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I make the history of colonialism part of my history in the only way I know, namely by taking it personally.
—Pia Arke

I approach the computer as a theatre machine.
—Nancy Mauro-Flude

Acknowledgments
It is such an honor to join you today at the Global DH Symposium!

I want to begin with a disclaimer. Unlike DH-ers proper here, I am a DH trespasser, a literary scholar, working in rights, migration, political ecology, and transmedia storytelling, so I am really humbled by the generous invitation. Many thanks to other Global Digital Humanities Symposium presenters @MSU: your painstaking, critical DH work yesterday truly dazzled; to Kristen Mapes, Ellen Moll, and Delaney Atkins for organizing and curating such a timely environmental justice-centric DH program this year; and to my tribe of critical humanists, technologists, artists, activists, refugee academics, and students, who make unruly storytelling possible. Finally, all love to tech poets and rebels—Nancy Mauro-Flude, Ricardo Dominguez, Beth Nowviskie, Roopsi Risam, Henry Mainsah, Alex Gil—for modeling defiant humanities work, and for teaching us how, as Beyoncé sings, we can get into a strategic “formation” creatively, with what Nancy calls the feminist “digital paraphernalia” of resistance.

Talk
Today, I want to discuss very small and intimate, as well as large-scale somatic projects. They are very site-specific. They respond to local epistemic and narrative needs, and they may thus appear irrelevant or nonreplicable in other geopolitical sites. But they are all about what we all care about in this Symposium: non-extractive narrative methods and making unwelcome collective narrative work possible. At the very least, if we are to lower the bar even further, they are about efforts not to “birth” what Edward Ongweso Jr. called “pathetic tech futures” in his SxSW review. Of course, these projects are also about coping with loss, failure, the lack of narrative agency, the heft of doing the unwelcome, unpaid work to realign public institutions with their public interest missions in this neoliberal era of toxicity, permanent crises, MOABS, supersonic, thermobaric, or phosphorous bombs, misogyny, and racism that is the “Weather,”
as Christina Sharpe heartbreakingly teaches us (21). I hope we can talk about more about this too during the Q&A panel tomorrow.

**Postcolony, “agencies of place,” and industrial immersive storytelling**

I will begin, however, with a short spatio-political reconnaissance, an important mapping method, and a few thoughts on the “agencies of place” (Alaimo, *Bodily Natures*, 24). Most of you might not know much about my base, and Trondheim, Norway, where I am a permanent guest on South Sámi lands, and which is an important character in my journey. It is a breathtaking port town in the tattering petro-welfare state, home to Norwegian, Sámi Indigenous, and migrant communities; venture capitalists; climate refugees; and Artic-Mediterranean-trans-Atlantic border crossers. The city is now transitioning, fast and somewhat violently, into a Silicon Fjord, aka Smart City, the Tech Capital of Norway; and in that, it is also very much like the world in China Mievillie’s weird fiction, *The City and the City*—a ruptured scene in which Global South and North collide, and where there is sensorial awareness of these multiple worlds but no reciprocal recognition.

Located in the city’s heart is NTNU, Norway’s largest public research university, and a powerful, immersive environmental “story factory” (Slaughter 144). Lesson 1, then, is sadly Althusserian: the most powerful immersive environmental storytelling is institutional VR; it is ideological, and embodied, performed by all of us, willing or unwilling accomplices. Specifically, however, NTNU is tasked with catering to the nation’s industries and providing technocratic eco-solution plots, with industrial money supporting baroque “narrative research commissions” within the research areas of Ocean, Energy, Digital. A storyteller-researcher here is likely to learn the intricacies of industrial narration and adopt its subjectivity, to speak like an extractive corporation, to see like a neocolonial “prospector,” Kjerstin Uhre’s term (NTNU NADO Workshop, 20 June 2019). We have access to an enormous storytelling apparatus, but we are also trained to follow what I call the rules of “aesthetic austerity,” which dictate the preferred genre, not simply content, of environmental storytelling (Musiol, “Habits,” 29). Among the most popular are ocean wet dreams, extinction gothic, hydro utopia, ocean crime fiction, marine biomass thriller, moon or earth, colonization narratives, et cetera. No socioenvironmental justice epics or sci fi yet, or racial justice manifestos. Sadly.

This regional immersive storytelling folds under a larger blanket of Nordic self-narration—as one of the happiest, most equitable environmentally conscious places on Earth—a soothing story, not completely inaccurate, but one that obscures an active site of Indigenous and national conflicts related to land use,
reindeer herding, understandings of sustainability, decolonization, gender, or migration policies, and so
on.

But I am not here to take you to Mieville’s dystopian abyss, cozy as it is here. Trondheim is also a vibrant
polylingual story space, powered by other unruly environmental storytelling ensembles and engines:
Literature for Inclusion (Litteratur for Inkludering) and Poetry without Borders led by Gulabuddin
Sukhanwar, grassroots improv groups, the ISAK Cultural Youth Center, ICORN: International Writers-
at-Risk City of Refuge Network, the TransLit project, Mangfoldhuset, and more. It has several well-
resourced art platforms and institutions, many with an explicit public outreach and new media arts focus:
Kunsthall Trondheim, Rosendahl Theatre, Fine Art Museum, Center of Contemporary Art,
Kunstforening, Rockheim (the national immersive museum of popular music), and Adressaparken, an
interactive public tech park with embedded sensors, speakers, and projections screens, designed as “an
open arena for ... new expressions and ... digital forms of narrative” (Adressaparken). Adressaparken, an
interactive “techno commons” public park in Trondheim, Norway, will feature prominently in my talk. Is
co-owned and managed by NTNU, the Trondheim municipality, and Adressa, one of oldest newspapers in
Norway, but has also been seized by artists, students, and the public on more than one occasion!

In short, located at the world’s new extraction and military frontier, Trondheim has a uniquely robust
storytelling infrastructure. But I mean it also in Simon AbdouMalik’s sense: that “people are urban
infrastructure,” too.

**Searching for critical D&EH**

My second situational lesson might then also be instructive. In academia we are all dislocated labor
migrants, after all. Critical environmental storytelling or DH often isn’t where you expect it to be. And if
critical DH and theory are not in traditional institutional spaces, you have to find de- or postcolonial
transmedia theory and praxis where it happens. In my case, this meant moving across disciplinary
boundaries, away from the humanities into (or finding the humanities in) industrial design, electronic
systems, acoustic ecology, or immersive art. I joke that we often need to engineer an escape from the
school, but it is not a pun. Engineers are literally enabling such escapes here.

At other times, we are moving from the university altogether to the streets to engage in the
“undercommons” storytelling work with residents, migrants, refugees, Grandparents for Climate Action /
Besteforeldrenes Klimaaksjon, Nature and Youth / Natur og Ungom organizations, and artists (Moten and
Harney). [Slide: Adrian Piper neon installation.] Here you can see Carl Faurby talking critical theory with my students in front of the flickering neon installation by Adrian Piper at Kunsthall Trondheim: “Everything will be taken away.”

Austerity takes away a lot but not all. We are still here. They continually show me.

When I first began experimenting with immersive environments in Norway, it was in resistance to local industrial storytelling, but also out of necessity, in the absence of more formal and sustainable DH academic infrastructure. Many analog or digital clandestine practices helped me greatly, in other words, in an environment where more systemic or systematically supported work is not always possible. I have long and secretly worshiped speculative designers—Fiona Raby and Anthony Dunn; Ricardo Dominguez, of the Electronic Disturbance Theater; or Krzysztof Wodiczko—who poeticize design, reactivate the humanistic, performative critical affordances of new media technology. They “tackle the human–machine interaction through the lens of critical theory and art, often literature and performance, and engage with ethics, reflection, social critique” (Musiol, “Beyond”), and what Erin Manning calls “the speech of the body,” as foundational components of knowledge-making and design (9). They lead me and my students to reframing “computing problems” and narrative building blocks (as Miriam Posner, Algorithmic Justice League, and others urge us to) based on local postcolonial Indigenous theoretical art practices here—say, Sámi joikers and their transhuman nonlogocentric storytelling, banned because, as my favorite environmental law professor and joiker, Ánde Somby, says, “it made spaces for other ways to think”; or decolonial maps crafted by Sissel Bergh or Pia Arke; or following the footsteps of Elsa Laula, a feminist Sámi rights icon, being guided by Eva Fjellheim and Søstrene Suse’s Radiokino (Søstrene Suse) and their listening and storytelling project. [Slide: Local postcolonial praxes resources].

Dismayed by the solution-oriented, top-down, fast industrial storytelling, in other words, I followed these artists and theorists to bring slow, consoling, meditative, “enfleshed” (Sharpe 21) immersive storytelling “by any media necessary,” per Henry Jenkins and collaborators, in order to unlearn, alongside my students and refugee academics, what we think about technology, the future, public space, solution stories, feelings, proximity, and touch. (Coco Fusco, Adrian Piper, and Erin Manning were great influences here, too). The critical internet scholar, thinker, and artist Nancy Mauro-Flude, who conducts, “performs the internet,” and approaches the computer as a “theatre” (“Divination”) and not simply as a “measure-and-capture” tool (“Performing” 205), has taught me how to open up to the understanding of technology as a feminist expressive instrument that enables us to touch, immerse, linger, enchant, to “tenderly narrate” (Tokarczuk).
So, I reasoned, after a socialist artist-technologist, Antonisz, if “technology is a form of art” like poetry, can’t its form be also a gentle, present-ist, tool, so to speak? Like, “a talisman against disintegration” (Kordjak-Piotrowska; Dove xiii)? I think poetic wordsmith Rita Dove and a technopoet Mauro-Flude would agree. [Slide: Tech talisman.]

I mentioned resisting “aesthetic austerity,” and it needs practice, communities of speakers and listeners, and, foremost, a change in narrative relations. Kyle Powys Whyte insists, for instance, that in Indigenous conservation, the focus is never solely on restoring a disappearing species to a particular ecosystem but on restoring stories and transforming what Stacey Alaimo and Marco Armiero call a “toxic,” wasting, biocultural relation. How can we rewire our “toxic narrative relations,” and how can we narrate and create more tender entanglements?

**Literature, biosensing poetry, and “tender biopower”**

I think a literature or environmental humanities class, a design lab, street theatre, or a city poetry reading all have a role to play. They certainly helped us. What we have learned from grassroots storytelling ensembles in our city is that we need to co-curate spaces where we can first and just be together, without judgment; play, linger, listen to each other; experience nontoxic, tender relations or sonic intimacies. Only then can we learn how to arch our environmental plots differently, or trust each other, or traverse media, or leave the classroom, or abandon narratives and ourselves altogether, and immerse ourselves in ecologies of touch, sound, scent, movement, rhythm.

What I want as an intellectual, administrator, researcher, in other words, is solidarity and “tender biopower” for environmental storytelling (to awkwardly fuse Olga Tokarczuk and Michel Foucault). For that to happen, we need also sites where such critical and tender somatic work is possible. Sometimes we succeed in the classroom. At other times, we augment this reality. [Slide: Screenshots from the Sex Ecologies exhibit.]

_Kunsthall Trondheim_, a contemporary art gallery, has been such a space for us for years. Here are images from this month’s somatics of Literature as Public Health class immersed in the queer and decolonial ecoworlds of the _Sex Ecologies_ exhibit, curated by Stefanie Hessler and Katja Aglert of the Seedbox research project. In the image you can see the immersive “drifting” sound installation by Margrethe Pettersen, Anna Tje’s work with safou fruit in Paris and Cameroon, Alberta Whittle’s mixmedia work,
and Anne Duk Hee Jordan’s immersive dance with terraqueous microbes, and my students, emoting with abandon, are in the center of these vibrant and contemplative ecospaces.

While some of this work may seem gimmicky—what can an art space field trip do, right?—we prepare carefully for these encounters for months or more, linking syllabi, reflective activities, prototype design studio workshops, and exhibit programming together into some sensorial and sensible practice. We absorb, emote, co-create, contemplate.

Before the pandemic we had collaborated with the A New We, an Eben Kirksey “multispecies salon” type of “living” exhibit, co-curated by the Laboratory for Aesthetics and Ecology and Kunsthall Trondheim. [Slide: Screen shots from the A New We exhibit.] And we paired this with my Environmental Literature Humanities class inspired by the Arts of Living on a Damaged Planet (Tsing et al.). Unknown Giants, a biosensing poetry installation by Amanda Ackerman and Dan Richert, in which digital technology “make[s] plants speak” to participants (Vegard Ruud qtd. in Musiol, “Beyond”), literally and metaphorically touched us all. Most participants saw algorithms, TV screens for the first time, used as narrative, embodied, prosthetic, creative tools, which “served as a voice for the plants, and gave them the ability to tell stories,” and ears for, us, humans, said my former student, Ida Tevik Haugen (qtd. in Musiol, “Beyond”). They marveled at how digital tools also enabled them to “co-author” art, in public, to become “poetic partners in crime” with computers and eucalyptus. What a very decolonial and anti-pre-Cartesian use of transmediality.

This digital and environmental humanities collaboration was a gift that keeps on giving. I mean it. Especially when it comes to shifting how we think about art, ecology, and technology, and the transmedia “arts of living on a damaged planet” (Tsing et al.)! These simple art-centric immersive experiences and reflective activities are not simply evocative but were incredibly poetically and epistemically generative when it comes to exposing students to noncorporate uses of digital technology. I see traces of these encounters in students’ papers, projects, and theses, doctoral applications, or their urban initiatives and in their own classes years later.

**Visceral present and urban-scale environmental storytelling**

Jacqueline D. Wernimont talks beautifully about working with “visceral data.” As you can tell, I like to work with embodied, visceral stuff. Especially, the present. I see its critical potential. Let’s not “birth pathetic tech futures” in environmental storytelling, right (Ongweso)? Let’s decouple new, immersive
media from their futuristic location, links to progress, or a particular field, discipline, as if transmodality and immersions were invented in California, and our Indigenous colleagues knew nothing about it, and poetry had no technology. So, my other concern is the kind that OutKast calls “Chronomentrophobia” and Ariella Azoulay talks about at length: this persistent urge to futurescape, to abandon the present and reshape the future by mobilizing, but not transforming, affective relations. Yet it is quite difficult to embrace and tell multiple times (e.g., colonial time, queer time, circadian rhythm, lifespan of different organism, neoliberal time, the heartbeat, “straight” time); José Esteban Muñoz, Michelle Bastian, and Elaine Gan et al. write beautifully about it. But any resistance to industrial storytelling’s military linearity, precision shooting, its extractive declarativeness, must grapple with different clocks, beats, and rhythms. Paradoxically, reading, reciting poems live, in public, in multiple languages, lingering at the bio art exhibit, or being enveloped in scent or sound at an ambisonic performance, in our case, allowed us to experience multiple temporalities sensorially, viscerally, and then write about it.

I want to conclude with examples of large urban-scale immersive storytelling interventions onto the urban canvas. Between 2015 and 2020, we were in a unique position to collaborate with mix media artists at NTNU as part of the NTNU Art and Technology Task Force (NTNU ARTEC) directed by Andrew Perkis. As part of the ARTEC Artistic Residency and Seminar Series, we could commission critical media arts projects, and invite artists, JODI, Nelly Ben Haoyun, and others to our classrooms, labs, and community centers, and to the streets.

[Slide: Current, by Mike Leisz and Hannah Mjølsnes.] Current was one of our first Adressaparken environmental storytelling commissions in 2017. It was an interactive and poetic art and science public project, linking temporalities of living and disappearing, of melting glaciers, urban flows, and local weather patterns in Trondheim via sound and visual means. A poignant clock tower of climate change and glaciers’ disappearance. Two years later, during the Resist as Forest intervention conceived by architect and critical cartographer Pablo DeSoto to protest Amazonian deforestation, we expanded the public multimedia immersive storytelling in the Adressaparken to engage voices and bodies of storytellers and to usurp the city’s skyline. [Slides: “Beeforization/colonization,” by Ada Miron, and Resist as Forest projections.]

The publicly accessible Adressaparken was again the center stage for this intervention, and DeSoto and I felt that this free and open-access site could “serve as a liminal, university–city exhibition performance space for democratic environmental storytelling” with those excluded from extraction plots (Musiol and
DeSoto) with words in Norwegian, South, and North Sámi, looped and “performed” on the soundtrack and on the roof, together with the phrase in 21 other languages.

We used the words of a Brazilian investigative journalist, Eliane Brum: “we must become the forest … resist like the forest … lend shape to [a] political feeling,” as a design metaphor for collective action. We then materialized and concretized it in DeSoto’s medium and mine, and in sound, theatre, with volunteers, on an unprecedented lateral and vertical and sonic urban scale. [Slide: Images from an environmental poetry public recitation; “Becoming Bodies and Trees” street warmup; looped polylingual projections and a 3D animation.] Ultimately, we augmented our communal “urban chorus,” a transmedia theatre performance during the 2019 Global Climate Strike, with a 3D projection projected on the Symphony façade, in an immersive soundtrack blending the sounds of the Amazon and local rainforests playing from embedded speakers; flash dance/warmup, collective storytelling, multilingual poetry open mic, and improv street theatre sessions, all layered onto it.

The public hardware of the park, the location, while glitchy, was an invaluable commons, but it also made us recognize and appreciate what I call the “humanware of the city,” as indispensable prosthetic extensions of, this time, the technological hardware of storytelling (Musiol and DeSoto).

**Coda**

There are some great institutional signs in the Nordic region within EH, the doctoral school consortium, and EH centers—Greenhouse in Stavanger; Oslo School of Environmental Humanities (OSEH) and CoFutures in Oslo; EH groups at NTNU, Agder, and Stavanger; and the KTH’s EH lab in Stockholm [links below]. They are springing up across the region, changing the kind of environmental storytelling that is possible here. Not so much yet for institutional critical DH.

However, even in our sacrificial humanities landscape, radical and “talismanic” D&EH storytelling that extends beyond the necrotic industrial plots, that transcends the city/university divide, and that brings transient and permanent city residents together, can and does happen, sometimes with poetry and technology used as expressive, ephemeral, and political interfaces, and always with diverse storytellers engaged in acts of narrative reciprocity.

Thank you.
Works Cited


**Digital and Environmental Humanities and Public and Communal Storytelling Resources**

Adressaparken. The interactive public park for new forms of digital storytelling. [https://www.ntnu.edu/thepark/](https://www.ntnu.edu/thepark/).


CoFutures. An interdisciplinary and international research group working on contemporary Global Futurisms based in Oslo [https://cofutures.org/](https://cofutures.org/).

Environmental Humanities Laboratory at the Royal Institute of Technology [https://www.kth.se/philhist/historia/ehl](https://www.kth.se/philhist/historia/ehl).

The Greenhouse, University of Stavanger [https://newnatures.org/greenhouse/](https://newnatures.org/greenhouse/).


Kunsthall Trondheim [https://kunsthalltrondheim.no/no](https://kunsthalltrondheim.no/no).


Literature for Inclusion & Poetry without Borders. Polylingual storytelling initiative at the Trondheim Literature House, Norway. [https://litteraturhusetitrdondheim.no/litteratur-for-inkludering/](https://litteraturhusetitrdondheim.no/litteratur-for-inkludering/).

Nancy Mauro-Flude. A site featuring the work of Nancy Mauro-Flude, a feminist digital performance artist, a critical internet scholar, and the founder of the Holistic Computing Network. [https://sister0.org/](https://sister0.org/).

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The Seedbox. An international environmental humanities program supported by Mistra: The Swedish Foundation for Strategic Environmental Research and Formas: The Swedish Research Council for Environment, Agricultural Sciences, and Spatial Planning, which funds transdisciplinary environmental humanities research projects at the intersections of environmental sciences, media arts, and the humanities. [https://theseedbox.se/discover/](https://theseedbox.se/discover/).

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