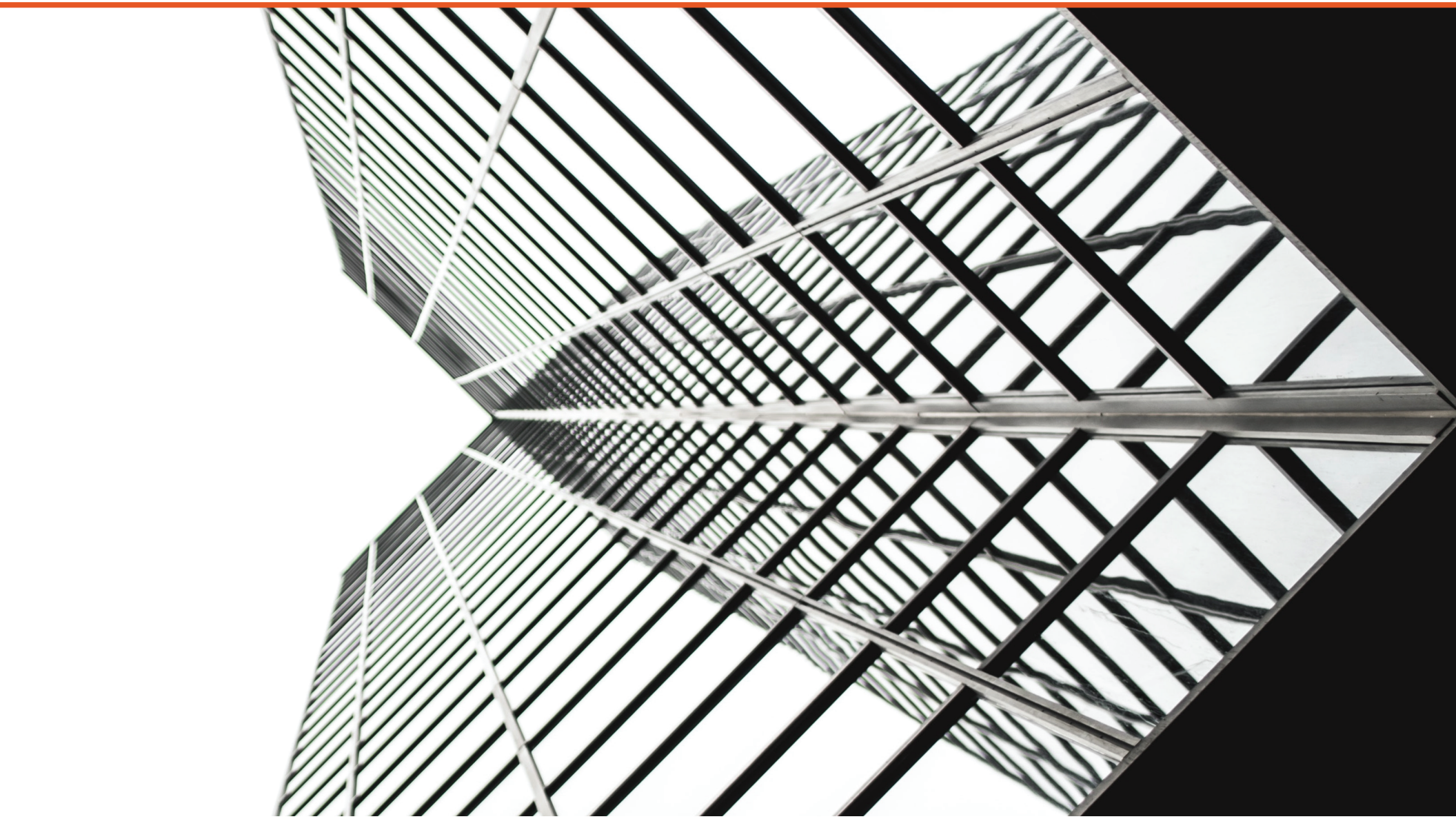
# react/review

a responsive journal for art & architecture



# react/review:
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representation, materiality, & the environment
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editorial statement
*react/review: a responsive journal for art & architecture* is a peer-reviewed responsive journal produced by graduate students in the department of the History of Art & Architecture at UC Santa Barbara. *react/review* is an open-source journal published annually on eScholarship, is an open access publishing platform by the University of California and managed by the California Digital Library.

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# Introduction:
# Representation, Materiality, & the Environment

Taylor Van Doorne & Felicity Backenstose Good

*react/review* is, as the reader may suspect from the title, a journal shaped by reactions. To *react* is to act in response, to reflect and return to a first actor. The term is active and encompasses the spirit of lively discourse and critical engagement. Perhaps it carries a connotation of hastiness, but we contend that this temporal association locates us firmly in the present. We envision this journal as a reaction to research trends and current global events, but we employ the term to also signal the discursive element of this project.

In other words, *react/review* is a responsive journal. Our authors engage not only with pressing topics in their fields, but also with questions and arguments posed by each other throughout the journal's content. Feature articles are followed by one or two responses that consider the authors' arguments' corollaries and implications, in turn propelling the discussion in new directions. While many journals unite their authors around a shared theme, our responsive format aims to cultivate a spirit of dialogue and exchange that naturally unfolds at in-person symposiums. While not a substitute for face-to-face conversations in their entirety, we assert that this format serves particularly useful in our current historical moment of the on-going COVID-19 pandemic—a moment when our worlds have become myopic, and we are no longer gathering with our colleagues.

The conception of the journal was itself a reaction to the incongruous circumstances in which the world found itself over the past year. The graduate students

of the Department of the History of Art and Architecture at the University of California, Santa Barbara host an annual interdisciplinary symposium inviting speakers from around the continent to share their work. The 45th iteration of this conference, scheduled for April 24, 2020, experienced the same fate as many events scheduled around the same period. By late March 2020, California was gripped by crippling uncertainty and sudden shutdowns symptomatic of the early days of the accelerating COVID-19 pandemic. In response, we cancelled the symposium and decided against hosting it virtually, as we were already weary of—to use a now-tired cliché—Zoom fatigue. Rather than discard a year of planning on the part of the co-organizers and research on the part of our presenters, we decided to channel our collective efforts into a new format. Thus, *react/review* was born.

What follows is a collection of original short-form articles and responses from graduate students and emerging scholars in art history, architectural history, visual studies, and related disciplines. The volume is divided into three sections: features, spotlights, and reviews. Feature articles engage with the volume's central theme, and emerge from papers that would have been presented at the 45th symposium. Following each work are brief, critical responses written by our editorial team that interrogate the feature's broader questions and its impact for other fields. In our spotlight section, scholars currently engaged in research highlight new findings, speculate on pressing questions, or address methodological issues encountered in their fieldwork. These articles are more open-ended by design, and perhaps offer more reflection and hypotheses than definitive conclusions. Reviews examine both recent books and exhibitions touching on the theme of the current volume.

Our inaugural volume adopts the symposium's theme: "Representation, Materiality, & the Environment." This topic considers the way environments, landscapes, and the natural world have been represented by artists and architects as a means to ritualistic, scientific, political, leisure, or spiritual ends. We are particularly interested in how the issue of representation is informed by the material turn in the field over the past decade or so amidst the emergence of ecocritical and environmental thinking in humanities discourses. We also wanted to draw attention to the way this generation of emerging scholars grapples with these issues vis-à-vis the global impact of climate change, which up until the current circumstance had felt like the most pressing issue of our lifetime.

This volume's feature articles, ordered to guide the reader from the soil to space, contextualize histories of materiality within a broader discourse concerning the relationship between the natural environment, art, architecture, and design. In her article "Revolution, Renewable: Political Ecologies of the Subsoil in Rivera's Song of the Earth," Grace Kuipers examines the representation of subterranean minerals in Diego Rivera's chapel mural *The Song of the Earth and Those who Till and Liberate It*. She

centers the materiality of the subsoil, resistance, and practices of extraction—both in terms of precious minerals and human labor in order to interrogate ideas of capitalism, labor relations, and socio-political ecosystems present in early twentieth-century Mexico. While Kuipers focuses on the way Rivera mobilizes the representation of subsoil as a locus for political revolution, Tobah Aukland-Peck's article "*You Can Be Sure of Shell:* Oil, Empire, and Landscape in Interwar Britain" examines how the imperialist practices of extraction present and critiqued in Rivera's work were obfuscated in advertisements for the oil company Royal Dutch Shell. Aukland-Peck argues that a 1930s Shell advertising series borrowed from existing artistic landscape traditions to mobilize consumers' nostalgia for British imperialism and exceptionalism towards the company's domestic extractions. In particular, the paper emphasizes the way these ads romanticized the company's history of domestic exploration, masking how these landscapes served as sites for extraction, labor exploitation, and commodification of fossil fuels, not only in Britain but across its empire. Environmental exploration is also the subject of Katarzyna Balug in her article "Outside of Architecture: Between Mediating and Navigating the Air." Balug examines inflatable architecture by way of the history of pneumatic sciences from the Enlightenment to the 1960s Space Race. She demonstrates the way the scientific exploration of air led to innovations in architectonic design, as seen in the work of English artist Graham Stevens, whose inflatable creations negotiate the embodied experience of occupant and environment, skin and breath, together and separateness.

While feature articles in this volume of *react/review* concentrate on the triangulation of environment, representation, and materiality, another theme emerges in spotlight articles and reviews. Some of our authors reflect on their experience with the COVID-19 pandemic impacting their ability to conduct field and archival research. However, we as the editors of this volume do not feel like the thematic shift towards the inclusion of the ongoing crisis is incompatible with the original theme. While scientific research on the relationship between COVID-19 and climate change is still in an embryonic stage and not directly correlated, studies have long suggested that changing environmental conditions impact public health.[1] Those in California and the Pacific Northwest are all too familiar with this, with wildfires no longer confined to a single season, now raging all year-long and becoming increasingly endemic to life on the west

[1] For a succinct discussion of the relationship between environmental conditions and public health, see Rebecca Hersher, "'We Don't Have to Live This Way': Doctors Call for Climate Action," *NPR.org* (December 2, 2020) https://www.npr.org/sections/health-shots/2020/12/02/940790818/we-dont-have-to-live-this-way-doctors-call-for-climate-action. For recent studies, see the bibliography in the following literature review: S.M. Zang, et al. "The intersection of climate change with the era of COVID-19." *Public Health Nursing* 38, no. 2 (2021): 1– 15, doi: 10.1111/phn.12866

coast.[2] Climate scientists predicted that the rise in global temperatures will likely see the emergence and facile transmission of novel infectious diseases.[3] In light of the current public health crisis, scientists are now imagining a future in which pandemics are increasingly common due to habitat disruption and air pollution, amongst other factors; the former of which leads to humans and animals cohabiting in closer quarters and subsequently facilitating the transmission of infectious diseases between species, and the latter correlating to high rates of respiratory infection.[4] The COVID-19 pandemic reminded us of what is at stake in conversations surrounding climate change. On these grounds, we contend that ecologically-minded humanities scholarship is as relevant as ever.

Further, the pandemic fundamentally transformed our relationship with the material world. In its early days, confusion over how long SARS-CoV-2 survived on counters or doorknobs impaired our relationship to touch. It seemed that any surface, no matter how familiar or benign, could be contaminated, if not altogether threatening. The handles of shopping carts, disposable coffee cups, ATM keypads, cardboard packages, and any otherwise unassuming object was seen as harboring deadly virus particles. A seemingly innocuous contact between an infected surface and our eyes or mouth by way of touch could land anyone in the hospital. Our routine contact with the physical world became perilous, and the once esoteric term "fomite" (*noun,* meaning any inanimate object able to transmit infectious matter) entered common vocabulary as we sought to articulate the emerging pandemic episteme. In the early days of the outbreak, we eschewed reusable grocery bags for plastic and reached for disposable masks and gloves. Although scientists are now confident that transmission by direct contact with contaminated surfaces is relatively low, contamination hesitancy persists,

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[2] Susanne Rust and Tony Barboza, "How climate change is fueling record-breaking California wildfires, heat and smog," *LATimes.com* (September 13, 2020) https://www.latimes.com/california/story/2020-09-13/climate-change-wildfires-california-west-coast. Samantha Schmidt, "'It burns your chest': Oregon residents struggle to live with relentless smoke," *WashingtonPost.com* (September 14, 2020) https://www.washingtonpost.com/nation/2020/09/14/it-burns-your-chest-oregon-residents-struggle-live-with-relentless-smoke/. Molly Peterson, "Paradise Residents Still Can't Drink the Water," *KQED.org* (September 30, 2019) https://www.kqed.org/science/1948232/paradise-residents-still-cant-drink-the-water

[3] Jonathan A. Patz, et al. "Global Climate Change and Emerging Infectious Diseases," *JAMA* 275, no. 3 (1996): 217–223, doi:10.1001/jama.1996.03530270057032. Ella Jisun Kim. *Cities, Climate Change, and Public Health: Building Human Resilience to Climate Change at the Local Level*. Anthem Press, 2020.

[4] X. Wu, et al. "Air pollution and COVID-19 mortality in the United States: Strengths and limitations of an ecological regression analysis." *Science advances* 6, no. 45 (2020), doi: 10.1126/sciadv.abd4049. Daniel P Croft, et al. "The Association between Respiratory Infection and Air Pollution in the Setting of Air Quality Policy and Economic Change," *Annals of the American Thoracic Society* 16, no. 3 (2019): 321-330, doi:10.1513/AnnalsATS.201810-691OC.

and these behaviors are still widely being practiced at the time of this publication.[5] However, after a year in lockdown, this embrace of disposable PPE and other items had led to a new environmental concern, namely a rise in littering and plastic pollution.[6] In short, materiality has become fraught.

Informed by these experiences, the spotlight section features two short essays on how doctoral research has been affected over the past year due to COVID-19 related restrictions. Benjamin Jameson-Ellsmore reflects on the challenges of researching "hackerspaces" and "makerspaces"—community-based technology and art workshops usually found in improvised spaces. The notion of improvisation became a lens through which Jameson-Ellsmore reflected upon his own strategies for conducting research in unfamiliar urban environments that were increasingly impacted by the virus. The second spotlight piece by Matthew K. Limb offers insight into their art history dissertation research which notably shifted towards issues surrounding the environment, Native American voices and systems of knowledge, as well as networks of craft production throughout the mid twentieth-century American West.

In the wake of the ongoing public health crisis, we hope that this debut volume of *react/review* may serve as an artifact of academic production during the time of the COVID-19 pandemic. However, we also consider the scholarship in this journal to address critical questions about the relationship between environment, representation, and materiality that will have lasting relevance to future discourses in the ecocritical and environmental humanities.

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[5] "Science Brief: SARS-CoV-2 and Surface (Fomite) Transmission for Indoor Community Environment" *CDC.gov* (Updated April 5, 2021), https://www.cdc.gov/coronavirus/2019-ncov/more/science-and-research/surface-transmission.html

[6] Aditi Sangal, "Discarded masks and gloves are becoming a health hazard as people dump them no streets," *CNN.com* (April 21, 2020) https://www.cnn.com/2020/04/21/us/coronavirus-ppe-masks-gloves-environment-hazard-trnd/

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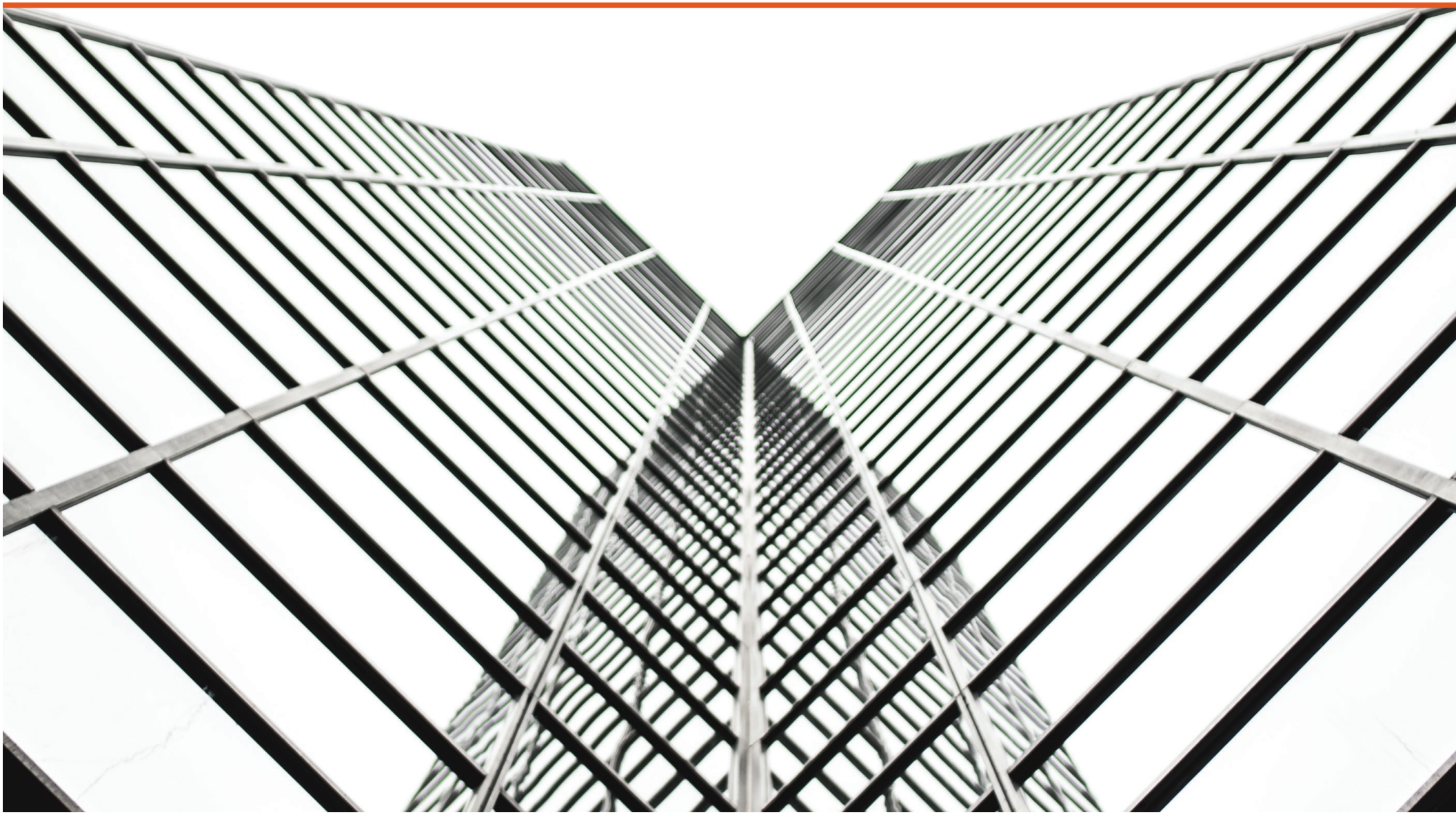
# feature articles



# Revolution, Renewable:
# Subsoil Political Ecologies in Rivera's *Song of the Earth*

Grace Kuipers

Diego Rivera's bright, 41-part fresco series in the former baroque chapel of Chapingo's Autonomous University has been called "the Sistine Chapel of the Twentieth Century," an analogy which draws our attention to the exhaustive, global treatment of the space's interior, and the abundance of nude, muscular bodies against brightly colored backdrops which evoke its Italian counterpart.[1] The product of land distribution following the Mexican revolution, the university had only recently been established as an agricultural school when Rivera received the commission in 1924. The work's title, *The Song of the Earth and Those who Till and Liberate It,* highlights two central themes: the natural world, and the political liberation that unfolds in relation to it. In a brilliant use of space, and as a nod to the university's educational purpose, the parallel East and West walls of the chapel show the twin trajectories of political revolution alongside the progression of natural forces of the earth. The five-part revolutionary tale on the West wall traces the organization, violent struggle, and triumph of Mexican peasants, neatly mirroring their equivalents on the East wall's *Song of the Earth,* which represents the latent energy, germination,

Unless otherwise indicated, translations are mine.

[1] Andre Michel, *Histore de l'art,* (Paris, 1929). Quoted in David Craven, *Art and Revolution in Latin America, 1910-1990* (New Haven: Yale University Press, 2002), 51. Michel writes that the "chapel of Chapingo… is the Sainte-Chapelle of the Revolution, the Sistine Chapel of the New Age,." and describes its "double genesis of nature and man."

and flowering fruit of earthly matter and plant life. Situated beneath the many painted, floating bodies of the vaulted ceiling, the two progressions meet at the apse, "The Liberated Earth with the Powers of Nature Controlled by Man," in which a pregnant nude emerges from a hollow in the soil surrounded by male figures who convert wind, fire, and water into the modern industrial commodity of electricity.

Completed in 1927, the frescoes at Chapingo are explicit in their homage to the recently-concluded Mexican revolution. They are just one of many commissions generated in the wake of the revolution to promote post-revolutionary ideals and their attendant regimes. The unsubtle gender binary is similarly of its time, following well-worn tropes equating women with the earth.[2] But the mural series is also highly unusual for the prominent place it affords the subsoil. Certainly no other fresco from post-revolutionary Mexico so explicitly imbricates revolution with subsoil ecologies. Indeed, Rivera's *Song of the Earth and Those who Till and Liberate It* is a story driven not by traditionally legible natural-world signifiers of flora, fauna, and agricultural labor, but rather by the representationally-resistant stuff of the earth's interior. Rivera's parable of revolution is rooted in the unequal distribution of Mexico's mineral wealth, which led exploited miners into armed rebellion. It was presumably referencing the uprisings in the prelude to the Mexican revolution against both mining companies and the Porfirian regime which had enabled their existence. On the East wall, allegorical female nudes represent the geological and biological forces below ground which form life itself. "Subterranean Forces,'' for instance, is a dramatic representation of the powerful agency of subterranean material through a woman's brown, muscular, nude body, backlit by the bright oranges behind her. Standing on a rocky outcrop of colorful, crystalline gems, the woman crouches at the convergence of two canals of fiery liquid, whose movement transports two sleeping women upwards. Her outstretched arms also point upwards, harnessing the energy and potential of heat and mineral matter. The scenes that succeed it on the East wall reveal the germination and birth of humans rendered as seedlings, their bodies incubating in a fleshy pink womb below ground and sprouting, like plants, into their surface.

Despite the environmental significance of the way humans have brought to the surface and combusted subterranean material, the relative difficulty of depicting the underground has made it a problematic object of visual inquiry. Seen as separate from the minerals that lie beneath it, traditional representations of land envision the

[2] Dina Mirkin complicates this argument by suggesting that the female allegorical figures on the East wall are represented as forceful and central to the cause of revolution on the West wall. See Dina Mirkin, "Women, Agriculture, and Civilization in Diego Rivera's Murals of Chapingo." *Aurora: The Journal of the History of Art* 9 (2008): 101–15.

earth and its attendant geopolitical boundaries as a surface.[3] When visualizations of earthly depth do exist, they generally render the underground as an isolated "store house" for raw materials and waste, positioned as an abstract value in terms of its future use for humans.[4] Yet at Chapingo, Rivera positions the subsoil not as a repository for inert resources, but rather as part of a complex ecology with interdependent links to the revolution: in addition to having its own autonomous life cycle, it is the dynamic source of both fuel and food for human economies. Finally, the subsoil also figures on both walls as a resting place for the revolution's dead, their bodies situated dually as a conclusion and yet also a source of life, fertilizing the organisms around them.

This paper argues that in centering the interior of the earth as crucial to the political goals of the revolution, Rivera contests not only the ownership of subsoil resources, but also capitalist epistemologies of the subsoil and their understanding of the relationship of the subsoil to social and political ecologies. In *The Song of the Earth and Those who Till and Liberate It,* the liberation of both people and the earth are cast not as linear teleologies with fixed endpoints, but rather as cyclical temporalities of constant renewal. These cycles are depicted not as parallel, but rather as interdependent life cycles of a larger ecology; the resulting deaths of the West wall's revolution are figured as elemental geneses of the East wall's cycle of organic life. The Chapingo murals thus reveal an important complexity to Rivera's revolutionary ideology: a belief in the *mutual dependence* between environmental sustainability and the equitable distribution and control of resources. Ultimately, these murals reflect the extent to which in post-revolutionary Mexico, the renewability of subsoil resources was not seen as just important to the success of revolutionary goals, but also dependent upon them.

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[3] Mark Anderson discusses the need for more volumetrically complex understandings of the earth in his chapter on depth and geopolitics. He discusses the ways in which traditional cartographic renderings of the earth render it as both a surface and an abstraction, which obfuscates possibilities of ecological, interconnected relationships. See Mark Anderson, "The Grounds of Crisis and the Geopolitics of Depth," in *Ecological Crisis and Cultural Representation in Latin America: Ecocritical Perspectives on Art, Film, and Literature*, ed. Mark Anderson, and Zélia Bora (New York: Lexington Books, 2016), 99–125.

[4] Jason Weems, in his study of the role of subterranean cartography in landscape and visions of the American West, has helpfully traced the development of stratigraphy in the late-nineteenth century as a solution for mapping an underground world that is inherently shrouded from view. Weems points out that stratigraphy is necessarily an abstraction: "Where the surface could (conceivably) be everywhere viewed and verified, the subterranean had to be extrapolated from limited samples." See Jason Weems, "Stratifying the West: Clarence King, Timothy O'Sullivan, and History," *American Art* 29, no. 2 (2015): 38.

It is significant that in the antechamber of the chapel, Rivera begins the parable of social transformation and revolution with a scene from the interior of a mine next to a political revolutionary. Entitled "The Agitator," the frame is split in two. On one side, brawny white men chip away at brittle, gray ore, wearing very little in the way of clothing but donning electronically equipped hard hats and power drills. The whiteness of their skin is conspicuous against the darkness of their subterranean backdrop, but also in comparison to the crowd of brown farmers looking angrily in their direction. The binary tension in this scene between a large group of indigenous farmers and a small group of white men extracting mineral resources would have undoubtedly been legible to Mexicans in the years following the revolution. Most likely, it was meant as an image of the pre-revolutionary mining economy under Porfirio Diaz in which the dictator's encouraging attitude towards white foreign investors, particularly from the United States and the United Kingdom, resulted in uneven economic development, disastrous environmental damages to indigenous communities, and an attendant atmosphere of resentment towards Anglo-owned mining companies. This smoldering inequality had been a driving force behind the stipulations of the 1917 constitution, and in particular Article 27, which specifically incorporated measures to ban foreign mine ownership. Undoubtedly the most well-known and discussed article of the constitution, Article 27 claimed mineral wealth as "patrimony" and aimed to redistribute its use rights to the people of Mexico.[5] In practice, however, threats of political retaliation from the United States had been so dramatic that leaders found the article scarcely worth enforcing, and the post-revolutionary Mexico in which these murals were painted still contended daily with the forces of foreign extractive capitalism.

"The Agitator'' thus might be read as representing the more recent years following the ratification of the constitution in which the murals were completed. In locating the genesis of revolution in the unequal distribution of subsoil resources, Rivera directly referenced Article 27.[6] In the following scene, "Formation in Leadership," a miner exits the mine shaft only to be humiliated by his boss in a pat-

[5] The article asserted that "In the Nation is vested direct ownership of all minerals . . . such as . . . petroleum and all solid, liquid, or gaseous hydrocarbons." See Jonathan C. Brown, *Oil and Revolution in Mexico* (Berkeley: University of California Press, 1992), 226. For a discussion of mines as patrimony, see Elizabeth Emma Ferry, *Not Ours Alone: Patrimony, Value, and Collectivity in Contemporary Mexico* (New York: Columbia University Press, 2005).

[6] Raquel Tibol describes the panel as "denunciando así el incumplimiento de la constitución de 1917, que en artículo 27 señala: *corresponde a la nación el dominio directo de todos los minerales o substancias que en vetas, mantos, masas o yacimientos constituyan depósitos cuya naturaleza sea distinta a los componentes de los terrenos, tales como los minerales de los que se extraigan metales y metaloides utilizados en la industria."* See Raquel Tibol, *Los Murales de Diego Rivera, Universidad Autónoma de Chapingo* (México: Editorial RM, 2002), 102.

down. This surveillance highlights the injustice and irony of the policing surrounding indigenous "theft" of a fortune that had been declared the birthright of the Mexican people. Indirectly, the chapel bears the traces of both of the article's two key provisions. Beyond the more internationally controversial provision that all minerals, fuels, and inorganic material within the subsoil become the inalienable property of the nation state, the article also enabled the redistribution of over 100 million hectares of land to peasants for collective farming. The reference to Article 27 was therefore especially appropriate at Chapingo: as an agricultural school tasked with educating rural farmers on innovative practices of farming and land stewardship, it was a suitable backdrop for a mural which dealt unambiguously with the rights of rural workers to Mexico's subsoil and agricultural land.

Given Rivera's well-documented dedication to communism, his sympathy for a model of indigenous, collective ownership over resources is hardly surprising. Symbols of the Marxist and indigenous frameworks behind the constitution's proposed *ejido* system of communal use rights for mines and agricultural land are legibly honored at Chapingo. A hammer and sickle can be found not only at the tip of the Agitator's fingers, but also in the final bay of the ceiling vaults, entitled "The Gifts of the Earth Rightfully Possessed." It leaves little doubt about the identity of the rightful owners of the resources on display at the chapel: the indigeneity of the final bay's two central bodies is thrust into high relief in comparison with the previous two bays, which centered first white and then mestizo bodies. The bays, which proceed according to the process of the revolution, thus locate victory specifically in the bodies of indigenous people in pointed contrast to white or mestizo ones.

Rivera's commitment to the liberation of indigenous people through communism is well known. Less well studied, however, are the ways in which his political allegiances included a complex engagement with environmental justice. What is on view at Chapingo, I am suggesting, bridges a condemnation of capitalism's unequal distribution of natural resources among humans with a condemnation of capitalism's effect on the environment itself. The chapel's title, for instance, *The Song of the Earth and Those who Till and Liberate It*, positions the earth as the immediate subject of a liberation orchestrated by agricultural workers. Rivera's anthropomorphisation of the earth solicits moral outrage for an environment enslaved by capitalist exploitation but nevertheless animate and conscious of its own captivity. In perhaps the most obvious denouncement of capitalism's effect on the natural world, a nude woman turns her head and body away from us in shame, surrounded by a leafy tree and shards of glass. Titled "The Oppressed Earth," the panel sits above "Formation in Leadership," excoriating clearly the effects of imperialist mining. A fat, shirtless man wearing flashy gold jewelry and standing in front of a bag of money trains his ugly gaze outward at us, hands on his paunch, as

if to guard her. The military and the clergy guard her from other angles, suggesting the tripartite forces of liberal imprisonment and wrongful objectification of the land.

Rivera, in other words, was not simply critiquing those who owned the subsoil, but also *how* it was owned, and indeed perceived, under the models of ownership which enabled capitalist exploitation. As proponents of deep ecology have pointed out, to conceive of nature as private property is to anchor its ontological status to human use, thereby alienating it from all other networks of life, particularly its non-human ecosystems.[7] Contemporary ecocritics have furthermore described the ways in which extractive capitalism benefits from the perceived isolation of inorganic materials such as minerals, fossil fuels, or soil, from other organic life cycles.[8] By contrast, Rivera not only animates the subsoil's inorganic contents, but instills in them a kind of relational dynamism. The powerful, spirited force of geological wealth represented on the East wall becomes the basis not just for the extractive exploitation on the West wall, but also for the plasmic subterranean womb in which life germinates in the next two scenes. Reinforced by the tessellated connections of the vaulted ceiling, which lead the viewer's eye through vertical as well as horizontal associations, the chapel renders the *Song of the Earth* as a complex web at once autonomous and interconnected with human life.

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[7] The Norwegian philosopher Arne Naess coined the term "deep ecology" in an influential 1986 paper in which he critiqued existing models of environmentalism for their anthropocentrism, arguing instead that non-human nature has intrinsic value outside of its use for humanity. Deep ecology furthermore advocates for a holistic view of the environment as an interconnected, living organism. Since then, ecocritics have highlighted the anthropocentrism of liberal concepts of private property, which construct nature as an *object* whose ontological status is defined by the property relationships of human *subjects.* See Jason W. Moore, *Capitalism in the Web of Life: Ecoology and the Accumulation of Capital* (New York: Verso, 2015); Helena R. Howe, "Making Wild Law Work—The Role of 'Connection with Nature' and Education in Developing an Ecocentric Property Law," *Journal of Environmental Law* 29, no. 1 (March 1, 2017): 19–45; and Arne Naess, "The Deep Ecological Movement: Some Philosophical Aspects," *Philosophical Inquiry* 8, no. 1/2 (1986): 10–31.

[8] In his study of Mexican subway and hydrology systems, Mark Anderson has critiqued the human-centric models of private property which "diminish ecologically complex volumes to schematic areas" and which exist under regimes of extractive capitalism: "In the neoliberal conceptualization of space… mining is not viewed in terms of vertical depth or geological time, but rather as a question of retrieving elements that are proper to the surface and crystallizing them into the configurations of the present. The underground is a mere vault, a sub-terra, a non-environment whose only purpose is to store commodities until future demand endows them with sufficient value to warrant extraction or to house waste so that it does not reduce the value of surface land." See Anderson, "The Grounds of Crisis and the Geopolitics of Depth: Mexico City in the Anthropocene," 110.

The former chapel at Chapingo was painted at a moment marked by conflict surrounding private property, conservation, and the subsoil's ecological importance. Article 27 had, at least in theory, promised to end the subsoil's commodification and exploitation for endless profit by prohibiting its ownership as property and, in particular, its alienation.[9] Many of its core draftsmen had been conservationists who had concluded, upon observing the rapid depletion of resources directly caused by extractive industries, that the pursuit of profit was contradictory to the project of national resource stewardship.[10] This conservationist logic nevertheless positioned subsoil material as a "resource" awaiting exploitation by humans rather than as an active participant in a non-hierarchical ecosystem.[11] The early 1920s, however, saw massive labor strikes and agitation on the part of indigenous miners and oil workers surrounding the persistence of foreign mining operations, but also, radically, the devastation wrought by extraction on entire ecosystems.[12] Rather than simply warning of the ephemerality of geological reserves, indigenous leaders and workers decried the effects of extraction on interdependent mechanisms of soil, water, and forests. For the first time, Mexican biologists who positioned the natural world not just as a resource but as part of a carefully calibrated network with independent causal nexuses gained mainstream attention.

Furthermore, as Christopher Boyer and Emily Wakild have pointed out, the environmental agitation of post-revolutionary Mexico also saw the emergent articulation of ecology as a living system which not only serves but is constitutive of

[9] Brown, *Oil and Revolution in Mexico,* 226. The constitution's language did indeed reserve for the nation the right to reject private property anywhere: "The Nation shall at all times have the right to impose on private property such limitations as the public interest may demand." It furthermore insisted that, as the newly inalienable property of the nation, subsurface minerals and fuel were excluded from "alienation rights" and thus could not be owned by any one group of people or alienated from the nation which owns them. It still, however, granted "use rights," a concept which many activists hoped would mean sustainable community use, but which ultimately became much more complicated with the nationalization of Mexican oil. "Use rights" itself was much more easily applied to land grants than mineral resources since "using" a nonrenewable resource by exchanging it for money amounts to alienation. The tensions and contradictions between use rights and alienation rights in mines are furthermore explored in Ferry, *Not Ours Alone.*

[10] For a case-study of the environmental implications of Article 27 on the Huastec people and the oil industry, see Myrna Santiago, *The Ecology of Oil: Environment, Labor, and the Mexican Revolution,* 1900-1938 (New York: Cambridge University Press, 2006).

[11] Santiago, *The Ecology of Oil,* 258-162.

[12] Ibid., 272-278.

and dependent upon human political and economic ecologies.[13] This movement would reach its most famous and developed achievements in the ascent of president Lázaro Cárdenas, who made the subsoil a driving force for his campaign in 1934 and who most famously wrested all petroleum from foreign hands in 1938. In what Boyer and Wakild have called "social landscaping," the Cárdenas regime seized upon the environment, its ownership, and stewardship as inextricably bound with a framework of socialist equity.[14]

Indeed, Rivera frames political development not so much as running parallel to biological life cycles, but as part of a greater, more holistic ecosystem with a reciprocal, cyclical relationship to the unfolding of human history. Rather than the Marxist construction of the path between capitalist exploitation, proletarian uprising and communist utopia as a linear, teleological inevitability, Rivera positions the revolution as critical to a temporality of constant renewal.[15] In the panel that represents the death and violence of revolution, three grieving, cloaked women, surrounded by mottled, brown soil, bury a body beneath the roots of a tree that grows above them. Entitled "The Constant Renovation of Revolutionary Struggle," it points to a concept of revolution as a recurring, continuous process. It also signals the generation, as well as the conclusion, of life: in the next, and final scene, the same tree ultimately blossoms, surrounding the group of people who share food, perhaps from its branches. Rather than a singular endpoint in a linear path towards a singular goal, revolutionary struggles are here described as part of an ongoing cycle of life and death. Death and martyrdom at Chapingo are not positioned as endpoints, but as beginnings directly related to cycles of life, and as necessary ingredients for renewability.

Significantly, the notion that slain revolutionaries fertilize the soil and were thus active participants in an interconnected, cyclical narrative of life appears also on the East wall, as the antecedent to "Subterranean Forces" and the very beginning to the *Song of the Earth*. In the antechamber, the dead bodies of Emiliano Zapata and Otilio Montana rest in the soil below a crop of corn which grows above them. A myriad network of roots reaches the cavities that encase their body, or perhaps

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[13] Christopher Boyer and Emily Wakild, "Social Landscaping in the Forests of Mexico: An Environmental Interpretation of Cardenismo, 1934-1940," *Hispanic American Historical Review* 92, no. 1 (2012): 73–106.

[14] Boyer and Waklid write that "unlike the productivist model that appeared in the United States around the same time…. Cardenista social landscaping sought to match development plans with specific social needs and environmental conditions." See Boyer and Wakild, "Social Landscaping in the Forests of Mexico," 76.

[15] David Craven begins to discuss Rivera's relationship to Marxist positivist determinism at Chapingo in relationship to race and indigenism. See Craven, *Art and Revolution,* 54.

encapsulating the bodies within the system of plant growth above them. A giant starburst is perhaps ambiguously denotative of a sun or a flower, suggesting alternatively a force that both gives to the soil and receives from it. A dedication panel pays tribute to the life-generating properties of revolutionary bodies, clarifying that the fresco series is dedicated to all people who work the land and "land fertilized with the blood, bones, flesh, and thought of those who knew how to sacrifice."[16]

The revolution thus becomes part of a larger cycle of mutually sustaining forces. A robust, thriving subterrain and the development of life enable the abundant, post-revolutionary Mexico on view at the apse. But their continued use is also enabled *by* the revolution; the casualties of its triumph set in motion a chain of bountiful, fertile regeneration. Amidst a post-revolutionary Mexico, which was grappling with the roles of conservation and the subsoil in campaigns for political justice, Rivera predicated the success of revolutionary goals and the renewability of subsoil resources upon one another.

[16] Originally in Spanish, this portion of the dedication panel reads: "*tierra abonada con la sangre, los huesos, la carne y el pensamiento de los que supieron llegar al sacrificio.*"

# The Future that Lies Beneath

## a response by Nathan Segura

In "Revolution, Renewable: Political Ecologies of the Subsoil in Rivera's *Song of the Earth*," Grace Kuipers makes a refreshing contribution to the existing literature on Diego Rivera as she demonstrates how some of his work can help us see, and subsequently rethink, the relationships that exist between modern industry, environmental sustainability, and social justice.

Of course, the question of how to deal with nature in a way that sustains social and economic life has run through the course of human civilization. Though Kuiper does not address it, the eulogistic analogy between Michelangelo's *Sistine Chapel* and Rivera's *Song of the Earth* is both fitting and ironic as the muralist painted a fresco that offers solutions to a crisis that can be traced back to the Renaissance. As Martin Heidegger has pointed out, the invention of linear perspective that revolutionized Western visual culture both reflected and fueled a nascent critical distance between mankind and nature—a distance that lies at the root of capitalist epistemology.[1] Since then, our ability to reflect upon the causes and ramifications of our detachment from nature has not necessarily generated fruitful solutions. Though post-structuralism has been instrumental in identifying and combating social injustices, its deconstructive methodology is not suitable to theorize environmental sustainability. As a result, a call for a return to the sacred as emerged in the world of the humanities and beyond. This renewed interest for the spiritual, the supernatural,

[1] Martin Heidegger, "The Age of the World Picture" in *Off the Beaten Track*, trans. Julian Young (Cambridge: Cambridge University Press, September 2002).

and the magic partly comes from a need to resist a digital neo-liberal regime that gradually empties out the spirituality imbued in prominent monotheistic religions, which, of course, have themselves oppressed pagan notions of the sacred.

Today, there is wide (though contested) consensus that a materialist vision of nature will likely lead to our collective demise.[2] Without sacrificing historical specificity, Kuipers provides timely insights on Rivera's animistic approach to geology, which, as she eloquently demonstrates, did more than pay tribute to indigenous myths. The economic practices Rivera depicted on the walls of the chapel at Chapingo's Autonomous University were, in his mind, not just functional activities, but social actions sustained by interrelations and spiritual significance. By situating the human rapport with nature within a metaphysical stream that irrigates cycles of life and death, he charted possibilities and opportunities that deserve our attention today.

If we should take cues from Rivera, we can also learn from his shortcomings. A *mise en scène* of economic practices stemming from indigenous system of collective ownership is praiseworthy, but actual empowerment needs to follow. Unfortunately, the indigenous populations of Mexico have historically been denied the means to contribute and shape the destiny of their respective regions—let alone of the country—on their own terms. Animating Mexico's geological makeup as an active character that impacts and is impacted by human life is commendable. But we must not forget that, too often, the men and women Rivera depicted have been deprived of the political agency required to take on outside powers avidly exploiting the resources upon which their livelihood depends.

It is true that environmental justice finally seems to be on the forefront of today's actualities as countries all around the world seek to transit to a "green" economy, which, they claim, will bring about a healthier world. This seducing and optimistic rhetoric praises a shift that, in reality, is anything but clean. The windmills, solar panels, and electric batteries we are encouraged to use all function thanks to semiconductors and energy-storing chips made of rare earth materials like lithium, gallium, and cobalt. These minerals are extracted at a dire environmental cost from the subsoils of Chile, Congo, and China, far away from the eyes of urban consumers. In this light, contemporary eco-artists like Richard Misrach and Betsy Damon who, like Rivera before them, use symbols and analogies to shed light on the interconnections that make up the biosphere, must remain open to alternative discourses coming from local communities who are directly impacted by "ecological" transitions.

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[2] See Susan Kieffer, *The Dynamic of Disaster* (New York: Norton & Company, Incorporated, W.W, October 2014). John Foster, Brett Clark, and Richard York, *Ecological Rift: Capitalism's War on the Earth* (New York: Monthly Review Press, November 2010).

At a time when "progress" involves moving from polluting the air with fossil fuels to contaminating the planet's subsoil and groundwater tables, an alternative path must be charted. If Michelangelo and his contemporaries helped propel the medieval world into the Renaissance, let us hope that the production and the discourse on eco-art can also usher a new era. Such a shift will necessitate a new sense of the sacred. Not one that remains untouchable, but one that is relational, equitable, and profoundly felt. To be sure, the path to "reorient the evolution of the collective drama," as French Martinican poet Édouart Glissant put it, will be long and arduous.[3] We can start by encouraging lines of inquiry that probe how past and present artistic production can help us re-consider the way we deal with what lies beneath our feet. This should be a chief concern in the study of visual culture, and in any discipline interested in sustaining, let alone bettering, our time on this big geological formation we call Earth.

[3] Edouard Glissant, *Caribbean Discourse: Selected Essays*, trans. Michael Dash (University Press of Virginia, 1992), 79.

# *You Can Be Sure of Shell*: Oil, Empire, and Landscape in Interwar Britain

Tobah Aukland-Peck

During the 1930s, Royal Dutch Shell Oil commissioned a group of prominent artists and designers to create posters for a nationwide advertising campaign in Britain. The slogans ran "To Visit Britain's Landmarks, You Can Be Sure of Shell"; "Everywhere You Go, You Can Be Sure of Shell"; "See Britain First on Shell", all of which were set against painted backgrounds of rivers, fields, churches, and castles. Through the latter half of the interwar period, these large posters traversed the nation stuck to the sides of the trucks that delivered Shell oil.[1] The broadsheet images acted as peripatetic windows onto the historic buildings, landscapes, and scenic villages of Britain, encouraging motor travel by reinforcing a sentimental connection to the British landscape. Yet in doing so, the series elided the reality of the landscape as a site of ideological conflict. In the decades following World War I, this space had become disturbed by political upheaval and placed at the center of debates over industrial modernization.

From its roots as a nineteenth-century import-export business dealing in exotic shells, Shell was historically tied to an expanded vision of Britain's imperial geography. Shell was founded in London in 1833, and the company cleaved to its

[1] As a corporate entity, Shell Oil has gone through many shifts in governance, structure, and branding since its beginnings in the 1840s, when it was established as Marcus Samuel & Co. For simplicity, I here refer to "Shell" as the general company, encompassing both Shell Transport & Trading, its name from 1897-1907, and Royal Dutch Shell Group, its name (with some variation) from 1907 to the present day.

national roots even after merging with the Dutch company Royal Dutch Oil in 1907. Today, the company operates as Royal Dutch Shell. In both their content and physical circulation, however, the 1930s Shell posters asserted an intimate connection with the geography of rural Britain. The image campaign merged bucolic nostalgia with the visual syntax of modernism. British artists including Graham Sutherland (1903-1980) and Paul Nash (1889-1946) were commissioned to reconcile canonical landscape painting with the visual innovations of a new modernist generation. The posters included visions of medieval castles, sheep-dotted fields, and gracious country houses, all traditional conventions of eighteenth-and nineteenth-century British landscape painting. These images presented a fictional British countryside unaltered by the ravages of modernity. Underlying this visual lexicon, however, Shell was engaged with modes of commercial production that physically challenged the landscapes depicted by the Shell artists. The very undertaking of motorized exploration was predicated on Shell's exploitation of a vast system of foreign oil fields, a new corporatized imperial network that materialized just as the vision of a unified British Empire faded. I argue in this paper that the Shell advertisement series' focus on the domestic landscape as the locus of British exceptionalism minimized the reality of imperial production. The visual violence of industry, missing from the view of the British countryside proposed by the Shell advertisements, was removed to foreign soil.

This study explores the veiled presence of imperial geography in the Shell series through three modes of interaction that complicate the division between local and colonial landscapes: physical exploration, cartography, and bombardment. These terms derive from the geological survey tools used to search for oil deposits in the nineteenth and early-twentieth centuries. I suggest, however, that each mode of interaction can be imported into the domestic British context, stretching the function of the British landscape from aesthetic to extractive. The Shell advertisements are, by virtue of their commercial form and reproducible media, numerous and disparate. With many examples from unknown or minor artists, they occupy a contested space as art objects and are often dismissed as footnotes to the careers of prominent artists. Yet the visual impact of the series drew from a rich tradition of British landscape painting, codified in the nineteenth century by artists including John Constable (1776-1837). These posters can be read as a twentieth-century reiteration of the nineteenth century retreat to an imaginary pre-industrial


Figure 1. Paul Nash, *Kimmeridge Folly*, Dorset, 1937, lithograph, 30 in. x 45. in (76 x 114 cm). Reproduced with the permission of Shell Brands International, courtesy of Shell Heritage Art Collection.

countryside.[2] This move was partly a result of the anxiety over Britain's contested global supremacy, which spurred an attempt to reorient British aesthetics back towards the type of romantic images of landscape typical at the zenith of its power.[3] Yet the return to an older form was a self-conscious assumption of rural identity that could not negate London's urban and global status. The Shell advertisements were images of a countryside not only mediated through the metropole, but perhaps more critically, through the commercial ambitions of Shell as a corporate entity.[4]

The Shell advertising series took the visual and conceptual frameworks of British landscape tradition and imbued them with commodity fetishism. Through their role as advertisements, these broadsheets translated the physical boundaries of the British landscape from abstract national fantasy to an object of physical exchange.[5] Although the series imagined the countryside as an autonomous ahistorical entity, the Shell posters promoted a product tied to commercial

[2] The nostalgic fetishization of the countryside is discussed by David Peters Corbett, Ysanne Holt, and Fiona Russell in David Peters Corbett, Ysanne Holt, and Fiona Russell, eds., *The Geographies of Englishness: Landscape and the National Past, 1880-1940* (New Haven: Yale University Press, 2002), xi. Denis Cosgrove and Raymond Williams both argue that history of the landscape British landscape is tied to capitalist development and that this complicates the division between the urban and rural spaces. See Denis E. Cosgrove, *Social Formation and Symbolic Landscape* (Madison: University of Wisconsin Press, 1998), and Raymond Williams, *The Country and the City* (Oxford: Oxford University Press, 1975).

[3] This discourse is most notable in the work of British critics including Roger Fry, Adrian Stokes, and Herbert Read.

[4] Here, I would like to emphasize London's dual identity as both capital city of England and metropole, the administrative center of the British Empire as a whole. Although a local definition of the capital often suited the more parochial sides of English identity, London was, first and foremost, tied to the business of Empire.

[5] Sut Jhally, *The Codes of Advertising: Fetishism and the Political Economy of Meaning in the Consumer Society* (London: Routledge, 2016), 37.

extraction, grounding them in imperial expansion.[6] Scholars have considered the version of landscape presented by Shell as part of the rediscovery of the English countryside by a newly mobile class of car owners; the historical relevance of Shell's corporate structure and the company's role in imperial growth have not been addressed.[7] I push beyond the encounter between the urban middle class and the rural sphere, instead asking to what degree depictions of the British landscape were impacted by geographic shifts during the Empire's peak and beginning decline. Here, I discuss just a small segment of the series, chosen for its representation of exploration, cartography, and bombardment. However, these images are exemplary of the conflicts of landscape, commodity, and Empire that appear throughout the larger series.

## Exploration

The Royal Dutch Shell's pectin shell logo alludes to the role of imperial exploration in the company's early days of existence. The business began as an import-export company in London's East End called Marcus Samuel & Co. Originally producing souvenir shell boxes for Britain's seaside towns, the company later dealt in rare and exotic shells brought home by the ships running commercial itineraries around the British Empire.[8] From the beginning, Shell was defined by an object that owed its value to both a physical connection with the domestic landscape and the power of international trade. The import of foreign seashells was predicated on a mediating commercial network, a dynamic distinct from the individual connection to landscape that seashell collectors sought on British beaches. Seashells fascinated early naturalists, who traveled to the shores of Britain's Jurassic coast to gather fossil specimens and abundant local shells. The demand for shells rose among wealthy collectors, who valued both domestic and imperial varieties, with British specimens prized alongside those from the Pacific Islands.[9] Seashells embodied a tension

[6] For more on domestic commodity objects in the metropole and experience of Empire, see Catherine Hall and Sonya O. Rose, eds., *At Home with the Empire: Metropolitan Culture and the Imperial World* (Cambridge: Cambridge University Press, 2006).

[7] Previous scholarly treatments of the series include Rosemary Shirley, *Rural Modernity, Everyday Life and Visual Culture* (London; New York: Routledge, 2016); John Hewitt, "The 'Nature' and 'Art' of Shell Advertising in the Early 1930s," *Journal of Design History* 5, no. 2 (January 1, 1992): 121–39; Patrick Wright, *On Living in an Old Country: The National Past in Contemporary Britain* (Oxford: Oxford University Press, 2009).

[8] Robert Henriques, *Bearsted: A Biography of Marcus Samuel, First Viscount Bearsted, and Founder of "Shell" Transport and Trading Co.* (New York: The Viking Press, 1960), 1.

[9] For a history of seashells and British naturalists, see Beth Fowkes Tobin, *The Duchess's Shells: Natural History Collecting in the Age of Cook's Voyages* (New Haven: Yale University Press, 2014).

between an inherent reference to the natural landscape and their function in carving, furniture, and household décor. They were both autonomous object and raw material.

Marcus Samuel & Co. was implicated in the same mutability between the natural and the utilitarian as the seashell in its logo. When Japan opened to the West in 1853, the business expanded to exporting machinery, textiles, and tools, also buying Japanese rice, coal, silk, and ceramics. Later, Marcus Samuel & Co. incorporated the functional and mechanical by leveraging existing trade routes to build a global commercial enterprise.[1011] The company focused not on the natural landscape of the colony from which the seashell was collected, but on the goods that could be produced by its exploitation. The seashell, a tangible connection to the natural landscape of the colonies, gave way to commodities produced through the extraction of natural resources from the land. Yet despite the pivot towards the commercial products of empire, the romantic imagery of the seashell as aesthetic specimen was codified in the company brand. In 1897, the company changed its name to Shell Transport and Trading Company, a nod toward its new focus on oil and kerosene. The name maintained, however, the reference to the company's roots in seashell trading.[12] This branding leveraged nostalgia as an expression of imperial power, harkening back to the image of the curious collector rather than the violence of commercial extraction.

By comparison, the exploration presented in Paul Nash's Shell poster *Kimmeridge Folly* (1937) relates more to local naturalism than imperial trading (fig. 1). Nash, a British neo-romantic and Surrealist artist, depicted an 1830 tower on the Dorset coast, appearing at the top of a crumbling hill which rises above the sea. A discrete ray of sunshine that breaks through the clouds above draws the eye directly towards the circular architectural folly. Though the slogan of the poster reads "To Visit Britain's Landmarks You Can Be Sure of Shell," Nash presented this landmark as a small part of the landscape. The folly was a foil for the drama of landscape, borrowing from earlier Romantic imagery such as John Constable's 1829 *Hadleigh Castle*, which similarly showed a dynamic interplay of light and color between sky,

[10] For other histories of Shell Transport & Trading Company and Royal Dutch/Shell Group see F.C. Gerretson, *History of the Royal Dutch* (Leiden: E.J. Brill, 1955); Stephen Howarth, *A Century in Oil: The "Shell" Transport and Trading Company 1897-1997* (London: Weidenfeld & Nicolson, 1997); Joost Jonker, J. L. Van Zanden, Stephen Howarth, and Keetie E. Sluyterman, *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007).

[11] Henriques, *Bearsted*, 31-32.

[12] From 1900, Shell Transport and Trading Company boasted a mussel shell as its logo, changing it to a pectin shell in 1904. See: "Our Beginnings," Shell Global, accessed December 22, 2020, https://www.shell.com/about-us/our-history/our-beginnings.html.

land, and sea. In *Kimmeridge Folly*, however, Nash chose to foreground the stony beach, arranging large stones, watery shadows, and curling seaweed. The lifelike quality of these materials, which coalesce into a surrealist still life, provided a modernist interpretation of Constable's classic canvas. The man-made structure is subsumed into the arrangement of natural forms that Nash located on the stony beach. The composition turns the viewer into a beachcomber, as the eye searches for recognizable shapes among the lines and swirls of mineral and vegetal objects.

In photographs of Kimmeridge Bay that were conceivably taken in tandem with the creation his work for Shell, Nash trained the camera lens towards the beach (fig. 2). The high cliff, folly, and sun-streaked sky are absent, reducing the picture plane to a jagged interplay of stones. Both the photographs and *Kimmeridge Bay* force a consideration of the landscape as separate layers of discontinuous objects, rather than a unified, traditional balance of the picturesque. In two photographs, Nash mimicked the act of discovery. Here, objects are centered on top of the gray expanse of beach rocks, a line of seaweed in one, and a man-made metal spiral in another (fig. 3). The objects, mysterious and tactile, arrest the eye and provoke the impulse to pick up and study them. Nash was absorbed by the geological traces of Britain's natural history, and amassed a collection of local seashells, stones and sticks, material forms that reappeared through his sculptures, photographs, and paintings.[13] Nash's interest in found natural items stemmed from the existing connection between amateur collecting and knowledge of the British landscape, where the search for local shells was a means of communing with the span of native history. Likewise, the exotic shell, long a popular addition to the discerning collector's cabinet of curiosities, brought the armchair explorer closer to lands otherwise grasped through the abstraction of maps, travel narratives, photographs, or popular engravings. The shell became a metonym for a personal experience of empire, supplanting a more intimate consideration of natural objects as a conduit to British history, geology, and, ultimately, identity. Moreover, the physical act of gathering was a key aspect of Nash's understanding of British terrain, a fascination with the hidden layers of landscape evident in *Kimmeridge Folly*.

Landscapes of oil production, lacking the picturesque elements favored for depicting imperial land, were excluded from the Shell advertisements. Nash's *Kimmeridge Folly* privileged the immediacy and intimacy of domestic exploration. In the advertising series, Shell aligned its corporate image with British tradition, appealing to those longing for a fantasy of pre-war imperial power and pre-industrialization. Its call to "See Britain First on Shell" presented the exploration of

[13] The Surrealist tradition of the *objet trouvé* is also an influential aspect of Nash's collecting practices, collages, and photography.

Figure 2. Paul Nash, *The coast at Kimmeridge, Dorset*, c. 1935–6, black and white negative, 3.5 in. x 4.7 in (8.9 × 12 cm). Tate, London (© Paul Nash, Photo © Tate. Licensed under CC-BY-NC-ND 3.0 (Unported). https://www.tate.org.uk/art/archive/items/tga-7050ph-947/nash-black-and-white-negative-the-coast-at-kimmeridge-dorset)

Figure 3. Paul Nash, *An* objet trouvé *on Kimmeridge beach*, n.d., black and white negative, 3.1 in. x 5.2in (8.1 × 13.1 cm). Tate, London (© Paul Nash, Photo © Tate. Licensed under CC-BY-NC-ND 3.0 (Unported). https://www.tate.org.uk/art/archive/items/tga-7050ph-949/nash-black-and-white-negative-an-objet-trouve-on-kimmeridge-beach)

the local as an extension of this nostalgia. With Shell, one could experience the wonder of discovery within the confines of the nation, a necessity given the growing instability of Britain's territorial reach. Though the moment after World War II formed the primary push against colonial power, the territorial peak of the Empire was in 1921. The following years saw tensions with Ireland, the rise of independence movements in India, the end of the British protectorate in Egypt in 1922, the naval parity treaty with the United States in 1922, and the 1923 legal foundation of the commonwealth system, all of which destabilized Britain's identity as the invincible global producer and enforcer.[14] Yet Britain, the series implied, could expand to fill the void left by the Empire's slow political and territorial dissolution.[15]

## Cartography

The series proposed a second mode of geographic knowledge: abstraction of the landscape into cartographic signs. Shell was known for producing countryside maps for British travelers, further imbricating its corporate identity with motor travel and British tourism. Tristram Hillier's 1936 *Tourists Prefer Shell* foregrounds the function of these maps for the class of travelers targeted by the advertisements (fig. 4). In Hillier's stylized beach scene, necessities for the modern traveler—a pipe, a hat, a map of the British coast, and a box camera—are strewn across a boardwalk. Mapping performed a significant role in domestic exploration, but was also a necessity for oil production on foreign shores.[16] In the interwar period, the sudden realization of oil's financial potential led to a scramble to ascertain the location of new oil reserves.

[14] This is not to say, however, that Britain lost its influence in these locations. Economic entanglement and military treaties maintained imperial power structures even after the putative independence of many colonies or nations.

[15] This imperial dissolution in the lead up to and during the interwar period is detailed in publications including Richard Davis, ed., *British Decolonisation, 1918- 1984* (Newcastle upon Tyne, UK: Cambridge Scholars Publishing, 2013); Richard Shannon, *The Crisis of Imperialism, 1865-1914* (St Albans: Paladin, 1976); Andrew S. Thompson, ed., *Britain's Experience of Empire in the Twentieth Century* (Oxford: Oxford University Press, 2012).

[16] For more on mapping as a mode of colonial control, see Terry Smith, "Visual Regimes of Colonization: European and Aboriginal Seeing in Australia," in *Empire of Vision,* eds. Martin Jay and Sumathi Ramaswamy (Durham, NC: Duke University Press, 2013), 267-79.


Figure 4. Tristram Hillier, *Tourists Prefer Shell*, 1936, lithograph, 30 in. x 45. in (76 x 114 cm). Reproduced with the permission of Shell Brands International, courtesy of Shell Heritage Art Collection.

In the late nineteenth and earlier-twentieth centuries, Shell established large oil fields in the Middle East and Asia.[17] *The Diamond Jubilee Book* of the Royal Dutch Petroleum Company, a history of the company published to celebrate its sixtieth anniversary in 1950, described this development: "In this first period only geological surface mapping was carried out. In the more or less remote regions covered with virgin forests the so-called natural exposures of the strata […] were examined […] In those days a geological party consisted of a graduate geologist with an assistant geologist. The latter's chief duty was to arrange the tasks of the native workers."[18] Oil spurred, in many respects, a renewed colonial process. Centuries of colonial production were collapsed into years, with initial exploration, exploitation of local labor, and commodification of natural resources achieved in a few short decades at the turn of the century. Oil extraction necessitated a significant disruption of the visual landscape through cutting, digging, and blasting. Yet the British motorist's

[17] Shell focused on Baku in modern day Azerbaijan, and Royal Dutch established itself in the Dutch East Indies, including Sumatra in modern-day Indonesia. See: Joost Jonker, J. L. Van Zanden, Stephen Howarth, and Keetie E. Sluyterman, *A History of Royal Dutch Shell* (Oxford: Oxford University Press, 2007), 65-79.

[18] *The Royal Dutch Petroleum Company: Diamond Jubilee Book* (The Hague: Nijgh & Van Ditmar N.V., 1950), 24.

discovery of the pristine countryside envisioned by the posters was facilitated by petroleum, a substance derived from a commodity network that ravaged imperial terrain.[19]

Innovations in aerial mapping, based in military reconnaissance research, made aerial photography an excellent method of gathering data about the landscape. If early oil production necessitated a large expeditionary group made up of geologists and local laborers exploring the landscape on foot, these new militaristic technologies allowed for a detached study of the land. *The Diamond Jubilee Book* celebrated this modernization:

> A first trial with air mapping was made in 1925, to chart an area of 13,600 square miles… to the astonishment of all concerned it was found that, notwithstanding the fact that the area was covered with tropical jungle, the majority of the geological structures which were already known were clearly apparent from the photographs… It can now be safely assumed that no important exploration project is undertaken unless air photographs of the area in question are available.[20]

Aerial photographs expanded territorial knowledge by overcoming natural obstacles that would have been insurmountable to human surveyors.[21] Using this technology, oil companies could target oil-rich subterranean sites. From the perspective of the corporation, photography negated the threat of the land's surface, whether that "danger" included indigenous peoples or nature.

In a 1920 Shell advertisement, five planes bearing the letters S, H, E, L, and L approach the viewer, zooming over a British landscape dotted by neatly organized fields, woods, and a meandering river (fig. 5). The composition aligns Shell with the industrial innovation of flight, and the military tactic of reconnaissance. Created in the same decade during which Shell pioneered the use of aerial photography for this purpose, the image of a systematic deployment of planes over rural England appears as a metaphor for the triumph of aerial mapping as a mode of topographical control. If aerial reconnaissance allowed for an easier extraction of natural resources in the imperial landscape, it also facilitated the mapping of Britain. The aerial field

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[19] Britain itself also had large industrialized areas (chiefly, extensive mining enterprises) and the tension between production and the rural landscape is a discourse that reaches back well into the eighteenth century. The Shell series obscures this part of the British scenery. This domestic division is, however, notable, and I expand on it in my broader dissertation work on art and mining in twentieth-century Britain.

[20] *The Royal Dutch Petroleum Company: Diamond Jubilee Book*, 39.

[21] For more on the simultaneous development of aerial photography, vision, and war, see Hanna Rose Shell, *Hide and Seek: Camouflage, Animal Skin and the Media of Reconnaissance, 1859-1945* (Brooklyn: Zone Books, 2007).

of vision reduced the landscape to a set of quantifiable symbols, making Shell's cartography more than just a convenient tool for tourists. By expanding the range of urban motor car owners into the countryside, Shell unified and standardized knowledge of the geography of Britain, presenting the beauty of rural Britain as a commodity to be extracted.

Britain itself was not insulated from the corporate reach of Royal Dutch Shell as a multinational corporation. Despite the visual turn in the 1930s towards advertisements that emphasized the potential for personal discovery, Britain did not prevail as a sovereign center in Shell's reorganization of imperial geography. A 1950 map of "The Spheres of Operation of the Royal Dutch/Shell Group of Companies" presented Shell as a new kind of global empire no longer adhering national boundaries (fig. 6).[22] The map recodes cartographic convention. Instead of designating colors based on political boundaries, it uses swaths of yellow and gray to organize space based on markets and production. Though England and the Netherlands were home to manufacturing plants, bunker stations, and research laboratories, these symbols also appear across the United States, South America, the Middle East, Australia, and Indonesia. This map displayed the company as a decentralized power, a modern, mercantile kingdom that took the place of Britain as a sovereign nation. The United Kingdom is depicted with the same gray color as the surroundings nations, subordinating its sovereignty to corporate reach. The advertising campaign lent Britain's geography a degree of exceptionalism, a comforting veil thrown over the growing irrelevance of England on the world stage.

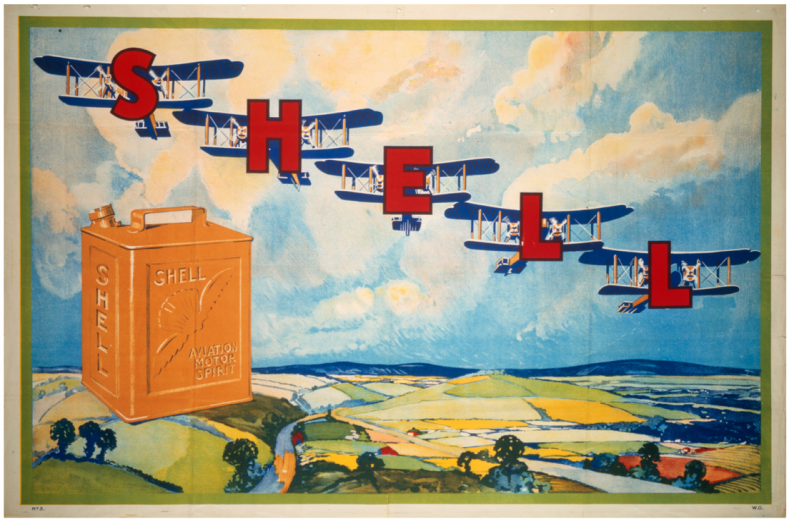



Figure 5. *Shell Studio, Five Planes*, 1920, lithograph. Reproduced with the permission of Shell Brands International, courtesy of Shell Heritage Art Collection.

## Bombardment

Rural Britain was also implicated in what Isaac Frederick Marcosson called oil's "bloodless conflict," writing that "The world struggle for oil [..] is perhaps the most significant bloodless conflict now being waged. […] We have come to the era when

[22] Ibid.

oil is a supreme necessity, ranking with transportation and agriculture, and essential to both."[23] Over the interwar period, the focus on oil led to the invasion of foreign landscapes and the British countryside alike in search of oil. This "war" utilized modes of physical bombardment in which explosives were employed to gather geographic data. In the early-twentieth century, geologists hunted for oil by setting off ground penetrating detonations to determine subterranean geography. This method was first used in World War I to locate enemy trenches. Marcosson's focus on oil as the driver of conflict is notable given the clear comparison to one of the most significant and bloody conflicts of the century: The First World War. Shell's role in World War I is a critical aspect of the imperial subtext of its 1930s visual culture for three primary reasons: the etymologic and material connection between explosive shells used in battle and Shell's brand; the overlap between artists who depicted the battlefields of the war and painted the British countryside for the Shell advertisements; and the technological overlap between oil exploration and military infrastructure.

The image of the exploding projectile eclipsed the Shell logo, lending the otherwise-nostalgic image of the seashell a violent overtone. Shell manufactured TNT used to fill military shells by using byproducts from the refinery process. If the oil derived from Shell's refineries exerted power through fueling industry and transportation, the explosive chemical reaction inside the military shell eradicated all in front of it, fulfilling the violent potential of the company's imperial reach. Shell occupied a contested position during the war, allied with British interests, yet also

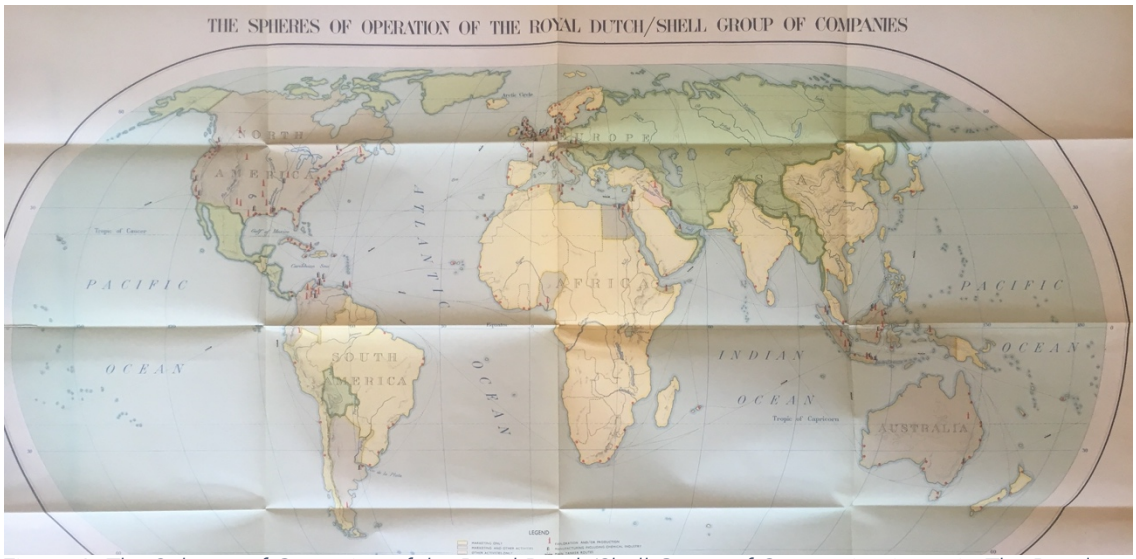



Figure 6. *The Spheres of Operation of the Royal Dutch/Shell Group of Companies*, insert in *The Royal Dutch Petroleum Company Diamond Jubilee Book*, 1950. Photograph by author.

[23] Isaac Frederick Marcosson, *The Black Golconda: The Romance of Petroleum* (New York: Harper & Brothers, 1924), 1-2.


Figure 7. Alexander Stuart-Hill, *Mousehole, Penzance*, 1932, lithograph, 29.3 in. x 43.1 in. (74.3 cm x 109.5 cm). Reproduced with the permission of Shell Brands International, courtesy of Shell Heritage Art Collection.

concerned with the company's ongoing profits. The use of Shell petroleum to run British tanks, transport trucks, ships, and planes blurred the lines between government and private corporation. As the British Empire came to depend on Shell, the company ascended as its own imperial entity. World War I marked oil's shift from a domestic convenience to a multinational political necessity. It was this realization of oil's true potential that catalyzed Marcosson's "bloodless conflict" of the 1920s.

The militaristic destruction wrought by shells may seem remote from the rural calm of the advertisements, but many modern artists commissioned to create these images of the 1930s were deeply familiar with the violence of World War I. The visual construction of many of the Shell images was a testament to the company's identification with modernism as the movement of the future, fitting evidence of their concern with the profits of mechanical innovation. The fractured picture plane lends some images an alienating quality which undermined the familiarity of domestic British scenes. The barren shell-scarred landscapes of the war seep into the frame. Alexander Stuart-Hill's *Mousehole, Penzance* is an example of a 1930s

return to the visual lexicon of Vorticism (fig. 7).[24] Stuart-Hill experimented with the geometric lines common to the movement, turning his image of the quaint Cornish harbor into a queasily steep drop onto gray jagged rocks. The ocean waves are standardized, while the road twists unnaturally, stymying the progress of the would-be traveler. Nash's work during the First World War included *Shell Bursting, Passchendaele* (1916), in which he represented the heedless destruction of shelling, with tree stumps, broken brick walls, and a fountain of debris shooting into the air (fig. 8). This chaotic scene of debris echoes the scattered stones of *Kimmeridge Folly*. Although evident only in a small subset of the 1930s advertising series, the presence of visual responses to war within the pastoral nostalgia brings the inherent brutality of oil into England's domestic space, literally a "bloodless conflict."

Just as the explosive power of Nash's *Shell Bursting, Passchendaele* was predominantly legible in terms of war, oil prospecting in the mid-twentieth century can be understood as laying siege to nature's fortifications. A *British Pathé* feature

Figure 8. Paul Nash, *Shell Bursting, Passchendaele*, 1918, lithograph, 17.4 in. x 224.4 in. (44.2 cm x 570 cm). Imperial War Museum, London (© IWM Art.IWM ART 1604).

[24] Vorticism was a movement in the United Kingdom in the years leading up to the First World that wanted art to express the speed, violence, and dynamism of mechanical creation. This group is most well-known for the publication of the short-lived magazine *Blast* (1914-1915).

from 1948 filmed a group of engineers snaking a line of explosives deep into the ground in Dorset, England.[25] The engineers retreated to a waiting van and stared transfixed as the blast shook the earth around them, unleashing a stream of dirt into the air. The landscape appears bleak, dotted only with barren trees and a metal oil tower, a markedly different view from the luscious greenery depicted in many Shell advertisements. Geologists asserted their scientific dominance over the land by treating their craft as warfare, amassing a company of men to root out earth's latent oil. This method was, according to the *Diamond Jubilee Book,* derived from "experiments made during the first World War with a view to recording and measuring the vibrations caused when guns were fired and hence to determine the position of enemy artillery."[26] In searching for oil in Britain, the landscape of home became a warzone.

Oil derived from British land was extracted via militaristic and commercial violence. The hunt for oil, with its promise of wealth and physical power, replaced the pursuit of hidden enemy lines, becoming a dark parallel to the motor tourism encouraged by Shell. These intentional eruptions were deployed in tandem with aerial reconnaissance missions, which likewise used methods of discovery honed by the military. The implementation of these devices, was a striking act of violence on Britain's native soil—a violence the empire had previously reserved primarily for vanquishing the dense forests and inhabitants of oil-rich colonies. Dorset, noted for its natural beauty and significant historic sites, including the romantically-inspired vista of Nash's *Kimmeridge Folly*, seemed an unlikely venue for such militaristic encroachment. As the two World Wars revealed the military's dependence on oil to run its airplanes, tanks, and ships, the pursuit of petroleum spurred oil companies to reevaluate the potential for extraction in mainland Britain.[27] Although this assault on

[25] See *Oil Prospecting* (Britain: British Pathé, 1948), accessed December 22, 2020, https://www.britishpathe.com/video/oil-prospecting.

[26] *The Royal Dutch Petroleum Company: Diamond Jubilee Book*, 28.

[27] The strategic importance of domestic oil reserves was evident in the nationalization of oil fields by the 1934 Petroleum Act, which centralized oil drilling licenses under government jurisdiction. The Petroleum (Production) Act of 1918 had attempted to spur development in an acknowledgement of the strategic importance of oil realized by the First World War. There was debate in 1918, however, as to the nature of mineral ownership, and the act left open the question of whether mineral deposits were tied to private land holdings. In 1934, the government clarified that oil deposits were the property of the Crown, and owners of the aboveground terrain would receive compensation for drilling forays on their land. This was the subject of contentious parliamentary debates. Drilling on British oil was often viewed as a measure of national self-reliance. The United Kingdom, however, would continue to heavily rely on foreign exports of oil.

the land was a constant of the English relationship with its colonies, it was an unanticipated destabilizing force when applied to domestic geography.

## A Prehistoric Landscape

With growing demand for oil after the First World War, companies like Shell turned to strategies of imperial domination—exploration, surveillance, and bombardment—on British soil. The Shell poster series was dedicated to excising the violent techniques of oil production from the public mind, replacing them with a vision of a pre-industrial past. Simultaneously, Shell was building a twentieth-century version of the mercantile Empire, a corporate entity that would push Britain-as-nation from its place as economic center. This modern imperial subtext haunted the advertisements' cozy scenes.

In some ways, however, the veneer of modern Britain proposed by the landmarks accentuated by the Shell campaign is a minor moment in the larger history of England's geography. In his Shell-sponsored guide to Dorset, Nash wrote of the history and beauty of the coastline. Aware of this layered geological history, Nash qualified his observations: "But all these impressions are intangible stuff compared with Dorset's records of more distant time. These, indeed, have left indelible marks in her countenance, which is scarred and furrowed from end to end."[28] A geological map of Dorset included in the guide illustrates the presence of distant time, showing prehistoric formations that lay underneath the recognizable cities and coastlines of the district (fig. 9). In his interest in the stones, flora, and shells of England, Nash constructed a physical bridge to this unseen history; it was this map in which Shell was ultimately interested. Shell's corporate success lay in the strata of paleontological remains that defined the landscape and was only faintly concealed

[28] Paul Nash, *Dorset Shell Guide* (London: Architectural Press, 1935), 9.

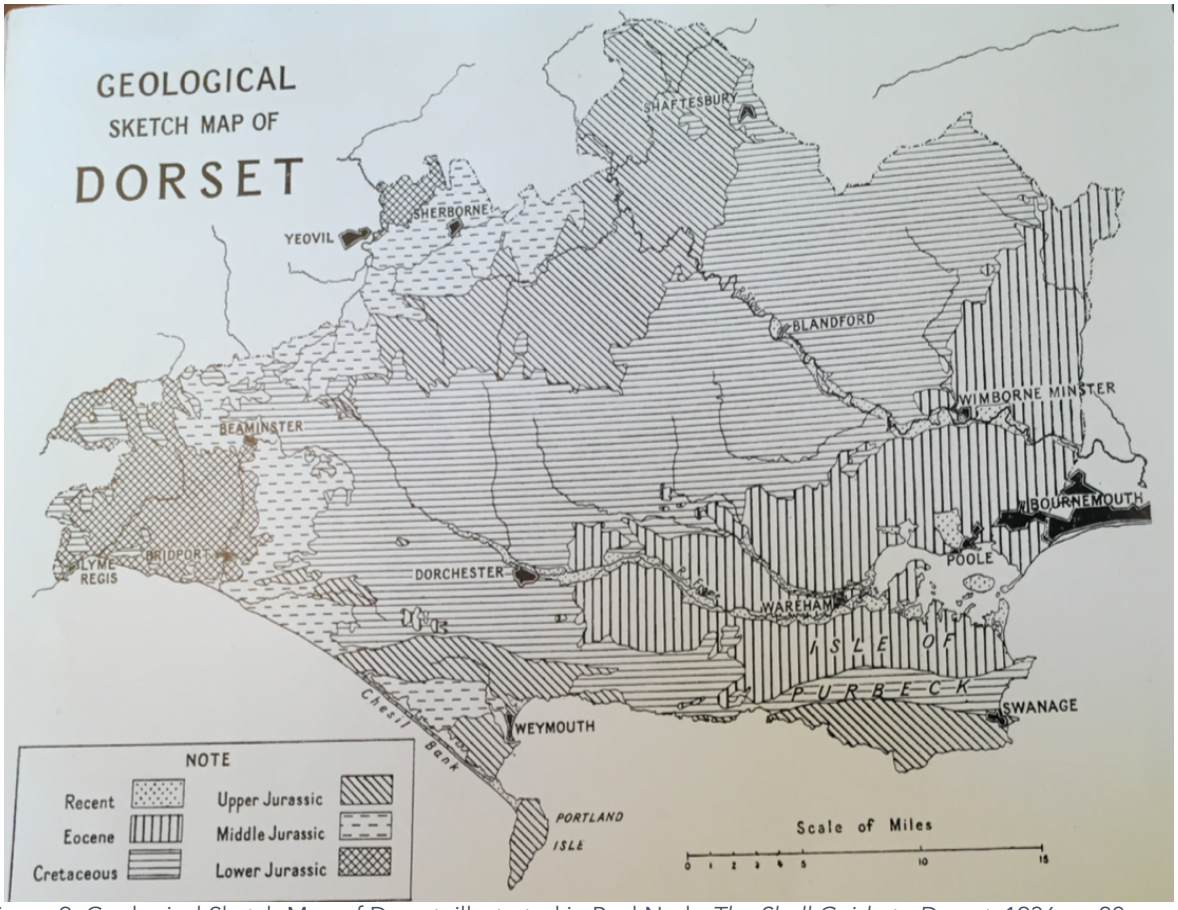


Figure 9. Geological Sketch Map of Dorset, illustrated in Paul Nash, *The Shell Guide to Dorset,* 1936, p. 20. Yale Center for British Art, DA670 D7 N3 1936+ Oversize. Photograph by author.

by tilled fields and stone follies. As the company bypassed national and individual land possession in the hunt for oil, conventional cartographic features became irrelevant.

Shell was attentive to the material that lay below the landmarks and landscapes that, through the advertising series, came to be associated with their brand. In drilling down into the layers of dirt and rock that formed the foundation of the English countryside, their search was more elemental than the discovery of the motor tourist. Instead of Shell motor tourist maps, Shell geologists would be armed with geological versions, such as the survey of Dorset. The natural inquiry pursued by oil companies sought the remnants of the prehistoric marine creatures that formed the basis of petroleum: the hidden shells of past millennia. In this search, Shell became the corporate iteration of the nineteenth-century seashell hunter, making just one more scar on an ancient countenance.

# Landscapes of Elision: Nostalgia and Imperial Networks

a response by Megan J. Sheard

A striking aspect of Aukland-Peck's piece is the way it traces a connection between naturalism and environmental exploitation via imperial networks. By grounding the discussion of Shell's advertising campaign in a discussion of its historical emergence as a company trading in exotic seashells from across the British empire linked to existing domestic interest in seashells and fossils by naturalists, Aukland-Peck establishes naturalism itself as part of the lineage of Shell's exploitation of imperial networks for later intensified forms of environmental extraction. There is no overstated claim here however: the move from seashells to oil and kerosene is clearly an economic one, with a kind of nostalgia for the oceanic constituting a thread of continuity with Shell's seashell-trading origins, most obviously in the company name and logo. However, the connection between British domestic interest in the natural landscape through collecting and landscape painting and the growth of a commercial network which ravaged both imperial and domestic environments is striking, not least because of the poetic connection Auckland-Peck makes between the seashell as an exotic product for trade in the first instance, and as part of the substrate from which oil is extracted in the second. While imperial collecting was always extractive, this linkage between a set of practices at least seemingly oriented around an interest in "nature" and the groundwork it laid for later intensive environmental exploitation is an intriguing avenue of inquiry.

This connection between natural history and corporate capitalist extraction is made most compellingly in the concluding section of the article, in which geological history supersedes aesthetic and historical concern with monuments: Nash's interest in the "stones, flora, and shells of England" creates precisely the form of knowledge required by Shell in the form of a paleontological cartography. The question arises here, however: supersedes for whom, and by whom? While Aukland-Peck's eloquent articulation of Shell as the "corporate iteration of the nineteenth-century seashell hunter" is understood as metaphorical, the nineteenth-century seashell hunter participated in imperial networks and institutions, just as the imperialism of the corporation proceeded on the basis of action undertaken by particular actors: a clarification of the actors within this history could strengthen the agential and structural dimensions of the article.

In the connection drawn here between the production of knowledge about nature and rapacious environmental extraction, I'm reminded of the role of botanical knowledge in British imperial expansion, including in its connection to the picturesque. For example, the development of a network of botanic gardens across the empire created spaces of experimentation for cultivating agricultural and other commercial crops such as rubber, as well as plants appreciated for their aesthetic qualities – the botanical complements to the seashells-as-exotica discussed by Aukland-Peck. In this piece, knowledge about nature in the form of a "paleontological cartography" maps out sites for extraction; in the case of botanic gardens, the instrumentalization of knowledge about nature might be said to go even further in the reconfiguration of plant life itself into a technics of colonization and ecosystem destruction (in the form of plantations, for example). The trade in exotic plants considered as a source of imperial wealth also underlines the connection between the nostalgia of the naturalist collector noted by Aukland-Peck and broader processes of imperial expansion; the romantic and picturesque associations of these botanic gardens within their respective publics, continuing into the present, hardly needs underscoring here. Importantly, thinking about commercialized collection of exotica within this expanded field also raises the specter of how such extraction processes and their accompanying solidification of objects into discrete "facts" impacted the bodies of indigenous people, not only as processes of extraction appropriated indigenous land and labor but also in the display of "artifacts" including human remains in international exhibitions and ethnographic collections, which worked to incorporate indigenous peoples into the taxonomies of colonial natural history. Again, romantic associations are interwoven through such practices, such as the imperial nostalgia reflected by the collection and documentation of artifacts, language and practices of Aboriginal cultures in Australia during the 19th and early 20th century, cultural material which colonial collectors and

institutions understood as belonging to a "dying race" and imagined themselves to be holding in posterity for their own descendants.

Something that would be wonderful to see here, given the emphasis of Aukland-Peck's argument on the elision of the landscapes of extraction via the advertisements' picturesque vision of the British countryside, would be a detailed consideration of one or two such landscapes in their specificity. Such a move would challenge methodologically the absence of the materiality of exploitation in the visual language which the article so thoughtfully highlights, combatting the tendency of discursive analyses to reproduce the elisions they critique. Ultimately however, this challenge likely stems from the ambitious rubric of Aukland-Peck's project, which draws together British imperialism, the commodity fetish, print culture, British landscape traditions, environmental history, the rise of the multinational corporation, cartography, and a form of the military-industrial complex worked through both the landscape and its artistic-commercial representations. I'm looking forward to seeing the directions in which each of these analytics are expanded in future work.

# The Landscapes & Material Culture of Empire

a response by Rachel Winter

Tobah Aukland-Peck's essay offers a fascinating inquiry into empire through posters and seashells, seemingly mundane objects tied to a complex history of travel, advertising, oil, and empire. No longer solely the domain of Romantic painting wistfully imagining the expanses of empire under the guise of a serene landscape, this paper focuses on an aspect of material culture not often studied. Aukland-Peck argues that the "bucolic" domestic landscapes pictured throughout a number of posters advertising Shell's enterprises neglected to depict the ravages wrought on the landscape by empire and capital in an effort to achieve material and corporate gain at a moment of Britain's anxiety about its own status. Focusing on posters with their catchy phrases designed to foster interest in Britain, Aukland-Peck shifts our way of thinking about the proliferation of empire towards the innocuous nature of cost-effective, reproducible media. The "visual responses to war within the pastoral nostalgia", as so poignantly articulated by the author, point towards the dialectical constructions laden within the imperial geography of empire and its visual culture. The presence of a peaceful landscape reveals a dialect of destruction; through visions of the countryside, the absence of imperial geography becomes present; and the relationship between the metropole and colony, as well as urban and rural, continue to be co-constitutive.

Through its foray into empire, land, corporations, tourism, and the exploitation of natural resources, the tenets of this paper create a framework for analyzing other material cultures of empires, such as photography and its role in the Middle East. Photography and posters are two sides of the same material culture coin in their

ability to envision empire through their dialectical absence of violence and their reproducibility. Beginning in the late-nineteenth century and continuing throughout the twentieth century, European photographers in the Middle East captured romantic visions of vast spaces, occasionally with verdant greenery, others with the disintegrating remains of archaeological sites, and some of people inhabiting the idyllic land. Photographs were used to affirm religious beliefs, document a fleeting moment, or research terrain that would become the subject of empire's conquests. Reviewing the ordinary objects and landscapes in photographs of the Middle East demystified the region for European audiences while also sparking imaginations about a new land that could be used in service of empire and capital.

Aukland-Peck's critical analytics around capital, nature, power, memory, and exploration begin to illuminate the idyllic landscape seen in a nineteenth-century photograph of the Pools of Solomon in the West Bank made in Maison Bonfils, the studio of Félix Bonfils (fig. 1). The sepia-toned image depicts a barren landscape against a clear sky divided by a body of water. However, the once verdant landscape is now decaying, with dry shrubs, sand, and rocky hills. The water is not a natural feature, but rather, three manmade pools work as reservoirs and aqueducts fed by multiple streams that formerly facilitated the flow of water into Bethlehem and the old parts of Jerusalem, although its dispersal capabilities are now limited. Framed by a shaded box and inscribed with Palestine, what is beyond the "bucolic" landscape, to adopt Aukland-Peck's term, cues the viewer to landscape's location.

The formal qualities of *Pools of Solomon* resonate with the examples set out by Aukland-Peck, capturing similar concerns around empire, violence, and its consequences across different landscapes. Bonfils captures the jagged nature of the landscape, as does Nash, both also cognizant of water and its centrality. The use of a monochrome palette, be it in black and white or sepia, also captures the landscape in a seemingly timeless moment that incites interest in an environment yet to be explored. These photographers share visions of landscapes in which visual evidence of then contemporaneous acts of violence are absent, yet paradoxically, this omission suggests the potential for future exploitation symbolized by the open space. For *Pools of Solomon,* the violence is embodied in the land through the harm rendered in order to construct the artificial water channels, a trauma which is dialectically absent. If the British landscape would be capitalized on by oil tycoons, then Solomon's pools would be the site for fiscal gain as a tourist landmark now managed by Bethlehem Convention Palace, or Convention Palace Company, an event planning company in the West Bank that administers the pools, allowing


Figure 1. Maison Bonfils, *Pools of Solomon*, Ca. 1875, Photographic Print, 10.75 x 13.825 in. University of Chicago Library, Middle East Photograph Archive, Chicago, IL. Image courtesy of Hanna Holborn Gray Special Collections Research Center, University of Chicago Library.

public access for recreation and leisure. A British artist in his native country, and a French photography studio in what would become the British Mandate of Palestine, both artists aestheticize the land, highlighting its natural beauty while also displaying the natural resources to be exploited, be they oil or water, locating nature in contested global orders, and positing landscape as a site for violence.

Aukland-Peck's essay operates at an important juncture between past, present, and future. Such insights on this historical problem resonate with our present and future, prompting questions about the way empire permeates the now digital visual culture of postmodernity. As notions of materiality evolve in a world shifting towards paperless, what is the new material culture of empire in the twenty-first century digital era? And under globalization, neoliberalism, and even neo-imperialism, what is the new form of empire, or empires? Perhaps there is no singular definition for either material culture or empire as the tumult of the twenty-first century resists any stable definition or consistent interlocutors, particularly in a digital world with its amorphous ephemerality and rapidly evolving crises that continually alter life as we think we know it. Rather, recognizing and interpreting the material

cultures of empire in their diverse forms, just as empire has many modes and locations, creates possibilities for dismantling the hegemonic systems of empires as they evolve, and reclaiming the land from its many forms of violence in the hopes of an alternative future.

# Outside of Architecture: Between Mediating and Navigating the Air

Katarzyna Balug

> Air is the physical connection between us and our environment, transmitting our sense experience of light, heat, sound, taste, smell and pressure. But its very transparency prevents us from observing its continuous transformations. Atmosfields and pneumatic environments aim to reveal the aesthetic of air, both in the natural states which make up the atmosphere and by using thin membranes to manifest their motions and forces, in order to extend and change our direct experience of air and our relation to our atmospheric environment.
>
> – Graham Stevens[1]

Reveal, make manifest, extend, and relate: English artist Graham Stevens was uniquely articulate in capturing, in words and structures, the capacity of the inflatable form to condition the human's relationship with her environment. Throughout 1960s Western Europe and the United States, young architects and artists like Stevens adopted the materials and aesthetics of the lunar Space Race to create immersive air-filled environments especially attuned to Earth. However, there was a significant difference in the operating logics of space structures and the Earth-bound forms they informed. While the pursuit of spaceflight had, since the mid-nineteenth century, emphasized the keeping out of the environment and the production of an artificial, fully controlled and enclosed atmosphere, inflatable architectures invited the outside in. These forms continually registered and mediated the relationship

[1] Graham Stevens, "Pneumatics and Atmospheres," *Architectural Digest*, no. 3 (1972): 166.

between circulating air and the plastic membrane, which together formed a structure without rigidity, and the body that occupied the resulting space.

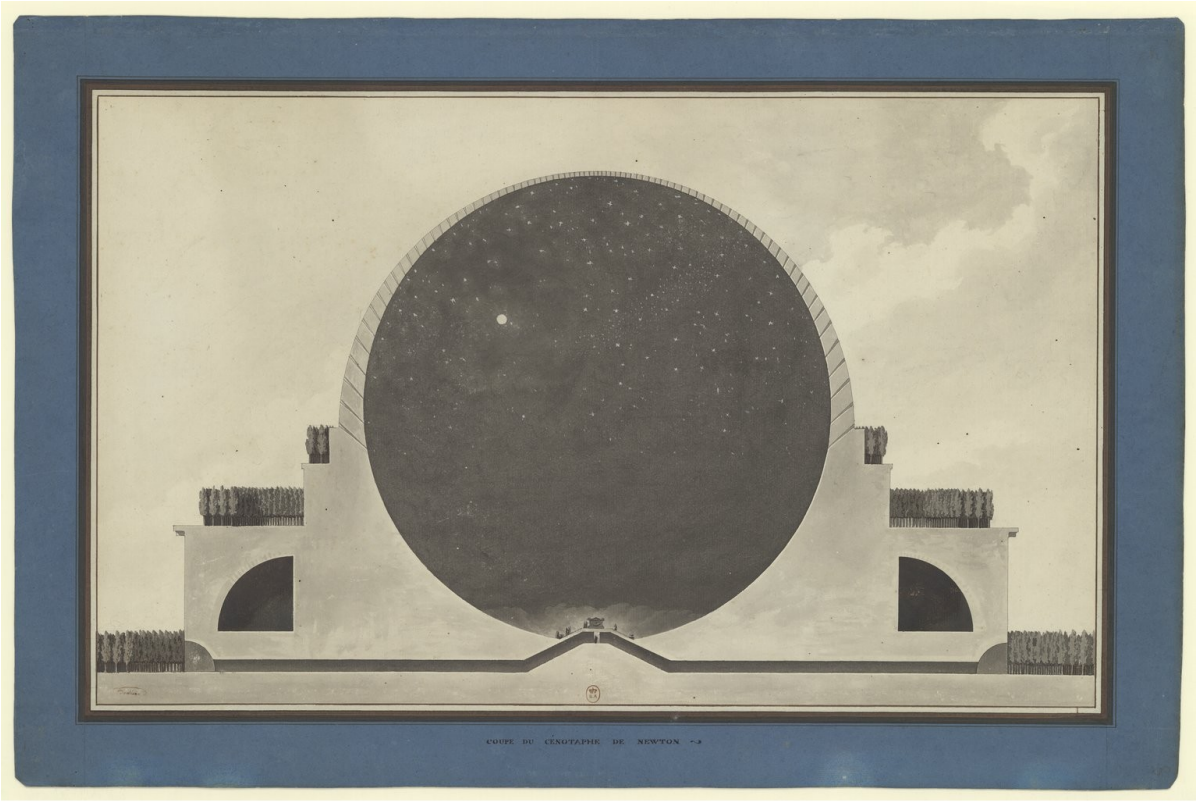
Such mediating features suggest that 1960s inflatable forms may have had an earlier muse in an invention from the height of European Enlightenment, before the modern narratives of environmental control transformed the episteme guiding our view of nature. The momentous 1783 invention of the balloon as flying machine, by both hot air and hydrogen, captured public imagination across Europe and the US as it at last opened the domain of the heavens to mankind. Once aloft, however, the balloon was at the mercy of wind, with limited control by the aeronaut. As the nineteenth century wore on, it was due to this responsiveness to rather than navigability in the air that it was gradually sidelined in aeronautic pursuits. However, this same feature offers a key to understanding the modern inflatable form. Like its forerunner, the 1960s inflatable was enormously popular when it first appeared, but was soon overlooked within its discipline: architectural scholarship.

This paper unpacks the changing logics of flight, from the hot air balloon to the 1969 moon landing, which mirror the larger transition to narratives of control during the modern industrial era. Then, it explores a blind spot in architectural historiography that left inflatable forms out of architectural scholarship since the 1980s, despite their being prominent in the decade before. Finally, the project deploys recent insights from media studies, a discipline that evolved from critical theory to address communications media and technologies in the 1960s, and more recently focuses on the materiality of such media, to trouble architecture's disciplinary limits and to demonstrate how the logics of the flying balloon illuminate the inflatable anew. Along the way, the work of artists and architects like Graham Stevens, whose texts and structures deploy scientific principles to reveal and embody a human entanglement with elemental forces, grounds the exercise.

## Rupture 1: Ascension to the Heavens

The late-eighteenth century invention of balloon flight seamlessly inserts into an Enlightenment narrative of hunger for curiosities and discovery. The balloon, facilitated by recent findings related to air and hydrogen by the modern science of chemistry, was a timely vehicle to satisfy desires for ever-expanding vistas and new experiences. Until the balloon, those vistas remained effectively out of human reach. Visionary French architect Etienne-Louis Boullée created a set of drawings for an imaginary memorial to Sir Isaac Newton in 1784. One of the sectional drawings of the enormous, spherical Cenotaph for Newton captures the reverence for cosmic forces and awareness of the human's limited capacities in the world. It depicts the cosmos inside a dome where the viewing platform holding Newton's sarcophagus is limited to the bottom "ground;" the middle of the sphere is empty, untouchable.

However, the balloon had arrived just a year earlier, as science, an increasingly popular affair, was untethering from religion, and as a public sphere independent of the nobility gained influence.[2] The early balloon ascents were enormous public spectacles, often attended by over one-hundred thousand citizens of all classes and including the king and his court.



Source gallica.bnf.fr / Bibliothèque nationale de France

Figure 1. Etienne-Louis Boullée, *Coupe du Cénotaphe de Newton*, 1784, drawing. Image source: BnF ou Bibliothèque nationale de France.

Even as humans delighted in their newfound capacity to view the world from above, the question of control in the air arose in parallel with the balloon. The desire for navigability grew stronger in subsequent decades, and the balloon's dance with the air became technologically retrograde by the mid-nineteenth century. Tiberius Cavallo was an Italian-born Fellow of the Royal Academy in London, a natural philosopher and physicist who had been studying the physical properties of the gases that comprise air since before the air balloon's invention. His 1785 treatise, *The History and Practice of Aerostation,* examined both the philosophical implications and scientific possibilities of the balloon, and refused to accept as a

[2] Jürgen Habermas, *The Structural Transformation of the Public Sphere: An Inquiry into a Category of Bourgeois Society,* Studies in Contemporary German Social Thought (Cambridge, Mass: MIT Press, 1989).

shortcoming the balloon's most damning critique: that these "bags full of wind" could not be guided against the wind.[3] Cavallo wrote:

> Ignorance, curiosity, and often the supercilious wisdom of the splenetic, ask whether it is possible to bring this discovery to be of any use?… endeavoring to depreciate them still farther by the ridiculous idea of emptiness, which has been often allegorically expressed by the words aerial, full of air, empty balls, and bags full of wind.… The principal objection started against aerostation is, that those machines cannot be guided against the wind, or in every direction at pleasure; and the enemies of innovations would set aside even the idea of air-balloons, because, two years after their discovery, the subject has not been so far improved as to steer them in any direction whatsoever.[4]

Cavallo recognized that the balloon's speed of 40-50 mph would revolutionize travel, but he was especially interested in its vertical capacity, for studying the 'upper air' and expanding the understanding of meteorology and the nature of weather. By achieving altitudes of over two miles, he was confident that man could rise high enough with this machine to see his impact on the planet for the first time, and discover vast tracts of earth still unknown. In short, his retort to critics was that the full potential of flight had not yet been remotely explored, and he encouraged readers to continue experimentation with what the new device could offer.

Other uses envisioned for balloons included military deployments. Benjamin Franklin, who witnessed the first hydrogen balloon flight as U.S. ambassador to France, imagined the possibility of aerial warfare. Indeed, an aerial battalion, the French Aerostatic Corps, was briefly implemented over a decade later by Napoleon's army during the French Revolution.[5] However, as Cavallo had correctly anticipated, an intensifying aspiration for environmental control would ultimately be the grounds for rejecting the balloon, a craft that carries a human passenger in open relation with the environment, for the practical applications of flight.

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[3] Tiberius Cavallo, *The History and Practice of Aerostation* (London: Printed for the author and sold by C. Dilly ..., P. Elmsly ..., and J. Stockdale, 1785).

[4] Ibid., 190-1.

[5] Richard Holmes, *Falling Upwards: How We Took to the Air*, 1st United States ed. (New York: Pantheon Books, 2013), 10.

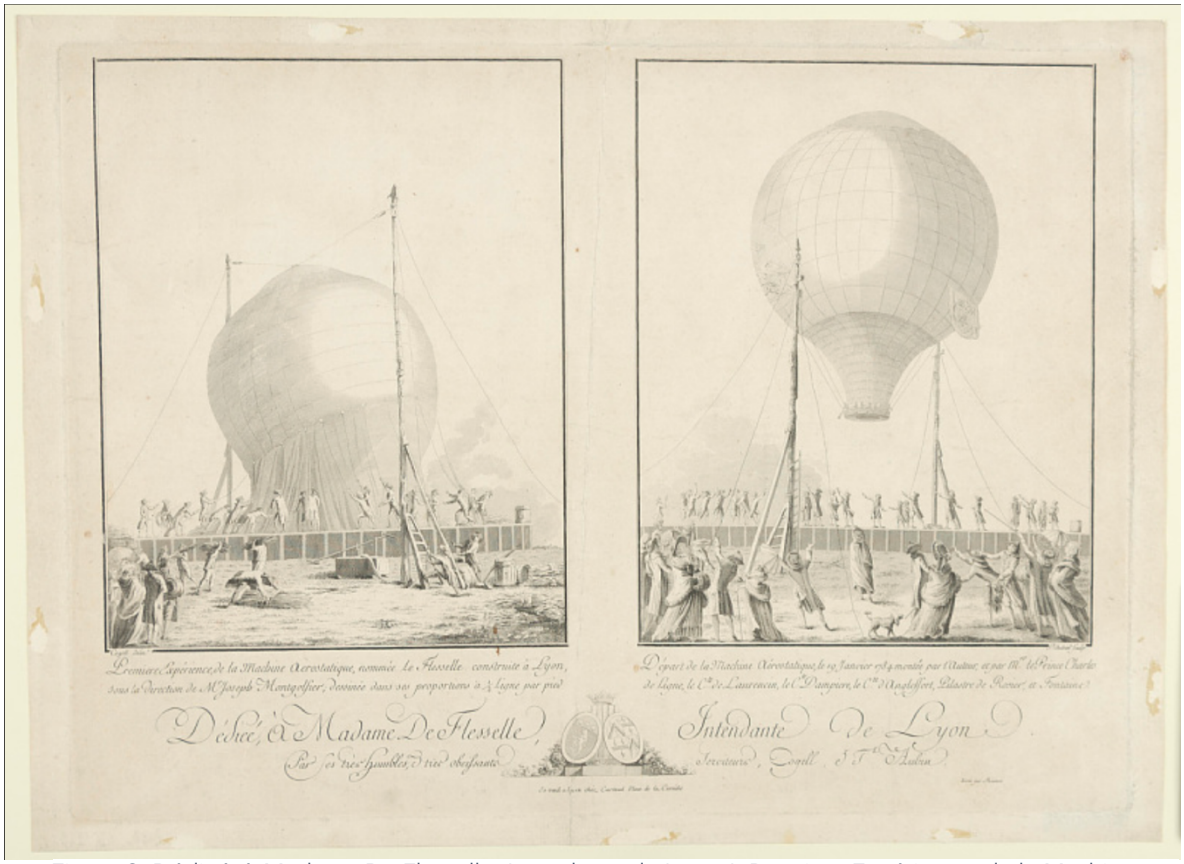


Figure 2. Dédieé, à Madame De Flesselle, Intendante de Lyon. I. Premiere Expérience, de la Machine Aerostatique, nommée Le Flesselle, construite à Lyon, sous la direction de Mr. Joseph Montgolfier; dessinée dans ses proportions à 1/2 ligne par pied. II. Départ de la Machine Aérostatique, le 19 Janvier 1784 montée par l'Auteur, et par Mrs. le Prince Charles de Ligne, le Cte. de Laurencin, le Cte. Dampiere, le Cte. d'Anglefort, Pilastre de Rosier, et Fontaine. Image source: Smithsonian Institution National Air and Space Museum Collection, Gift of the Norfolk Charitable Trust.

In a major breakthrough, seventeenth-century chemistry had managed to isolate the air to study it as if from the outside which, as historians of science Steven Shapin and Simon Schaffer have demonstrated, raised political concerns as much as it offered scientific insights.[6] In the eighteenth century, chemists isolated air's chemical composition, further demystifying the ethereal substance.[7] Gradually, expanding industrial logics crept into scientific pursuits so that new discoveries were evaluated based on their potential instrumentalization.[8] Though a similar geometry

[6] Steven Shapin and Simon Schaffer, *Leviathan and the Air-Pump: Hobbes, Boyle, and the Experimental Life*, new ed., Princeton Classics (US: Princeton University Press, 2011).

[7] Steven Connor, *The Matter of Air: Science and the Art of the Ethereal* (London: Reaktion Books, 2010). Steven Connor outlines this history of air studies in the 17th and 18th centuries, highlighting Robert Boyle's air pump experiments and later production of fictitious airs to underscore the early modern significance of enclosed versus open airs for scientific understanding.

[8] Bruno Latour, *We Have Never Been Modern* (Cambridge, MA: Harvard University Press, 1993) describes the modern split between nature and culture, which, per Latour, erroneously

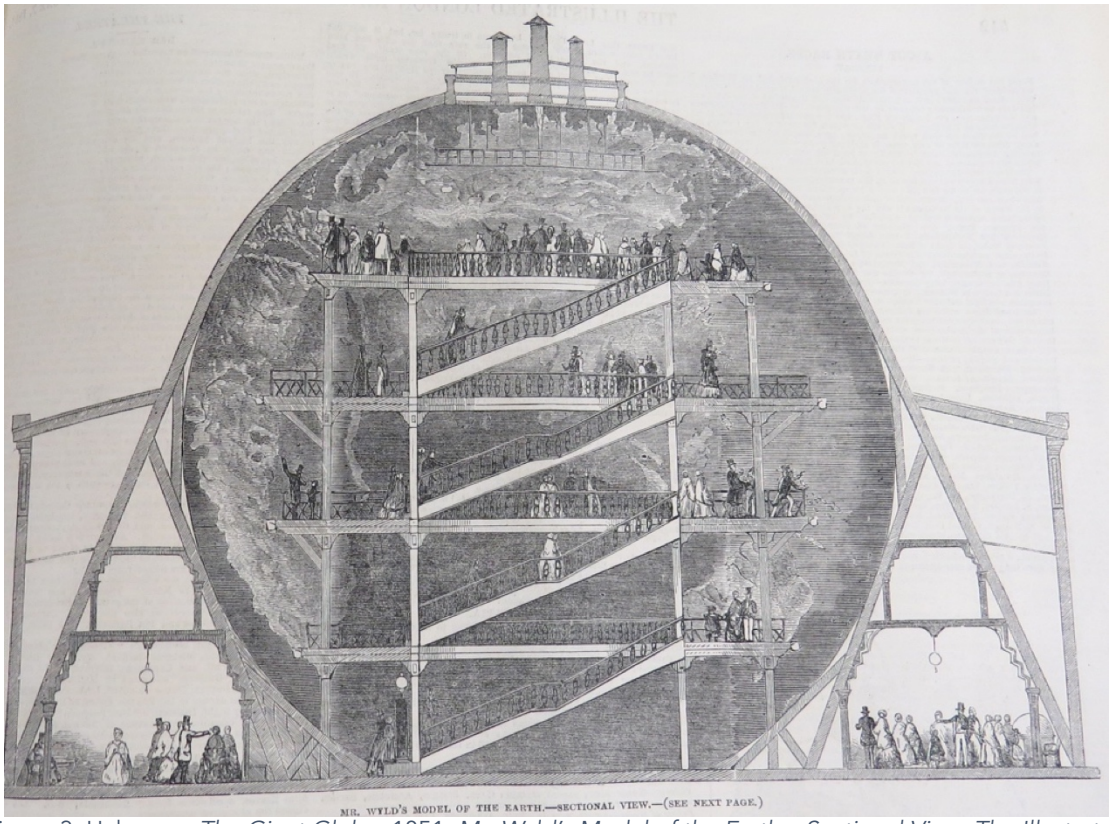


Figure 3. Unknown, *The Giant Globe*, 1851. *Mr. Wyld's Model of the Earth – Sectional View, The Illustrated London News*. Image source: Guildhall Library blog.

and scale to the Boullée Cenotaph, the Georama, first patented in 1822 by Charles-François-Paul Delanglard, illustrates a case in point. The first Georama opened to the Parisian public in 1826, a second in 1844, and a later iteration was installed in London in the 1850s. The initial Georama was a forty-foot diameter building-scaled sphere that operated as an inside-out globe. That is, spectators entered from the bottom, as if from Antarctica, and traveled the world's surface, which was painted along the interior. Stairs and platforms made accessible the entirety of the dome, collapsing the humbling distance of Boullée's earlier sphere while turning the focus away from the cosmos and grounding it on Earth. Via this popular entertainment device, the enormity of the planet could be conquered in an afternoon.[9] In the span of a few decades, the Earth and her subjects had come to stand in as the heart of the cosmos, its details knowable and within optical reach.

Unlike earlier viewing devices and studies of air, the question immediately asked of the balloon was "what is it for?" in a framework that privileged its usefulness for

separated epistemological from ontological questions. In the nineteenth century, the scientific understanding of air facilitated its influence in cultural phenomena, while this role in turn fueled interest in further understanding its science.

[9] Giuliana Bruno, "The Architecture of the Interior," in *Atlas of Emotion: Journeys in Art, Architecture, and Film*, paperback ed. (New York: Verso, 2007), 133-170.

science or defense, as explored above.[10] Thus the curious, incredible, unprecedented achievement of human spaceflight was short-lived. In an 1863 letter, French Romantic poet Victor Hugo compared the balloon to a leaf or a cloud, swept helplessly by the wind, and urged the displacement of the balloon by the navigable 'bird', or helicopter.[11] Air was not desirable as a dance partner that co-determined the flight path with the aeronaut and his balloon, but viewed as a recalcitrant substance to be manipulated, its unwieldy properties isolated and deployed for human ends.

Despite their start as an open exchange with the elements, the higher altitudes of twentieth-century human spaceflight were predicated on shutting out the uninhabitable environment. To ascend farther from the planet, man had to sever his engagement with the atmosphere and climb up from the balloon's carriage into the controlled, protective environment of the bubble. Over time, his body and its needs came to be viewed as one variable, and a finicky one at that, in control systems aimed to deliver the promise of progress.[12] By the mid-twentieth century, cybernetic diagrams, for example of human waste processing in space, represented human needs as equivalent to any other technical necessity in the system.

However, just as the first astronauts orbited the Earth in tightly enclosed capsules, the narrative of control was unraveling in art and architecture, informed by emerging scholarship on media and technology fueled by the dawn of the so-called Information Age. Around 1964, Canadian theorist Marshall McLuhan framed media as infrastructures that deliver content. He and others began to note that increasingly ubiquitous information networks had attained an immersive, elemental quality no longer within human grasp. Similarly, scholars like American-Israeli communications

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[10] Giuliana Bruno summarizes a history of viewing devices that emphasized optics and were public entertainment embracing the 'travel cult' of 18th century. Steve Connor describes the air studies, as mentioned above. Bruno, *Atlas,* 133-170; Connor, "Taking to the Air," 9-40.

[11] "Let us deliver mankind from the ancient, universal tyranny! What ancient, universal tyranny, you cry. Why, the ancient, universal tyranny of gravity!...Today the balloon has been judged, and found wanting... To be torn from the ground like a dead leaf, to be swept along helplessly in a whirlwind, this is not true flying. And how to we achieve true flight? With wings!...What do you see above you? You see clouds and you see birds. Well then, these are the two fundamental systems of aviation in operation. The choice is right in front of your eyes. The cloud is the balloon. The bird is – the helicopter!" Victor Hugo, 1863 Letter on Flight in Richard Holmes, *Falling Upwards: How We Took to the Air*, 173.

[12] Nicholas De Monchaux outlines the history of evolving ideas of man's 'suitedness' for space, which included attempts to alter the human mechanism via both internal chemical interventions and external protective suits meant to conform the body to spaceflight. Nicholas De Monchaux, *Spacesuit: Fashioning Apollo* (Cambridge, MA: MIT Press, 2011). See in particular Chapter 6: Cyborg.

theorist Elihu Katz posited mass media as modes of being capable of shaping underlying psychic and social orders, akin to infrastructures that condition life, with a life of their own on par with elemental forces.[13] Media considered as inseparable ensembles of nature and technology undermined the modern separation of culture and nature.[14]

Without rigid structure, though not amorphous, the inflatable architectures that proliferated from the mid-60s reflect the apperception of media as elemental. The thin, usually plastic, membranes relied on nothing but air to imbue them with form. They, in turn, made perceptible fragments of this pervasive element in environments that both underscored and undermined the frontier between inside and outside. In 1968, English architecture critic Reyner Banham penned a short article, entitled "Monumental Wind Bags," recounting his experience inside an inflatable dome set up at the British Broadcasting Corporation's Television Centre. He wrote:

> The beauty of that simple wind-bag was the directness and continuity of its response. Every slight change of state inside or out – even a heated conversation – brought compensating movement in the skin, not through the expensive intervention of a computer, but by direct variation of curvature under balance of pressures. For the human occupant it was a kind of partnership relation with the enclosing membrane, each going independently but sympathetically about its business....I *like* that.[15]

In other words, the 'wind-baggery' that had been the eighteenth-century balloon's perceived shortcoming was the epitome of Banham's embrace of the inflatable bubble as he privileged its environmental register and responsiveness over prescribed behavior. Once again, the inflatable structure operated through a continuous engagement with the atmospheric forces of the air despite, unlike the earlier balloon, remaining grounded. In 2015, American media theorist John Durham Peters made explicit the link between how the concept of media was understood in the late Enlightenment and in the years of the 1960s Space Race. During the eighteenth century, writes Peters, media was defined as a continuous, enveloping ether that included the elements with its own dynamics and forces that shape and organize life and its contents. Throughout modernity, nature and the environment were redefined in relation to human control, parceled for instrumental purposes. "Media" became less affiliated with the *forms* of a surrounding, influential environment, and instead came to be understood as an intermediary, channeling

[13] John Durham Peters, *The Marvelous Clouds: Toward a Philosophy of Elemental Media* (Chicago: University of Chicago Press, 2015).

[14] Bruno Latour, *We Have Never Been Modern.*

[15] Reyner Banham, "Monumental Wind-Bags," *New Society* (1968): 569–70.

information whose *content* became the focus of media studies. For example, inventions like the telegraph channeled human communication with minimal distortion, and that communication became the object of study. With McLuhan and subsequent scholarship, then, we begin to see a return to the earlier notion of elemental media.[16]

The inflatable form of the 1960s permitted, like the balloon or the air-pump, the capturing of a surrounding ether to make it tangible and available for engagement. Unlike the air pump's rigid glass globe or the early balloon, however, the inflatable consciously underscored the relational autonomy between the enveloping matter (the plastic form), the subject, and the larger environment. In 1965 sketches for the project Spacefield, realized with fellow architecture students at the University of Sheffield in 1966, English artist Graham Stevens depicts a 'body environment,' an immersive inflated bubble where the physical distance between the art object and the viewer is collapsed. The body enters the art and participates with all senses in a kinesthetic experience involving a single color field, heat, light, and sound, with the goal to expand consciousness and express the material experience of the elements.[17] The body's presence and exchange with the air in turn affect the environment, or the enclosing form.[18] No longer Boullée's passive observer of inaccessible domains above, nor the visual conqueror of Earth's farthest reaches throughout the Georama, Stevens' is a body in relation whose very existence alters the globe and is in turn altered by the space it produces.[19]

Why does relational exchange between the atmosphere and the human preoccupy creative practices at this moment, just as the first dozen humans are leaving their footprints on the moon in perfectly sealed spacesuits?

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[16] Peters, *The Marvelous Clouds*. 15-48. Several exhibits from the era provide further evidence of the renewed interest in the concept of elemental media in practice: Air Art, curated by Willoughby Sharp, a traveling exhibition across the United States in 1968, and Earth, Air, Fire, and Water: Elements of Art at the Boston Museum of Fine Art in 1971. Both of these included inflatable works; Stevens took part in Air Art. Some inflatable projects were especially attendant to contemporary communications media and its pervasive influence over private, mass consumption. Television and projection, as well as the latest electronic technologies like video, were a key component for some architects working with air, most notably the collectives Haus-Rucker-Co and Ant Farm.

[17] Cited in an unpublished interview for Some Magazine with Graham Stevens, shared with the author in June 2020.

[18] Will McLean, "Atmospheric Industries," *AA Files* 70 (2015): 138–43.

[19] Image is available from the Centre Pompidou: https://collection.centrepompidou.fr/artwork/150000000043895?filters=query%3Agraham%20stevens&page=1&layout=grid&sort=by_author]

## Rupture 2: Arriving on the Moon

Comparing the 'inflatable moment' of the late 1960s with the history of early balloons reveals in air architectures a disenchantment with the ideologies of progress and industrially-ordered instrumentalization of science that subsequent scholarship tended to align with postmodern critiques of modernism.[20] Through Spacefield and his subsequent works, it is as if Stevens anticipated a more existential shift, symbolized by the immediate popularity of Earthrise, an image captured aboard NASA's Apollo 8 mission three years later in 1968. Unexpectedly, the Earth viewed beyond the lunar horizon appeared as a marvelous site, an exception in the vast cosmos that made it uniquely, preciously tailored to human existence.[21] Stevens' inflatable color field membranes immersed the soon to be constrained body and its gaze back on the Earth, while the responsive envelope reflected the planet's vulnerabilities to human action. The semi-transparent plastic surface isolated the body from the exterior environment, offering nothing to consume visually on the 'inside' save for the contours of an Earth 'out there', akin to the view from the lunar surface. Yet the same semi-transparency, like the material's responsive quality and constant air flow into the low-pressure system, also contributed to the sensory reception of the bubble-as-Earth, as the exterior continually marked the inside. The plastic mediated, a second skin that registered the pressures of interior and exterior. Framing the inflatable surface as a medium accents the agency of the plastic membrane as both viewing and registration screen, and rejects a binary between outside and inside.

Figure 4. Graham Stevens 'Spacefield' interior/exterior. Sheffield University Arts Festival June 1966. Photo: Peter Luck, Copyright 1966 G.A. Stevens.

[20] See for example: Robert Venturi, Denise Scott Brown, and Steven Izenour, *Learning from Las Vegas* (Cambridge, MA: MIT Press, 1972).

[21] Hans Blumenberg in Benjamin Lazier, "Earthrise; Or, The Globalization of the World Picture," *The American Historical Review* 116, no. 3 (2011): 602–30.

During the 1950s and '60s more broadly, the binaries of modern scientific knowledge and methods came under scrutiny.[22] The social sciences interrogated modernity's influence on forms of social control and subjectivity, while cybernetics offered nonhierarchical methods to evaluate human/non-human interactions.[23] Late 1960s and early '70s issues of publications like the UK-based Architectural Design (AD) reveal the influence of these thinkers on artists and architects. In a 1972 AD article, Stevens wrote: "Understanding of energy processes is reaching the point where the wave emissions of the body and brain can be registered and measured, opening up the possibility of ultimate environmental control… we are not alienated by technological hardware, but freed by technological forecasting, control and simulation of the elements."[24] For Stevens, as for Banham, greater environmental control meant freedom *from* the environment, even as his forms suggested otherwise: they immersed viewers in a less controlled milieu more vulnerable to environmental factors.[25] This dialectical approach toward control and vulnerability, synthesized in the gap between Stevens' language and form, helps illuminate why the mid-1960s explosion of inflatable architecture became obscured in postmodern architectural scholarship by the mid-1980s, buried as a minor alternative to mainstream modernism.[26]

Twentieth-century architectural histories tended to focus on changes in space, form, and structure aligned with, and rarely questioning, the necessities, capacities, and desires of modern life. Banham, for example, examined the shift from structural to mechanical systems that afforded buildings greater disregard for contextual constraints –facilitating architects' capacity to maintain the same practice across disparate locations.[27] For him, the inflatable visualized the disappearance of the

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[22] Ilya Prigogine and Isabelle Stengers, *Order out of Chaos: Man's New Dialogue with Nature*, Power and Morality Collection at Harvard Business School (Toronto; New York, N.Y.: Bantam Books, 1984).

[23] Herbert Marcuse, *One Dimensional Man: Studies in the Ideology of Advanced Industrial Society*, Power and Morality Collection at Harvard Business School (Boston: Beacon Press, 1964); Andrew Pickering, *The Cybernetic Brain: Sketches of Another Future* (Chicago: University of Chicago Press, 2010).

[24] Stevens, "Pneumatics and Atmospheres," 169.

[25] Reyner Banham, *The Architecture of the Well-Tempered Environment* (London: Architectural P, 1969).

[26] Felicity Dale Elliston Scott, *Architecture or Techno-Utopia: Politics after Modernism* (Cambridge, MA: MIT Press, 2007); Caroline Maniaque Benton, *French Encounters with the American Counterculture, 1960-1980*, Ashgate Studies in Architecture (Burlington, VT: Ashgate, 2011).

[27] Banham, *The Architecture.*

need for architecture as physical enclosure given modern building systems.[28] However, he, like Stevens, also embraced its sympathetic and continually responsive partnership with its occupants and environment. Both saw no conflict between control and responsiveness, inside and outside, which later scholarship would overlook.

This later scholarship, including late-1970s and '80s emphasis on architectural autonomy, was wary of social prescription through built form, undermining modernism's rational-functional utopian visions.[29] American literary and cultural theorist Frederic Jameson shows that for Italian critic Manfredo Tafuri, an important voice in 1960s architectural criticism, architecture does not construct the experience of society but critiques society as a legible text within the city, understood against what it is not. The semiotic reading of built form that developed in practices like American architect Robert Venturi's as early as the mid-1960s, and further evolved in writings by Venturi with partner Denise Scott Brown, Tafuri, architectural theorist Charles Jencks, and numerous others, emphasized the contemporary architectural surface as a communicative medium.[30] The façade could communicate function and program, and reflect popular preferences, even if the form of the building was a generic 'shed'.[31]

Thus on the one hand, postmodernism, influenced by post-structuralism, rejected modernist prescription and embraced liminal, responsive spaces, suggesting a sympathetic context from which to read air structures.[32] On the other

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[28] Amy Kulper, "Ecology without the Oikos: Banham, Dallegret and the Morphological Context of Environmental Architecture," *Field Journal* 4 (2011).

[29] Critics like the Italian Manfredo Tafuri argued that any social project in architecture could not help but serve the capitalist interests that conditioned its utopian imagination, and thus was to be avoided. He posited that rather than represent its social, political, ideological moment, architecture embodies and produces knowledge from within that moment through the architectural form. Thus, it is limited by contextual logics, even as it operates within an aesthetic realm not entirely subservient to political ideologies. See Manfredo Tafuri, *Architecture and Utopia: Design and Capitalist Development* (Cambridge, MA: MIT Press, 1976), and Fredric Jameson, *The Ideologies of Theory*, ipdated ed. (London; New York: Verso, 2008). A 2019 symposium at Harvard University organized on Manfredo Tafuri by visiting professor Jorge Liernur and professor K. Michael Hays helped inform this point.

[30] Fredric Jameson, *Postmodernism, Or, The Cultural Logic of Late Capitalism*, Post-Contemporary Interventions (Durham: Duke University Press, 1991).

[31] Venturi, Scott Brown, and Izenour, *Learning from Las Vegas.*

[32] Some architects working with inflatable forms, such as members of the collective Ant Farm, were likewise influenced by the media theories of writers such as Marshall McLuhan, and especially interested in the role of television in simultaneous experiences shared across space and time. Their interest, however, led to explorations of the interior psychic states facilitated by immersive air environments, rather than to the emphasis on surface. For more

hand, however, the linguistic read of architecture did not share adequate common ground with inflatable forms, whose semiotically blank and aesthetically stubbornly responsive, rather than reflective surfaces were meant to foment an altered interior experience, psychically and physically, and to mediate outside with inside. Architectural discourse continued to assume architecture as enclosure, so while the postmodern surface could communicate between the two, it stopped short of questioning the separation between exterior and interior. Thus, the linguistic models undergirding late-twentieth century architectural theory left a theoretical vacuum from which to analyze the inflatable and the world it envisioned, and they disappeared as unpredictable, temporary, and, at best, critical, or, at worst, emotional events.

The plastic form's primary contribution to architectural knowledge has less to do with its aesthetics of form or structure and more with the aesthetics of encounter that it mediates, between subjects, air and envelope. By doing away with rigid architectural materials, the element of air becomes sensible as atmosphere in the plastic container, a space to confront the breath of life, of wind, and of the electric apparatus of the blower.[33] A potent example of new tools with which we ought to reconsider the earlier inflatable is American posthumanist scholar Cary Wolfe's recent framing of the Blur Building.[34] The Blur Building by architects Elizabeth Diller and Ricardo Scofidio was a temporary media pavilion for Swiss EXPO 2002 installed on Lake Neuchatel in Yverdon-les-Bains, Switzerland. It was a structure of pure atmosphere, defined by a thick mist that blurred the supporting ramps and public walkways, and gave the confounding sensation of immersion in a featureless but nevertheless substantial structure. Wolfe deploys systems theory to show the building as a complex system in continuous engagement with its environment. The ability to adapt to shifting environmental forces – its tendency to revert to its foggy cloud form and maintain structural integrity as changing winds, temperatures and humidity levels continually modify its shape – demonstrates for Wolfe systems theorist Niklas Luhmann's framing of environment as the outside of a specific system that conditions that system while underscoring its autonomy. We are no longer in a humanist dichotomy of inside and outside, human and non-human, or even

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on Ant Farm, see Felicity Dale Elliston Scott, *Living Archive 7: Ant Farm; Allegorical Time Warp: The Media Fallout of July 21, 1969; plus the Complete Ant Farm Timeline* (Barcelona; New York: Actar, 2008).

[33] The concept of atmosphere is a recent topic of interest in architectural theory and practice. One relevant example is: Christian Borch, ed., *Architectural Atmospheres: On the Experience and Politics of Architecture* (Basel: Birkhäuser, 2014).

[34] Cary Wolfe, "Lose the Building", in *What Is Posthumanism?* (Minneapolis: University of Minnesota Press, 2009).

embracing difference. The inside of the cloud structure and its outside are not ontological opposites. Instead, what links the system to the world and makes the world available to the system is what hides the world from the system so the latter maintains its integrity. Blur produces an immersive experience out of focus to emphasize our dependency on visual sensation, exposing the paradox that this dependency always comes up short as the world is never fully observable despite conditioning what we see.

In reflecting on breath, contemporary Italian philosopher Emanuele Coccia poetically articulates air architecture's undeniable yet fraught bond with its environment:

> [Breath] is a vibration that touches, simultaneously, the living being and the world that surrounds it. In breath, for the duration of an instant, the animal and the cosmos are reunited; and they seal a different unity from the one marked by being or form. It is, however, with and in the same motion that living being and world consecrate their separation.[35]

Graham Stevens was already grappling in the 1960s with the unity of separateness and togetherness between the bubble – the material containing the air – its environment, and its occupant: "The membrane of the [inflatable] structure becomes an *extension of one's skin*, seen from inside the body, as it indents, sweats and changes shape, as the person inside moves over and through various locations…"[36] His allusion to skin suggests how the closed systems of space travel can be reconsidered toward more porous relations with the conditionally exterior environment.[37] In his inflatable structures, the subject was as if inside the Earth's atmosphere, shielded from undesirable encounter with outside forces. However, the thin membranes also continually registered the tensions of those forces, emphasizing the tenuous link to the exterior. We arrive at Tafuri's complex enmeshment between architecture and its outside, but in a system that considers not only matter but air, not only the human but the non-human. The living, breathing inflatable organism cannot be adequately represented but must be *inhabited*.

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[35] Emanuele Coccia, *The Life of Plants: A Metaphysics of Mixture*, English edition (Medford, MA: Polity, 2019), 120.

[36] Stevens, "Pneumatics and Atmospheres," 167-8, emphasis added.

[37] See Eva Horn's mention of subject-object rupture related to this extension of skin in: Eva Horn, "Air as Medium," *Grey Room* 73, no. 73 (2018): 6–25

# Flux:
# The Ontological Status of Inflatable Forms

a response by Iman Salty

The formulaic "reveal, make manifest, extend, relate" encapsulates the simultaneous material and immaterial ontological status of inflatable architectures investigated by Katarzyna Balug in "Outside of Architecture: Between Mediating and Navigating the Air." What does it mean to *reveal* the environment and how does this disrupt and contribute to our experience of spaces? With Balug's discussion of Graham Stevens' architecture—alongside correlating moments in the history of science, technology, space travel and flight—it becomes clear that at the core of this examination is the embodied, sensory experience of entering and inhabiting these inflatable structures. The phenomenological is intrinsic: how our relationships with the tangible materials framing the bubbled construction is enmeshed and mediated by the invisible properties providing the form constituting the contained architecture.

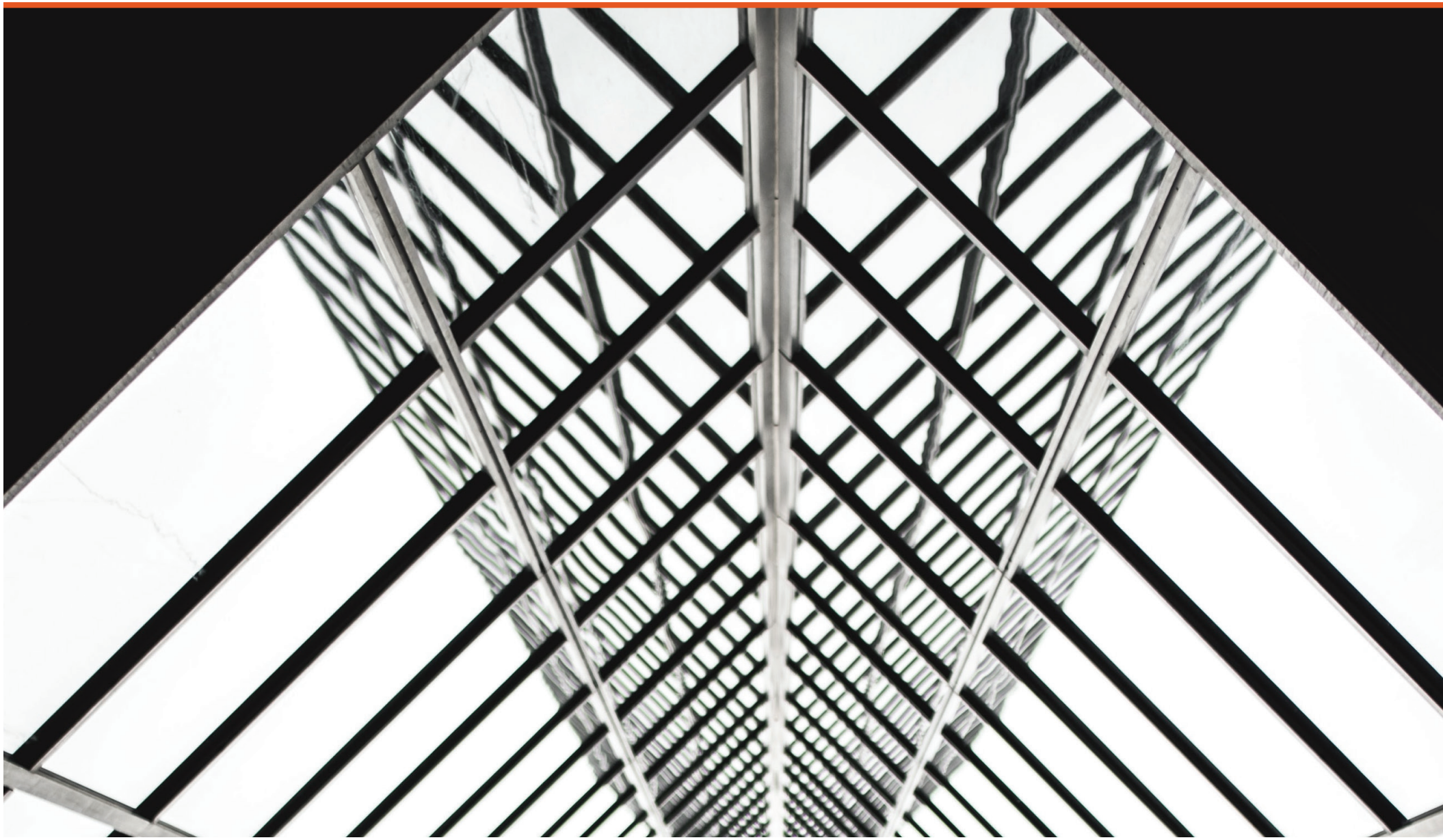
The wavering perceptibility of materials in these air-filled forms—in the sense that alongside the mediating plastic membrane, perceiving the infinitesimally contained matter extends beyond the bounds of human vision—is something I keep returning to when thinking about the idea of "revealing" the properties and aesthetics of air. In an effort to draw more from the fluctuating conditions of inflatable structures at the mercy of its materialities, I want to engage these architectures with thing theory, specifically notions of "entanglement" as discussed by archaeologist Ian Hodder. For Hodder, entanglement describes the various dependences and dependencies binding things to humans, humans to things, and

things to things. In this sense, entanglement metaphorically embodies the fluctuating responsiveness within these relations. The ontologies of these things and their "thingness" so to speak is revealed through their dependence on each other. One could then argue that the agency of things—as both material and immaterial matter—exists in these entangled, contingent relations.

For the inflatable forms, the structure, environment, and human occupant act on one another in a way that transforms the space itself and the experience of inhabiting the installation and sensing the surroundings. It is this responsiveness that seem to "reveal" and make perceptible the aesthetics of air. The reveal requires dwelling in the interior at the mercy of the exterior in order for this response to be recorded, where aesthetics of air are inscribed through the temporality of this experience. Hodder's notion of entanglement is useful for considering the ways in which inflatable architectures perhaps require human agents as mutually constructive and destructive subjects entrapped in the forces of built environments. The potential for destruction resides in these interactions, as physical engagement with the inflatable surface contributes to the decay of the architectural membrane while transforming the spatial experience. Balug astutely recognizes the responsiveness of inflatable architectures as vulnerabilities. The susceptibility of form to environment and occupant becomes intrinsic to the longevity—or rather ephemerality—of the ontological status of the form itself. We can expand the ways we think about the fluctuating status of these structures through their temporalities that defy permanence, and yet are determinant for revealing elemental forces. In this vein, the most tangible ontology of inflatable form exists in responsiveness.

If inflatable architectures are distinguished by their temporality, then how is this contingent on specific atmospheric conditions that impact the aesthetics of air? In other words, how does the aesthetics of air evolve in response to climate change, or even the economy of airspace? Considering contemporary projects such as *Museo Aero Solar*, an international initiative by collective Aerocene in association with artist Tomás Saraceno that repurposes plastic bags into air sculptures, or *The Gas Trap* by architecture group Seattle Design Nerds, which comments on human dependence on gasoline, the inflatable architectures of today seem to prioritize not only the experiential but also a responsibility of environmental activism. As Balug contextualizes Graham Stevens' inflatable architectures within histories of militarist applications of technologies and the Space Race, the inflatable structures of present and future appear to also be confronted with the dilemma of the increasing politicization of air; one that continues to reimagine the status of the perceivable and imperceivable authority of air as a material property.

# research spotlight



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# Improvising Field Research in COVID-era Hackerspaces

Ben Jameson-Ellsmore

Hackerspaces and makerspaces are community-oriented technology and art workshops facilitating new forms of public life and filling infrastructural gaps in cities (but for the sake of brevity, I refer to both as hackerspaces here).[1] My dissertation project aims at understanding how hackerspaces relate to the built environment and how they create new imaginaries of citizenship in U.S. cities like San Francisco and Detroit. Here I reflect on some of the challenges I faced researching these spaces as they constantly adapted to unaccommodating city environments before and during the pandemic. During my field research, I had to learn to follow them through their various improvisational strategies.

The relation of a hackerspace and its members to the built environment has never been straightforward. Even before the pandemic, hackerspace members often discounted the importance of any single building in determining the character of their organization. As such, I decided my methodological approach had to go beyond photographing and studying hackerspace buildings to include participant observation and interviews. Dozens of interviewees expressed that hackerspace buildings are often just the best their organizations could find at the time; they make do after receiving eviction notices and having to quickly relocate to a new space. Their spatiality is defined by improvisation, where "people address what might be

[1] I parse the finer distinctions between hackerspaces and makerspaces in my forthcoming dissertation.

possible to do with what they have access to now," as AbdouMaliq Simone puts it.[2] Privileging social forms over built forms makes sense because of the improvisational situations of hackerspaces. Municipalities are often puzzled with hackerspaces on a legal level. Architecture and zoning codes which are accommodating to hackerspaces are rare, meaning hackerspaces must adapt to less-than-ideal spatial situations. The fact that hackerspaces aim to be like Swiss army knives, with as wide a range of tools as possible, creates problems. For instance, do certain activities belong in industrial zoning or mixed-use? Most hackerspaces contain tools which could be interpreted as code violations in any given zoning (figure 1). Rather than simply accepting these restrictions, hackerspaces often attempt to find their own solutions by altering their buildings and installing their own safety features, and sometimes end up being evicted as a result.

Improvisation is an overarching theme before and during the pandemic, both in hackerspaces themselves and in my dissertation research process. COVID-19 interrupted much of my 2020 research, making it impossible to attend most hackerspaces in person or consult non-digitized records relating to hackerspace buildings. In other words, I had to alter my methodological approach and research questions again to observe the ways in which hackerspaces adapt to crisis conditions. I had to conclude much of my in-person visits and rely more on digital hackerspace platforms to understand how hackerspaces relate to architectural and urban space before and after the pandemic.

During the pandemic, much of the built environment proved incapable of facilitating social distancing, as exemplified by improvised sneeze guards for cashiers and queues wrapping around grocery stores. The pandemic transformed everyone into what architect Joel Sanders calls "noncompliant bodies," or people who are impeded rather than enabled by the built environment and must find new ways to make do.[3] But hackerspaces already operated within unaccommodating environments. Because of their tenuous relation to architectural and urban space in U.S. cities, hackerspaces already had adaptable infrastructures in place that they could fall back on during the pandemic. These include their already solidified social

[2] AbdouMaliq Simone, *Improvised Lives: Rhythms of Endurance in an Urban South* (Cambridge: Polity Press, 2019), 30.

[3] Kim Tingley, "How Architecture Could Help Us Adapt to the Pandemic: The virus isn't simply a health crisis; it is also a design problem," *The New York Times Magazine*. June 9, 2020, https://www.nytimes.com/interactive/2020/06/09/magazine/architecture-covid.html.

Figure 1. A masked hackerspace member slides tools and miscellaneous items down an improvised chute during their move to another, more suitable building. The industrial laser cutter in the foreground is part of the reason for this move. San Francisco, 2020. Photograph by author.

bonds and digital communications platforms like Slack, Discord and Discuss. Before the pandemic, hackerspace members used these supplemental infrastructures to extend their gathering sites to members who were not physically present or fell back on them after being evicted and temporarily without a brick-and-mortar space. During the pandemic, I had to rely on hackerspaces' digital infrastructures for my research. I was able to successfully execute this transition thanks to the connections I already made with hackerspace users during my participation in these highly variegated subcultures and in their physical spaces before COVID. Because of this work, I was even able to safely attend one hackerspace in Detroit in person after Michigan stay-at-home orders relaxed.

The skills I had developed to adapt to variegated hackerspace cultures were hard-won, but they came in handy as hackerspaces in turn adapted to the pandemic. As an outsider more familiar with formal educational institutions in the U.S., it was, and still is, at times difficult and uncomfortable for me to participate in hackerspaces. While many hackerspaces were open to the general public, physical access does not guarantee you will make useful connections with established members. Most hackerspaces are "doocratic," meaning they privilege action over deliberation and aim to empower users to make what they will of the space without necessarily asking permission. This can mean freely painting and graffitiing on interior walls, experimenting with tools and beginning one's own initiatives for improving aspects of a hackerspace's building. This gave me a sense of vertigo, first because I'm accustomed to academic institutions where every initiative requires an approval form, and secondly, because I was determined to conduct my research ethically, meaning asking permission was critically important to me. This made me feel like

one of Sanders' noncompliant bodies, at first, not because I was impeded by hackerspace environments, but because I felt paralyzed by the imperative to act freely while simultaneously obeying more-or-less implicit norms of conduct.

I had to learn to be malleable given that each hackerspace culture has different manifestations of doocracy with implicit rules. I had to try various strategies in order to forge interpersonal connections, conduct interviews, and gain physical access to hackerspaces before the pandemic. In exchange for a tour and interview with a member at the leftist and anticapitalistic Oakland Omni Commons, I restocked and cleaned a particularly grungy bathroom as a way of participating in their economy of favors. At Noisebridge in San Francisco, everyone who walks in the door qualifies as a member, but this does not mean everyone feels like one. To better integrate myself, I attended weekly meetings and helped another member assemble an infinity mirror to decorate the hackerspace's walls. At Double Union, a feminist hackerspace for female and nonbinary members only, I conducted phone interviews facilitated by referrals from members of the larger hackerspace culture in the Bay Area. As a white, straight, cisgender male, I was fortunate to finally receive an in-person tour of the space but also understood that I could not qualify for membership and frequent access. The Michigan hackerspaces I researched were also more exclusive and membership-based than the more public facing hackerspaces in the Bay Area. This required me to become a paying member in some cases. i3Detroit, in Ferndale, just north of Detroit, allows guests into the space at the discretion of its present members. But to gain regular, unmonitored access as a member, I completed a lengthy scavenger hunt for fire extinguishers, emergency exists, medical kits, and memorized specific policies. These items were especially important to i3Detroit because of its unusually large membership of over 150 people. If that many people are to conduct themselves doocratically, they ideally should be able to address ensuing mistakes and crises doocratically as well.

OmniCorpDetroit, in Detroit's Eastern Market district, was the most challenging to access. I had to become a fully initiated, dues-paying member in order to visit more than a couple of times. Like most hackerspaces, OmniCorpDetroit began as a more public facing hackerspace. However, it later developed in the opposite direction, after the few volunteer members who had been facilitating public events and access experienced burnout. When these members gave up, OCD became more exclusive. After reaching out for a tour using the hackerspace's minimal website, I needed to acquire two sponsors, or members to vouch for me. Neil and Achille agreed. I was interviewed by the larger membership at a monthly gathering, where I explained my dissertation project. They asked me some pointed questions about how I planned to conduct research ethically in the city of Detroit, which was apprehensive of what they called "drive by journalists" who stay for a

week and then purport to be experts. After hearing that I'd stay in Detroit for the better part of the year, they approved me, and I became a member. However, I did not feel like a member until I constructed my own personal workbench using the hackerspace's own tools and infrastructure (figure 2).

COVID-19 all but eliminated public access to hackerspaces. I3Detroit and Noisebridge closed entirely to public visitors and guests, and reduced access to small skeleton crews. My research in these spaces had to happen through screens. Luckily, hackerspaces were still active even without their brick-and-mortar establishments acting as physical public interfaces. One i3Detroit member named Que explained that a hackerspace is a "strata of layered infrastructures," and the pandemic emphasized their point. Hackerspaces switched infrastructural gears during COVID, relying more on their digital platforms. Video chats were used for weekly meetings where they hashed out the evolving COVID guidelines of their states and cities. I attended as many of these meetings as possible while keeping track of conversation threads on Slack and changes made to wiki pages. Staying involved in digital hackerspace communities helped me to continue to identify

Figure 2. Constructing a workbench in OmniCorpDetroit's downstairs workshop. Detroit, 2020. Photograph by author.

individuals to approach for telephone interviews and kept me abreast of how they were responding to the COVID-19 crisis.

Because of OmniCorpDetroit's members' familiarity with each other, the relative ease of coordinating safe use with a small number of people, and the space's larger square footage, members were able to still use the space. I also returned in person after Michigan's stay-at-home orders partially relaxed and after encouragement from other members. Everyone attended with masks and communal hand sanitizer was provided by the space's budget. We were also able to move our personal workspaces to sequestered corners in this cavernous hackerspace building. While I was there, I was fortunate enough to see Project Apollo in action. Project Apollo was Ford Motor Company's rapid prototyping operation for PPE including respirators and face shields.[4] From my sequestered personal workspace, I observed documentary film crews entering and exiting, and interviewed one of OCD's founding members at a distance as he tinkered with various valves, tubes and face coverings.

Observing Project Apollo at OmniCorpDetroit was one of the highlights of my research experience, but it would have been impossible without first experiencing the wide variegation among hackerspace cultures. Each required a different approach and I had to figure out the roadmap as I went, with varying success. I want to point out that I still never felt like I fully belonged in any of these spaces, despite being a paying member in some and despite the radical inclusivity practiced in others. I found this fact extremely uncomfortable, like becoming acquainted with a different academic culture in a different university department a dozen times over the course of a year of field work. Sometimes I clicked with members who were curious and receptive to my project, and sometimes it took me months of repeatedly attending meetings before I made a single useful connection. However, I was not simply in the right place at the right time to observe Project Apollo in Detroit or participate in other hackerspaces' digital platforms; it could not have happened without my prior legwork gaining access to hackerspace buildings. Because of an improvisational approach to improvisational spaces, my research was not entirely hampered by COVID-19 and I was able to observe hackerspace cultures as they variously decoupled from or hunkered down in their buildings.

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[4] Ben Jameson-Ellsmore, "Hacking the Pandemic: Hackerspaces and Makerspaces Respond to the COVID-19 Crisis," *PLATFORM*, August 24, 2020, https://www.platformspace.net/home/hacking-the-pandemic-hackerspaces-and-makerspaces-respond-to-the-covid-19-crisis.

# Crafting Environmental Citizens

Matthew K. Limb

I never intended to devote my doctoral studies toward the environment. When I began my Ph.D. in California in 2015, my research interests pertained to questions of materiality, queerness, sexual futures, and craft. For me, the process of a dissertation continues to be an endless lesson in the art of letting go and allowing for change and the unexpected.

During the summer of 2018, I embarked on a three-week research trip across the southwestern United States. At the Ceramic Research Center (CRC) on the campus of Arizona State University and the archives of the New Mexico Museum of Art, I hoped to find a few gems that would bolster my project on queer craftspeople in the American West, AIDS, and the potentiality of tactility and the surface of an object as a site for sexual expression. I found nothing. During the 937-mile drive through deserts and red rock mountains from Santa Fe to Santa Barbara, I agonized over what to tell my advisor.

Driving in the American West begs you to contemplate the landscape and your own connection to it. Somewhere near the Arizona border, I recalled an image published in a catalogue by the then-Pasadena Museum of Art for their exhibition series *California Design* showing ceramic vessels photographed in the desert. This image and the long drive through the surreal and majestic landscape ahead of me prompted my recollection of a series of scans I took in the CRC on a whim because I found them unusual. In the Summer 1974 issue of *Studio Potter* magazine, a periodical aimed toward practicing potters in the United States operating small-scale production, the editor Paul Soldner focused the publication on the relationship

between studio ceramics production and the emerging environmental movement. The needs of the ecologically-minded craftsperson ranged from alternative energy sources (atomic, solar, wind), the ethical sourcing of materials, and spiritually-infused practices aimed at giving back to the Earth.

Through centering environmental concerns in craft production and its objects, a network of issues quickly surfaced: materiality, technology, land use, (de)colonization, race, place, urban/rural, national and global politics, citizenship, and economics. For example, the materiality of studio craft (ceramics, glass, metalwork, fibers, and woodworking) necessitate a direct connection to the land, and its processes utilize both organic and natural materials. Whether this be plant fibers within textiles, the innards of animals for basketry, or minerals for ceramic glazes, craft provides a unique lens to explore an object's relationship to the earth. However, whose craft and whose earth? Histories of American studio craft are predominately white and rarely explore Native American makers who, through philosophy and the adoption of processes, were crucial in shaping how craftspeople in the United States thought about and engaged with the land. The association of Native Americans with ecological concerns and an environmentally based citizenship was further reinforced (and complicated) through images in the popular magazine *Life*, the counterculture publication *Whole Earth Catalog*, art periodicals like *Studio Potter*, and advertisements of the so-called "Crying Indian."

This project seeks to explore how artists, craftspeople, and designers engaged in environmental problems across a fractured political, social, economic, cultural, and racial landscape. It centers Native American voices as stewards of the land, identifies how white artists turned toward indigenous systems of knowledge to combat an existential threat to our planet, and complicates the construction of the ecological citizen. The artistic production occurring on communes, reservations, and small cottage industries dotting the American West created networks between Native Americans and white makers. I emphasize the agency of indigenous peoples and complicate the collaboration/appropriation that occurred between these groups in the hopes of moving toward a decolonized history of craft and land use.

By choosing craft as a lens for environmental concerns, I emphasize the importance of the local and the intimacy inherent in these objects. Be it a ceramic cup, a woven wall-hanging, a basket made from wild grasses, or a wood-turned bowl, these are objects that make connections to the materiality of a place on a scale designed for the human hand and human-sized dwellings. The small scale and the preponderance of craftspeople sourcing local materials works in tandem with environmental preservation rather than actively disrupting the landscape it is built upon.

Like nearly every other aspect of contemporary life, my research was derailed by the novel coronavirus. A year ago, I received a grant to conduct dissertation research during Spring 2020. I packed up my apartment and hit the road on March 17th—the same day Governor Gavin Newsom shut down the state of California. It became clear that the research trip I planned would not be possible. Like the frustration that comes with writing a dissertation, COVID-19 has been a lesson in letting go, allowing room for growth and change, and finding creative approaches to research. No dissertation is written in a vacuum. The virus has disproportionately impacted indigenous communities and other communities of color that lack adequate access to medical facilities and experience environmental racism, creating worsened health conditions. The murder of George Floyd, a black man in Minneapolis by police officers, renewed the national conversation on racial justice for Black and Indigenous People of Color (BIPOC) and further illustrated the very real conditions of the structure of white supremacy. Our current moment feels incredibly relevant to my research. It has required self-reflection and interrogation as to how, I, a white, queer, non-binary, first-generation college student could complete this project without enacting further violence upon these communities and use it to empower BIPOC voices. It will not be easy; I have much to learn and will make mistakes, but it is vital that we tell these stories.

Since moving to California, I have experienced wildfires, mudslides, drought, oil spills, heat waves, and other consequences of climate change. The world we inhabit is warming and has produced the dire conditions the western United States faces year after year. It is crucial that we learn and remember this history in order to enact environmental justice, craft a sustainable future, and build a better world for everyone.

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# reviews

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BOOK:

Christopher P. Heuer
*Into the White: The Renaissance Arctic and the End of the Image.*
Brooklyn: Zone Books (2019), 256 pp. 69 b/w ills.
$32.95

Book review by Hannah Kagan-Moore

Christopher Heuer's *Into the White* attends to phenomena that so often mark conclusions or dead ends in art history rather than beginnings: absence, loss, disintegration, the unseen, and the unknown. Opening with Martin Frobisher's ill-fated 1578 voyage from England in search of a northwest passage to Asia, Heuer introduces readers to chronicler Thomas Ellis' attempts to illustrate an iceberg. The resulting images of this "great and monstruous peece of yce" near abstraction, and deftly exemplify the core concerns that thread through the rest of the book. As Europeans explored, documented, weathered and succumbed to the Arctic, the resulting images and texts spoke back to European crises of the day: Protestant iconoclasm, the epistemological limits of the image, and the relationship between the unseen and the unknown. The project of visualizing the non- or poorly-visible, Heuer argues, resonated with Protestant arguments about the dangers of the image, the reification of "whiteness" as purity, and open questions about how and what objects mean.

Chapters one and two situate the project within the larger scope of Arctic and environmental studies, and subsequently within antique and early modern European climatic thought. The third chapter of the book addresses questions of scale and distortion, exploring the limitations and slippages that the Mercator projection necessarily produces in depicting the North. Chapter four turns to the question of European understandings of Inuit and other Indigenous peoples, and the ways in which depictions of abducted Inuit peoples disrupt neat boundaries of selfhood and Otherness from the perspective of the European viewer. Heuer provides a brief interlude in chapter five, examining the works of the Swedish bishop Olaus Magnus. This short chapter briefly but incisively connects Arctic "ethnography" directly to debates about the value and use of images. Chapters six and seven connect early modern objects and artifacts with a longer *durée* of art and object making in relationship to Arctic environments. Here, Heuer contrasts fragmented visions of the Arctic with literally fragmentary prints recovered from the Barents expedition with nineteenth-century colonial visions and utilitarian images of Soviet settlement. This long view illuminates the central role of instability, uncertainty, and the unknown in European thought and art about the Arctic.

Despite the firm location of the bulk of the material in the early modern period, Heuer's theoretical departure offers a new and critical turn with wide applicability across disciplines and time periods. For instance, his examination of the environment and the image beyond the visible resonates deeply with Grace Kuipers' discussion of Diego Rivera's *Song of the Earth* published in this volume of *react/review*. Both works take as a core question what it means to depict the unseen or unseeable (in Kuipers' case, the subterranean, rather than the Arctic), and what it means to render such a site legible. These works mark a critical turn in the scholarship: approaching the seen and unseen, absence and presence, gain and loss, rather than self/other as a primary dialectic through which images communicate meaning and power relationships. For Heuer, Europeans viewed the Arctic itself and the Inuit peoples who lived there as "refus[ing] to submit to a clear category of alterity."

Despite the specificity of his topic, Heuer certainly cannot be accused of an overly-narrow focus. *Into the White* draws comparisons and analogies that cross hundreds of years and a vast range of topics. Like the cache of congealed, frozen, and subsequently re-separated prints that form the main subject of chapter six, "Arctic Ink," *Into the White* brings together a body of objects ranging from ships' logs to ruined Mannerist prints, Caspar David Friedrich paintings, and Soviet pamphlets. This material forms the basis for a comprehensive and dispassionate examination of three hundred-odd years of expansion and loss alongside accretion and accumulation.

The book wisely steers clear of invoking contemporary polemics of climate change, instead making a decidedly historical case that the visual and sensory, as much as other phenomena, drive human relationships to environmental sites. There is a particular dimension in which that exploration of the visual and sensory is limited. Although chapter four, "The Savage Episteme," thoroughly addresses European images of and interactions with Indigenous peoples, Heuer's sources almost exclusively come from the perspective of European explorers. The lack of Indigenous voices is a conspicuous void in a text otherwise conscious of and attentive to questions of absence. A future study engaging Indigenous epistemologies and narratives of the period in greater depth could provide a critical future corollary to this richly-written, robustly-researched, and innovative text.

# EXHIBITION:

## Toward Our Digital Futures, a review of @socialdistancegallery

Matthew K. Limb

Our engagement with art has fundamentally shifted during the COVID-19 pandemic. As museums and galleries shut down or severely reduced the number of visitors to contain the spread of the virus, the in-person viewing experience of art was but another halted aspect of daily life. Increasingly, the art-viewing public turned toward Instagram and other visual social media platforms. Long used by artists for networking and to reach a wider audience for their work, Instagram has emerged as a pivotal resource (especially for young artists) to connect in a time of limited in-person interaction.

For graduating BFA and MFA art students, this has meant the loss of their thesis exhibition. This event is a rite of passage in one's career, and the culmination of years of work. To alleviate this loss, Professor Benjamin Cook of the Art Academy of Cincinnati created the Instagram account @socialdistancegallery. Boasting over eighteen thousand followers, the Social Distance Gallery has hosted hundreds of BFA and MFA thesis exhibitions from institutions around the globe during the pandemic.

Although imperfect, digital platforms provide a plethora of positives in our current moment: accessibility, giving the viewer autonomy for engagement, and greater ease in collaboration and feedback. For Cook, although the inability to translate an object's physicality is among the app's drawbacks, Instagram's algorithm is yet more problematic. By favoring engagement and connection, Instagram has "the potential to amplify the already unbalanced social structures that exist within the art world today. There is gamification, which creates a new economy of visibility through likes and comments."[1] Cook does not think these drawbacks should dissuade artists (or the public) from using the platform for art-

[1] Benjamin Cook in discussion with the author, November 2020.

viewing experiences, but rather advocates for greater digital literacy so that viewers can make informed choices and use the platform effectively.

Cook would like to see a fundamental reunderstanding of the digital and our experience thereof. The digital landscape was a central part of our lives prior to the pandemic. However, working remotely, the dependence on online shopping, and social gatherings hosted on Zoom have all made it more apparent. There exists a push to return to 'normal life', or 'IRL '(a common internet term, *in real life*). But both terms imply that our current experience is somehow lesser, fetishizing" digital and physical media as a hierarchical binary system with physical as the paramount experience."[2] By readjusting our experience and understanding of digital media and the way it is used in our lives, Cook believes we better reflect contemporary culture and can better understand the importance of algorithm transparency and lack of neutrality in computer code.

In addition to greater digital literacy, Cook would like artists and audiences to adjust their expectations and intentions when engaging with the digital. When I write an exhibition review, my approach is oriented around the object's physicality and the use of space. These attributes do not translate well to the digital sphere, and digital viewing is likely to leave viewers like me disappointed as a result. Cook argues that artists must understand their work, not as a singular object, but in a state of duplicity—there is a physical version and a digital one. If an artist approaches their physical art object only through the lens of sharing information, inevitably information will be lost. Rather, by understanding that the experience of physical and digital objects are separate, the artist can exploit these aspects of their work that best translate to a digital medium during the documentation process.

Cook sees the documentation process as crucial to effective engagement with a digital object. This, he says, is a key area in which young artists need more education and institutions are lagging. He would like to see a more robust digital literacy education within art programs that takes into account not only the many aspects of digital documentation (location, cropping, lighting, animation, sound, etc.), but greater discussion about" how physical marks on the surface will translate to a digital image and how digital languages ' protocols alter our relationships with physical objects." [3] For Cook, students require an understanding of the fluidity between digital and physical spaces to operate effectively in our current landscape. But this teaching must go beyond specific digital platforms—to continue innovating, students must critically engage with the effects of digital protocols.

[2] Benjamin Cook in discussion with the author, November 2020.

[3] Benjamin Cook in discussion with the author, November 2020.