DIALECTIC IX: DECOLONIZING
DECOLONIZING ARCHITECTURAL TECHNOLOGIES

Design and technology are inextricably connected, radically impacting the way we produce form and inhabit space. In the last several decades, technological shifts have pushed efficiency, performance, and data mediated approaches to spatial production under the guise of objectivity and universal applicability. But the distance of these physical and digital tools from the idiosyncrasies of the human hand and mind, does not make them neutral instruments. Their placement after **decolonizing** (a process of achieving self-realization of a previously dominated people) in the title of *Dialectic IX* is strategic. It strips away from **"architectural technologies"** all claims of universality, scientific neutrality, and knowledge progression, reframing both decolonization and technology as cultural practices. Furthermore, the focus on techniques in our thematic identifies the locus of resistance to spatial inequity and colonial erasure, not elsewhere but squarely in designers, preservationists, urbanists, cartographers, engineers, programmers, and most of all in educators.

Acknowledging technology's role in perpetuating and amplifying spatial and social structures that discipline human behavior, choices, and imagination, how might it be used instead as a tool for delivering cultural sovereignty? We have numerous examples of this. In recent years, preservationists, anthropologists, and archaeologists have adopted digital techniques such as 3D scanning, photogrammetry, and augmented reality to protect, interpret, and transmit not only tangible or built heritage, but also intangible expressions of culture--performances, practices, oralities, and lived experiences. Indigenous artists and urbanists are employing digital media technologies such as virtual reality, mobile apps, and sound recording as new modes of storytelling that are immersive, relational, and non-linear. In architecture, interactive tools have fostered participatory and collective modes of working, expanding the agency of designers and community end users in creating more adaptive and inclusive environments. The building industry has transformed vernacular building materials such as earth and wood by connecting them to advancements in construction technology and contemporary concepts of ecological design and circular economies. Geographers,

film makers and landscape architects have also brought the act of mapping into question. Learning the notation of landscapes with petroglyphs, natural observatories, smoke signals, and dance has brought into sharp focus scientific mapping as an instrument of cultural domination. The emerging field of cultural mapping, in conjunction with geo-spatial information technologies, has been employed to protect tribal resources, expand the potential for engagement and empowerment for indigenous communities, and spatialize new ways of knowing the relationships between people and places.

The editors of *Dialectic IX* welcome submissions on the braiding of different cultural attitudes to building construction with industrialized modes of project delivery, recoveries of endangered ways of building, harvesting materials, and the application of technologies both material and immaterial, animate and inanimate, in design thinking and practice. How are the lines of inquiry opened by immersive storytelling, cultural mapping, and the collection of indigenous epistemologies disrupting status quo practices of communication, analysis, and production employed in the design of cultural landscapes? Do we have good examples of new research methods in design that address the biases implicit in technology? Are there case studies that insist on human processes to offset technology's tendency to favor merciless efficiency, optimization, and cost-effectiveness? How are colonized peoples re-appropriating the technologies that have excluded, erased, and othered them in the past?

"Decolonizing Architectural Technologies" not only responds to the social inequities perpetuated through notions of knowledge progression and human advancement, but it also makes space for new directions in design technologies, informed by diverse ways of knowing and creating. *Dialectic IX* invites articles, reports, documentation, interviews, and photo essays on best practices of decolonizing architectural technologies. Possible contributions may also include mapping of ongoing debates across the world, and reviews of books, journals, exhibitions and new media.

EDITORIAL

DECOLONIZATION IS NOT A VIRTUE SIGNAL. IT IS A CALL TO ACTION.
SHUNDANA YUSAF, TONIA SING CHI

Tonia Sing Chi's work explores the link between place-based building technologies and collective, cross-cultural approaches to design and preservation. She is a practicing architectural designer, preservationist, and scholar with broad experience in natural building, subsistence farming, and community-centered models of practice. Previously, she was a KPF Paul Katz Fellow where she researched the role of architecture and planning in dispossession and displacement in the settler colonial context of Sydney, Australia and how we might work towards the decolonization of urban land. She has taught community design-build at UC Berkeley's College of Environmental Design and has partnered with several non-profit organizations advocating for food justice and housing security on Chochenyo and Ramaytush Ohlone land (the San Francisco Bay Area), where she is from. Tonia is a core organizer with Dark Matter University and a founding member of Nááts'íilid Initiative, an Indigenous-led, coalition-driven CDC that strengthens the cultural and economic resilience of Dinétah through self-reliance initiatives in the built environment.

Shundana Yusaf is an Associate Professor of Architectural History and Theory at the School of Architecture, Uni–versity of Utah. Her scholarship juxtaposes colonial/ postcolonial history with sound studies in architecture, framing each as a force of globalization. She is the author of *Broadcasting Buildings: Architecture on the Wireless, 1927-1945* (MIT Press, 2014) and the coordinator and primary author of *SAH Archipedia Utah* (Virginia University Press, 2019). She is currently completing the manuscript of her third book project: *The Resonant Tomb: A Feminist History of Sufi Shrines in Pakistan.* Together with Ole Fischer, she is the founding editor of *Dialectic*.

In addition to teaching and scholarship, she is the founding member of *Nááts'íilid Initiative*, a Navajo Community Development Collaborative, committed to strengthening the cultural and economic resilience of Dinétah through initiatives in the built environment and sweat equity housing.

DECOLONIZATION IS NOT A VIRTUE SIGNAL -IT IS A CALL TO ACTION

TONIA SING CHI, SHUNDANA YUSAF

For the master's tools will never dismantle the master's house. They may allow us temporarily to beat him at his own game, but they will never enable us to bring about genuine change.[1]

— Audre Lorde

This issue of *Dialectic* is published during a global pandemic, which suspended all non-essential activities involving human interaction and in-person gathering. We called upon technology to solve the human problem—to fix the disruptions in our daily lives caused by nationwide lockdowns and physical distancing measures. Those of us who were afforded the privilege of working and living remotely took to the internet to communicate, socialize, and gather from our homes. *Dialectic*, too, shifted to the digital realm, with Issue IX: *Decolonizing Architectural Technologies* being the first to be published as an online journal. The call for papers to decolonize architectural technology went out before the worldwide shut downs and came into relief in a different world. Receiving abstracts and papers in response to that call during a time of accelerated dependence on digital tools is not ironic, but timely. This year has only underscored the importance of critically interrogating the stories we tell about progress, innovation, and technological saviorism.

Consider the ways in which video conferencing has provoked a comparative critique of digital versus physical meeting spaces, bringing attention to the inequities coded in our workplaces, institutions, lecture halls, and meeting rooms. We were quick to praise the gridded view of our new virtual meeting spaces for equalizing communication and democratizing collaborative work, with each individual—from intern to principal, from student to professor, from audience member to keynote speaker—occupying an equally sized rectangle on an orthogonal grid, eliminating the hierarchies that characterize our physical spatial arrangements. Technology is often portrayed as evolving and improving humanity towards greater neutrality, objectivity, and equality. In collaborating closely with colleagues on Navajo Nation through unreliable internet connection, however, we have witnessed firsthand how our new dependence on video conferencing for communication has amplified the digital divide, exposing the impact of connectivity barriers and the circumstances of our domestic lives on equal participation.

Technology deepens and amplifies discrimination *by design*—and it becomes especially sinister as it does so under the guise of a neutral, universal lens. We have devised systems of measurement and weight to prove 'primitive' minds were smaller than European minds, designed facial recognition technologies to both target and misread people of color, and invented techniques for the continued subjugation of women.[2] Research shows that administrative and secretarial information on our AI apps is provided in female voice, while law, finance, and other higher function information is covered in male voice. Indeed, as Beth Coleman argues, race itself is a technology, one designed and deployed to segregate and sanctify the structural injustice experienced by racialized groups.[3]

Architectural technologies—from computer aided design (CAD) and building information modeling (BIM); to construction materials, means, and methods; to mechanical, electrical, and plumbing systems—are no different. None of them offer objective technical solutions for optimal production and performance. They, too, are designed by society and shaped by cultural, institutional, and funding biases. Science has built a reputation as a matter of fact, capable of fixing our human prejudices and errors. In reality,

it is tied to institutions of European imperialism and White hegemony, reflecting the values and ideation of people with wealth, power, and influence. Anyone in the business of production of knowledge and architectural research knows that so-called simplicity, clarity, uniformity, and objectivity projected in science and technology is achieved only through aggressive pruning of the complexity and chaos at the heart of any data and experiment. The elegance of a simple formula comes about only by rounding up and weeding out race, gender, religion, culture, ability, and language. Textbooks, for example, separate mechanical, electrical, and plumbing systems from the historical context in which they were invented and developed to stabilize them as technological "facts." This observation is nothing new; historians and philosophers of science like Paul Feyerabend have been making it since 1975.[4] Emboldened by Decartes' body-mind divide, scientific knowledge pretends as if "ideas" are independent of the bends of thought of embodied minds of those who invent those ideas.

This past year has also catalyzed a national reckoning with a second pandemic: systemic racism. It was not until we—as a global society—witnessed the murder George Floyd at the hands of state-sanctioned police violence that this centuries-long reality spread into the collective consciousness of those who have been shielded by the invisibility and neutrality of Whiteness. Widespread racial unrest has also brought the term "decolonization" (among other words such as anti-racism) into even greater academic and public discourse. We are being called upon to decolonize *everything* from our syllabi, to our bookshelves, to our closets, to our diets, to our newsfeeds. For the first time, people in the United States are learning and verbally acknowledging whose unceded land they're on, a practice that has been standard in Australia, New Zealand, and Canada for some time. While greater national awareness is a welcome development, the rhetoric of decolonization is often invoked in ways that evacuate it of its force. Decolonization is a matter of overcoming the sense of inferiority that the Western knowledge system has imposed on us. It *is* about political sovereignty and returning land back to Indigenous nations. It is *also* about cultural sovereignty. Technology and science are part of the cultural memory of a people. Land sovereignty is

entwined with cultural sovereignty, and therefore any talk of land without culture and technology, and culture and technology without land, is meaningless. Aboriginal Australians know this entanglement of technology, culture, memory, and land as Country:

> For Aboriginal peoples, the country is much more than a place. ... Country is filled with relations speaking language and following Law, no matter whether the shape of that relation is human, rock, crow, wattle. Country is loved, needed, and cared for, and country loves, needs, and cares for her people in turn. Country is family, culture, identity. Country is self.[5]

"Decolonizing Architectural Technologies" is not a return to an idealized, pre-colonial, puritan moment. It is not about disentangling the Rest from the West. Rather, it is a path that aims to braid different technological systems, not dismiss one or the other. The metaphor of "braiding" as opposed to the "melting pot" ensures that is not confused with assimilation, but a coming together of different visions of technology— materials, structures, and building envelopes—in a manner that maintains the integrity of each system. *The use of the word decolonization is not virtue signaling but a call to action.[6]* It is a way of thinking that creates an equivalence of different knowledge economies previously dichotomized as primitive and modern, archaic and cutting edge, civilized and uncivilized.

Since the European Renaissance, architectural technologies, be they for protecting fortresses from enemy fire or building slave ships, have been an instrument of encounter between the West and the Other, changing the consciousness of the colonizing and colonized people alike. A decolonial approach, we must reiterate, does not mean we denounce science and technology. Rather, it demands that we rethink what we consider as science and technology, and whom we think are its inventors and innovators, its customers and users. A decolonial approach must ask of our technologies: Who has designed them and with what questions in mind? Who has codified and marketed them? Who deploys and teaches them? Who benefits from them? How do they activate the survival of Indigenous, rural, oral, non-hegemonic knowledge, language, literature, stories, values, practices, and

ways of knowing? This line of inquiry enables us to think about culturally appropriate architectural technologies and modes of representations. Decolonial architectural technologies do not just hold up a roof safely and cost effectively; they are technologies that partake in the self-determination of disinvested communities and strengthen their resilience and self-reliance. They are technologies that disentangle Western knowledge from superiority, evolution, and progress. They are technologies that center the individual and collective physical, spiritual, psychological, and social healing of historically exploited people. In short, they are technologies that serve the cause of justice.

In this issue of *Dialectic*, we call for broader research methods and technologies that partake in the hard work of cultural resilience as opposed to cultural assimilation. We envision a different trajectory for architectural technology, one that opens up new solidarities and methods towards liberatory ends. We invited papers that argue against the portrayal of technology as apolitical and acultural, and offer critical, decolonial engagement with existing, emergent, and divergent tools and technologies that shape our built environment. The contributions are divided into four sections exploring four types of architectural technologies: (1) technologies of representation, (2) technologies of mapping, (3) technologies of resilience, and (4) technologies of construction.

In Part I, "Technologies of Representation," the articles reveal ways in which technological forms of documentation destroy cultural and physical differences in pursuit of legibility. Sechaba Maape critiques methods of preservation through 3D scanning technology in that it not only fails to capture the value of liminal ritual spaces in his hometown of Kuruman in South Africa, but also destroys meaning and significance by undermining the potency of mystery, myth, and ritual in the production of space. By tracing the evolution of the anthropomorphic drawings of industrial designer Henry Dreyfus, Diana Cristobal Olave reveals how they disseminated the values of the middle-class, able-bodied, white male.

In Part II, "Technologies of Mapping," the authors discuss ways in which mapping and remapping of Indigenous land can occur through language and

notation. Genevieve Murray and Joel Spring expose how the rhetorical re-mapping through "Acknowledgements to Country" are operationalized as optics by institutions to maintain structural White supremacy. Using their experience as sessional employees teaching within an Architecture school in Australia, they describe how they, too, were instrumentalized by the institution to extend the performative remapping. Manuel Shvartzberg Carrió describes spatial practices for managing territorial conflict through the settler-colonial city of Palm Springs, California, the ancestral lands of the Agua Caliente Band of Cahuilla Indians. He explores how architecture translates complex problems of sovereignty into neocolonial language of internal geopolitical containment.

In Part III, "Technologies of Resilience," the authors examine the social relations of architectural production, challenging the superiority of expert-driven design and building technologies towards a more inclusive understanding and practice of architecture. Naren Anandh explores the resilience and strength of the Kabuli Pastoral Nomads from Afghanistan through the intelligence embedded in their semi-permanent structures. Clint Abrahams, in turn, examines and centers building typologies and techniques of collective expertise through self-made buildings in Macassar township, South Africa.

In Part IV, "Technologies of Construction," Robert Cowherd interrogates the socio-cultural status of bamboo architecture in Indonesia in the context of its association with cutting-edge, sustainable design and its promise to solve our colonial crises. Selina Martinez, in conversation with Tonia Sing Chi, discusses Indigenous futurity, plurality, and healing through the informal and participatory process of adobe building.

The two editors of this issue, Shundana Yusaf and Tonia Sing Chi, make this critique from very specific vantage points. Shundana is a daughter, mother, and architectural historian from an indigenous Pakhtoon community in Pakistan. She spent her childhood between the city and her ancestral village and trained as an architect, realizing early on that her professional education gave her no skills, tools, or language to support building technologies developed in oral cultures. A technical assistant for building

schools in remote Pakhtoon villages with German grants, her work raised very difficult philosophical and technical questions about the Eurocentric paradigm of professional practice and architecture as an instrument of empowerment versus colonization of the mind. Tonia was born to Taiwanese and Chinese immigrant parents in the United States. The dissonance she experienced in her cross-cultural upbringing galvanized her to advocate for spaces that reflect diverse stories and cultivate healing and belonging for people who have been othered and invisibilized by structural exclusion. For her, building decolonial, anti-imperialist knowledge coalitions among Indigenous and diasporic communities is the work of overcoming colonial mentalities, internalized racism, and cultural assimilation.

Since its establishment nine years ago, *Dialectic: Journal of the School of Architecture at the University of Utah* has problematized the most pressing concerns of teaching architecture in a place like Utah. Our theme for this issue was recommended by a set of colleagues at the School of Architecture, University of Utah, as the School was revamping its curriculum to correspond training in architecture with training in civic entrepreneurship and activism. As editors, we found value in the theme for two reasons.

The first relates to the broader context from which we derive most of our students and into which we send them back. Utah is composed of several persecuted groups including the white Mormon majority who celebrate the first colonial settlers in the mid-19th century as pioneers. This majority has successfully brought many non-white Utahans like Native Americans, Polynesians, and Latinos into the church since the 1970s, creating new trajectories of solidarity. The result is that in Utah, colonization is seen as a question of Mormon survival, not a dehumanizing pathology of European culture. The discussion of colonialism and decolonization is not always received as an invitation to build a socially just future, but as an existential challenge to the narratives of self. An issue-wide airing to offer a new type of comradery therefore seemed worthwhile.

The second reason is tied to the more immediate disciplinary context in which architects are trained worldwide. Among the contemporary areas of architectural education—history and theory, communications, design, professional practice, and building technologies—architectural technologies have thus far been most resistant to calls for decolonization. Practitioners are in denial about their complicity in the project of racial domination. Pioneers in this sub-field trying to bridge the culture-science divide find themselves awkwardly positioned. The reason is obvious: the tactic to make science definitive has historically been to give it an agnostic, ahistorical, and placeless "logic" of its own. The moral authority acquired by science through claims of being above the fray has shielded education and practice of building technologies from questions of race, class, and gender. When Western science doesn't consider whose concerns it represents, it becomes a sinister instrument of neo-colonialism.[7] It suppresses non-European science and technology. It debunks research methods that intertwine physics with metaphysics, ethics with objectivity, and confuses power with conclusions. It reduces construction and fabrication to mechanisms geared towards a dull understanding of efficiency, economy, and bodily comfort. Such are the closures and impoverishments of what Western science has called progress.

The work of decolonizing architectural technologies will take time and intention, both of which run against technology's ethos of non-stop innovation and progress. We offer this issue as advice that we practice a slower, more nuanced, more inclusive and more conscientious "innovation." The work of decolonizing architectural technologies will require us to descend into the chaos of knowledge and become comfortable with the disorientation caused by the disappearance of canonic law. We are only beginning to recognize our complicity as architects in a world that valorizes a facile definition of "cutting edge." For architectural technologies to stop being an instrument of status quo, it must regard non-Western visions of architectural technologies not as the other, not as a threat but, as Audre Lorde puts it, a source of rejuvenation, strength, and purpose. ▪

ENDNOTES

1. Audre Lorde, *Sister Outsider: Essays and Speeches* (Berkeley: Crossing Press, 1984)

2. Linda Tuhiwai Smith, *Decolonizing Methodologies: Research and Indigenous Peoples.* (London: Zed Books, 2012), 86.

3. Ruha Benjamin. *Race After Technology* (Cambridge: Polity Press, 2019) and Beth Coleman, "Race as Technology," *Camera Obscura* 24, no.1 (2009): 176–207.

4. Paul Feyerabend, *Against Method* (London: New Left Books, 1975).

5. Palyku woman Ambelin Kwaymullina quoted in "Meaning of land to Aboriginal people - Creative Spirits," https://www.creativespirits.info/aboriginalculture/land/meaning-of-land-to-aboriginal-people (accessed April 11, 2021).

6. The title of this editorial is inspired by Eve Tuck and K. Wayne Yang, "Decolonization is not a metaphor," *Decolonization: Indigeneity, Education & Society* 1, no.1 (2012): 1.

7. Janet Browne, "A Science of Empire: British Biogeography before Darwin," *Journal of the History of Science* 45, no. 4 (1992): 453-475.