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RELATIONALITY

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from multiple perspectives within and beyond the academy.

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INTRODUCTION

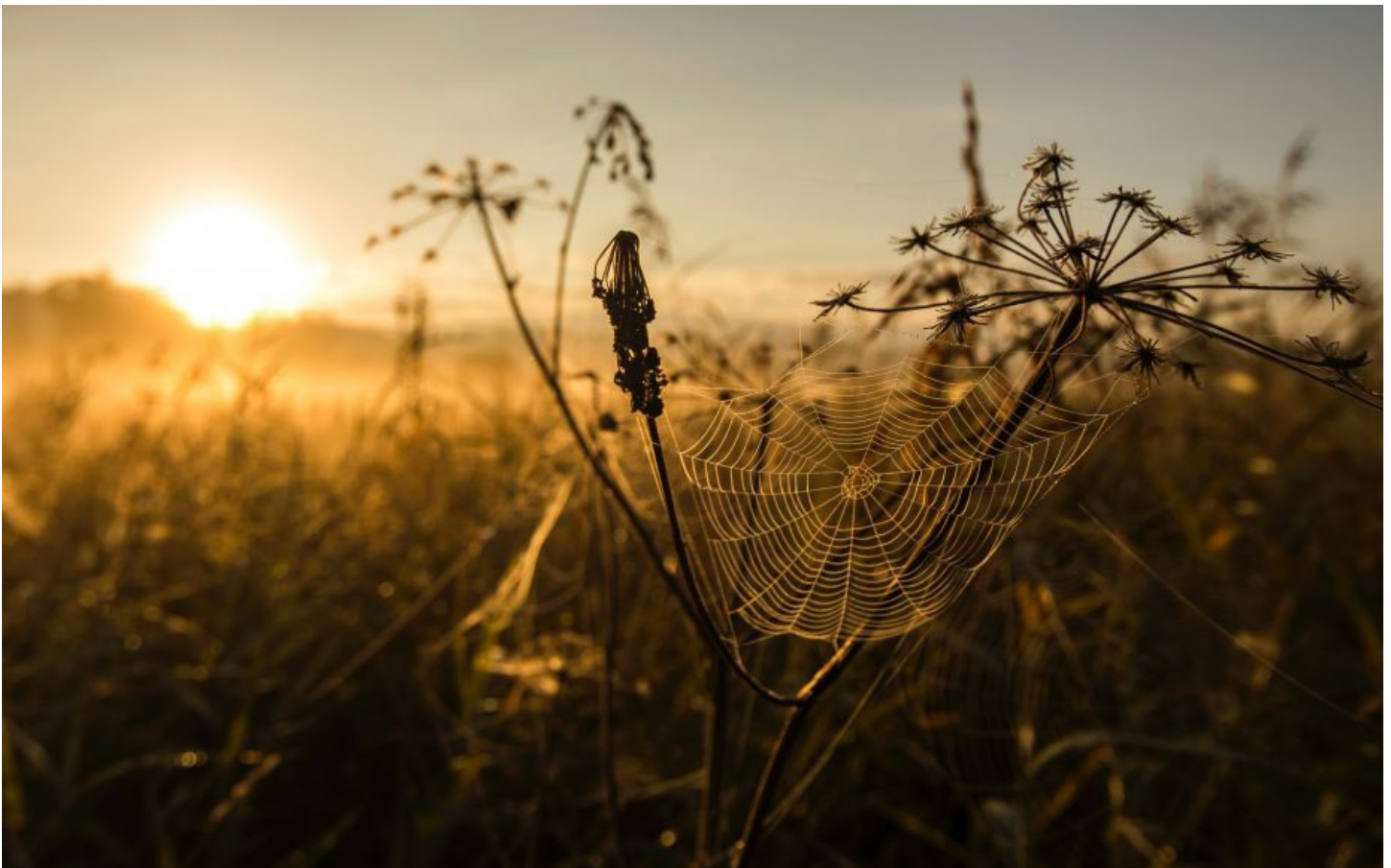
INTRODUCTION TO ISSUE SEVENTEEN

By Laurie Moberg, Managing Editor

In recent years, the practice of land acknowledgements—making statements to acknowledge that white settlers to Turtle Island (what we now know as North America) are all on lands unethically, unconscionably taken from Indigenous peoples who lived and thrived here long before settlers—has become common. While these kinds of statements mark an important step for many settler institutions, this practice—acknowledgement—is not nearly enough to remedy, recalibrate, compensate, or take responsibility for the displacement, violence, theft, and injustices perpetrated. This issue of *Open Rivers* is an effort

to take another step, to move beyond a simple acknowledgement toward complex learning.

In 2019, the University of Minnesota was awarded a grant focused on drawing the University's attention and work toward learning from Indigenous ways of knowing, methodologies, and relations with other-than-humans in order to effect change in modes of education and the University as a whole. Funded by the Andrew W. Mellon Foundation, the humanities-led Environmental Stewardship, Place, and Community Initiative began this work by building



Prairie and spiderweb. Image courtesy of Jan Huber.

a cohort of participants across three campuses—the University of Minnesota Duluth, Morris, and Twin Cities. As part of the first year of this work, Christine Taitano DeLisle worked with *Open Rivers* staff to help us imagine, coordinate, and create work that could be a resource both for people engaged in the Initiative work moving forward and a broader audience interested in Indigenous epistemologies and methodologies.

In particular, the work in this issue—and the work of the Initiative more generally—focuses on the interrelatedness of Indigenous ways of knowing and what we call the “environment” in Western modes of thinking. We titled this issue “Relationality” to highlight this connectedness. Many of the pieces in this issue offer an implicit challenge: how might our ways of engaging environmental challenges change if we considered ourselves as related, if we considered the “natural world” as other-than-human relatives? How might this interconnectedness impact our relationships with the world around us and with each other?

In “Indigenizing Environmental Thinking,” a group of scholars and thinkers both within and beyond academia respond more directly to this question. In response to a prompt on how Indigenous ways of knowing might reconfigure higher education as well as responses to environmental change, a dozen people share their reflections based on their own teaching, research, and lived experiences.

Other articles demonstrate relationality. In “Rattlesnake Effigy Mound Ancestors Still Teaching” and “Sky Watchers, Earth Watchers, and Guardians of the Former and Future Garden,” Jim Rock introduces Indigenous STEM, histories, and the interconnectedness of places on Turtle Island and the cosmos. These two articles illustrate core principles of Indigenous science in practice and provoke readers to see the world differently. Čhaptémaza (Neil McKay) and Monica Siems McKay explain relationships

between settler institutions, like the University of Minnesota, and the dispossession of Indigenous lands. They argue that acknowledging that the University of Minnesota Twin Cities campus is built on Dakhóta land is not enough, pressing readers to recognize that “how we have benefitted and continue to benefit from the theft of Dakhóta lands should obligate us to take reparative action.” There is also place-based research happening at the University of Minnesota grounded in Indigenous ways of knowing, as exhibited through the two U of M Grand Challenge Research Grant projects highlighted in “Navigating Indigenous Futures with the Mississippi River.” Both of the projects featured in this article prioritize building good relationships with Minnesota’s Indigenous communities and focus on Indigenous relationalities, “the web of interconnected relations of kinship and ethical regard among Indigenous people, land, water, and sky scapes.” The article focuses on a particular event at the Mississippi River in the fall of 2019 and includes an accompanying gallery of photos from the day.

Several of the pieces also offer insights and resources for exploring Indigenous relationalities and ways of knowing. Becca Gercken and Kevin Whalen reflect on their experiences teaching *The Relentless Business of Treaties: How Indigenous Land Became US Property* by Martin Case. They argue that this book about white treaty-makers helped students understand the legacy and ongoing impacts of Indigenous land dispossession into the present. Republished from an earlier issue of *Open Rivers*, Mahin Hamilton’s review of *Braiding Sweetgrass* by Robin Wall Kimmerer invites readers to slow down and savor Kimmerer’s weaving of story, Indigenous knowledge, and Western science in her collection of essays. The Primary Sources column for this issue offers more resources in the form of a reading list that invites readers to engage questions of relations to *this* place, decolonization, Indigenous environmental activism and justice, and Indigenous methodologies and theory. We also share an

article republished from *The Conversation* that exposes ongoing water injustices for aboriginal peoples in the Murray-Darling basin in Australia, offering a perspective on Indigenous relations and settler practices in a different place.

Together, this collection of articles and resources foregrounds Indigenous ways of knowing and invites us all to consider how thinking relationally might reshape our collective environmental futures. Enjoy.

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About the Author

Laurie Moberg is the managing editor for *Open Rivers: Rethinking Water, Place & Community* and the project manager for the Environmental Stewardship, Place, and Community Initiative at the University of Minnesota. She earned her Ph.D. in anthropology from the University of Minnesota in 2018. Her doctoral research investigates recurrent episodes of flooding on rivers in Thailand and queries how the ecological, social, and cosmological entanglements between people and the material world are reimagined and reconfigured in the aftermath of disasters. In her work at the University of Minnesota, Laurie brings her ethnographic sensibilities, attention to story, and interest in human-nonhuman relations to questions of water and absented narratives closer to home.

FEATURE

WHERE WE STAND: THE UNIVERSITY OF MINNESOTA AND DAKHÓTA TREATY LANDS

By Čhaŋtémaza (Neil McKay) and Monica Siems McKay

Makhóche kiŋ de Dakhóta Makhóche héčha ye/do.[1]

This land is Dakhóta land.

We begin with a land acknowledgement—an increasingly frequent practice, especially in higher education settings and academic conferences. Land acknowledgements call much-needed

attention to the Indigenous history of the places on which we stand. Despite the centuries-long and ongoing erasure of Indigenous peoples from American history textbooks and classrooms, and the chronic consignment of Indigenous peoples to the past in mainstream American



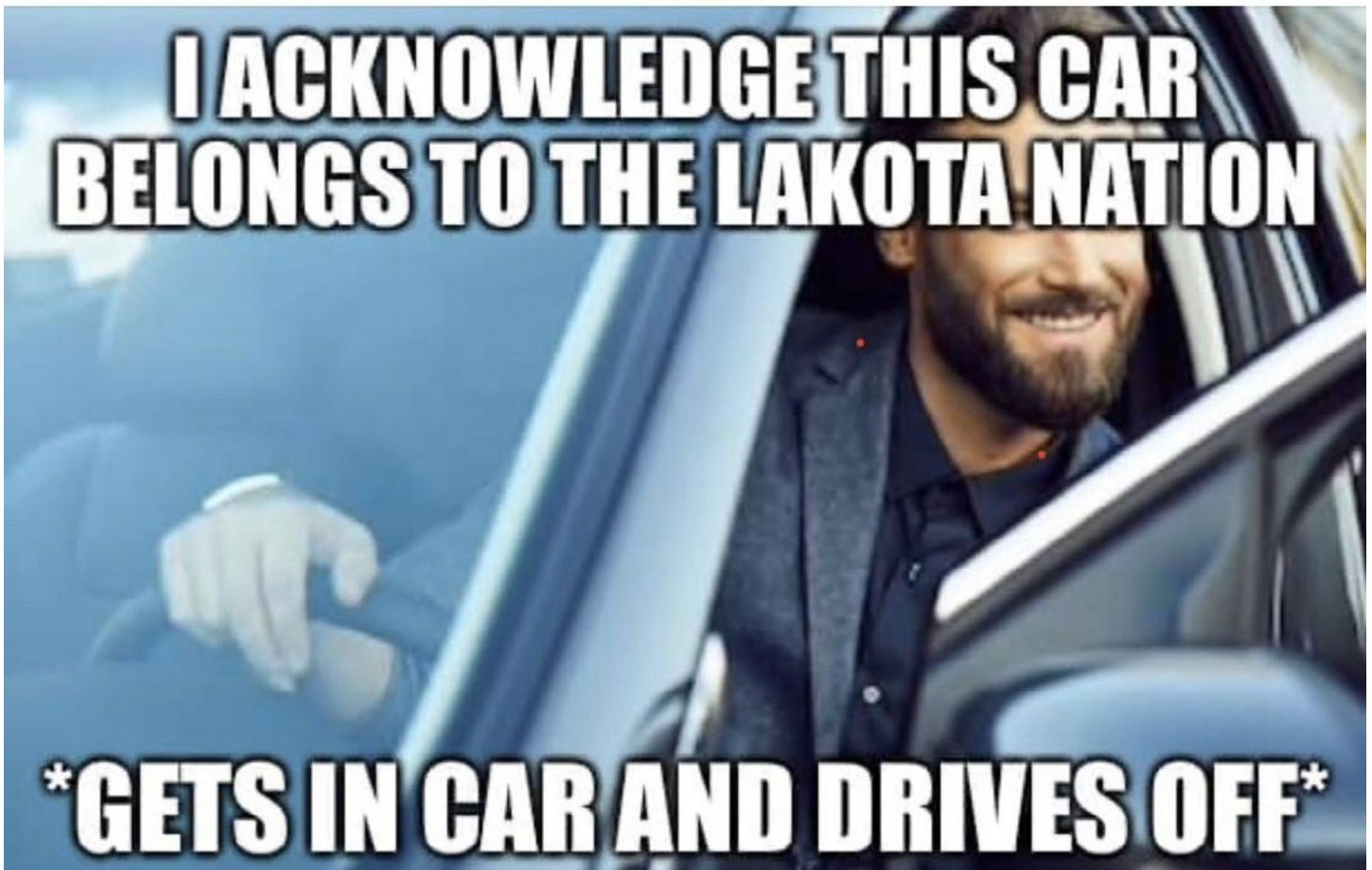
Northern Minnesota. Image courtesy of Lee Vue..

consciousness, it remains a fact that every inch of what is now the United States is land to which one or more Indigenous nations has a deep and abiding connection, and of which, at some point, the U.S. government at least tacitly acknowledged Indigenous ownership.

To correct the erasure and to honor those Indigenous nations, land acknowledgements typically identify whose “homeland” the speaker and listeners are situated in. At the University of Minnesota Twin Cities, many land acknowledgements state that our campus sits

on Dakhóta homeland. This is certainly true; in fact, the Dakhóta are the only people who are truly indigenous to this place, as their history begins with their emergence from the earth near the confluence of the Mississippi and Minnesota Rivers. But it is also a problematic statement, since it can easily be interpreted as meaning that Dakhóta people *used to* live here and that they have primarily a spiritual, as opposed to physical and legal, connection to this place. Indeed, the authors of a March 2020 *High Country News* article described many land acknowledgements in higher education settings as “formal statements

Woke settler colonialism: land acknowledgments



In recent years, many memes about the emptiness of land acknowledgements have circulated online, bringing a welcome note of humor while still sending a powerful message about continuing injustice.

that recognize the Indigenous people who *formerly possessed* the lands those colleges now stand on” (emphasis added).[2] When formulated in this way, land acknowledgements can be seen as a gesture of both good will and respect, but in fact they become little more than virtue signaling or checking a box for diversity and inclusion. Recognizing and verbally honoring Indigenous

peoples in no way obligates us and our institutions to look critically at how possession of our campus lands shifted to non-Indigenous hands. Worse yet, land acknowledgements can actually do harm to Indigenous people, who are frequently asked by schools, churches, colleges, universities, professional associations, and others to give such acknowledgements. For an Indigenous person



It is important to remember that Indigenous territories do not match settler colonial boundaries. While the Dakhóta treaties involved land cessions in what is now Minnesota, this map shows how far the Ochéthi Šakówin (the Seven Council Fires of the Dakhóta/Lakhóta/Nakhóta nation, historically referred to as the “Great Sioux Nation”) ranged in their travels and settlements. The core area of what can be considered “Dakhóta homeland” would include all of Minnesota, parts of Wisconsin, Iowa, and Nebraska, all of North and South Dakota, part of Montana, and southern Canada above those states.. Map courtesy of usdakotawar.org CC BY-NC-SA after “Aboriginal Map of North America denoting the Boundaries and Locations of various Indian Tribes”. The House of Commons. Britain: 1857.

to get up and say, “This is Dakhóta land,” when there is no reciprocity from the institution can be insulting. To Indigenous people, this could come off as, “Hey you, Indian! Could you tell everyone that they’re on the land of your people, but we still get to keep everything here and will continue to benefit from what is not rightly ours? Thanks!” To actually contribute to restorative justice for Indigenous peoples, land acknowledgements need to address the legal status of the land in question, which entails knowing the treaty history. In mainstream American consciousness—shaped by dominant historical narratives and K-12 education—treaties provide a veneer of legitimacy for the dispossession of Indigenous peoples. Treaties are generally viewed as documenting real estate transactions whereby Indigenous peoples “sold” their lands to the United States government in exchange for money and other considerations. While not a perfect description of a treaty, this suggests a useful analogy. Suppose we made a purchase agreement with you for your home, agreeing to pay a specific price for it, but then we moved into your home and never paid you for it. Would we have any legal right to live in your house? What would you call what we had done? And if we willed the house to our children and they to theirs, even though our grandchildren weren’t the ones who stole the house, would they have a right to live there?

Thus, when we say the University of Minnesota’s Twin Cities campus illegally occupies Dakhóta land or sits on land stolen from the Dakhóta people, we’re not being dramatic or hyperbolic. And since the U.S. government failed to uphold its obligations under every one of the 375 or so treaties it made with Indigenous nations across the continent that were then ratified and proclaimed—in other words, every treaty is a broken treaty—most land acknowledgements should lead to the same conclusion.

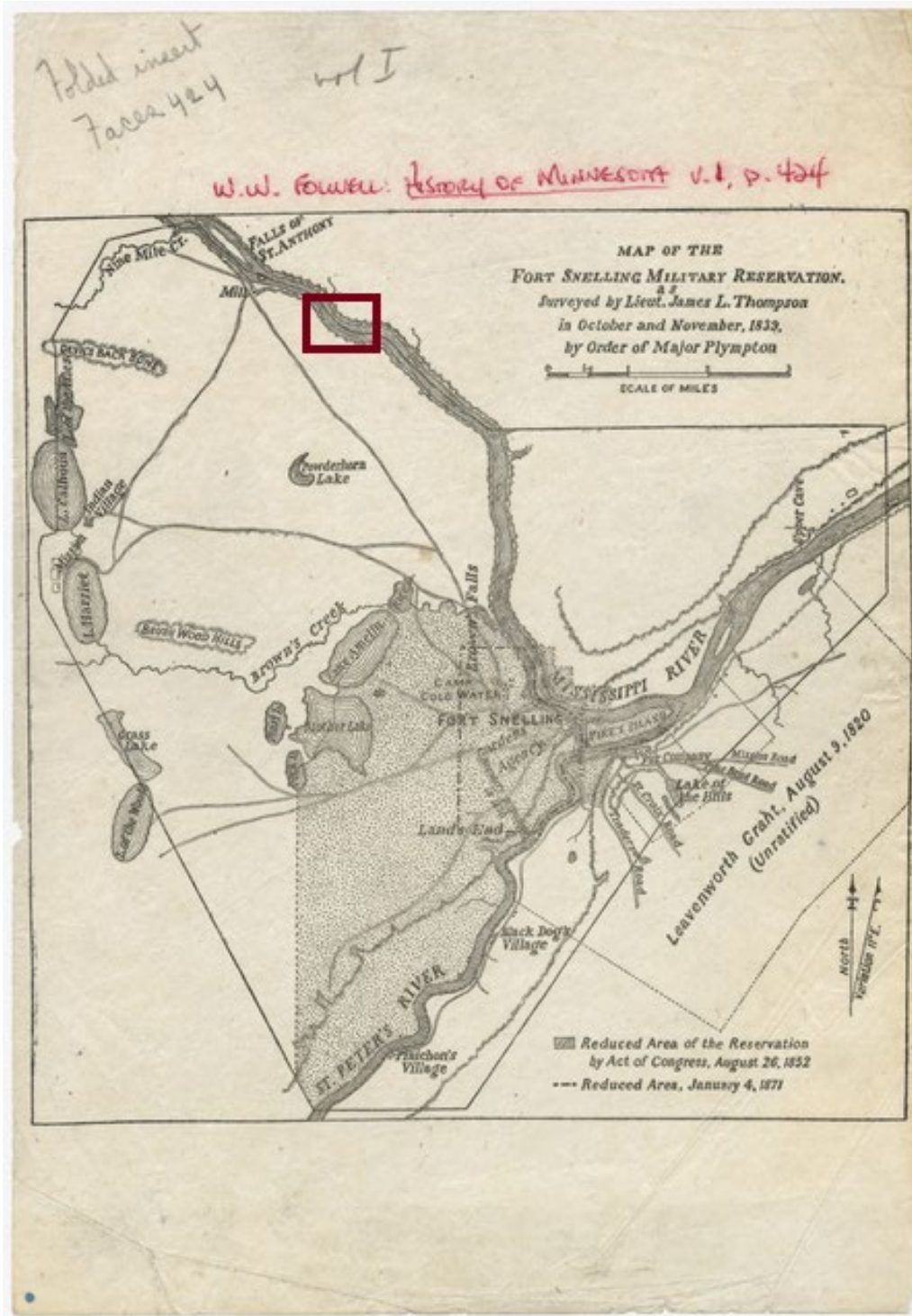
To further clarify the terms of this discussion, it’s important to note that we are asserting that in its dealings with Indigenous peoples, the U.S.

government failed to follow its own domestic laws and the international law frameworks it subscribes to. Some historical narratives acknowledge that massive injustices resulted from treaties, but suggest that Indigenous peoples were easily taken advantage of because they didn’t share the European-American concept of land ownership. This is both absolutely true and absolutely irrelevant to this discussion (and it plays into a romanticized stereotype of Indigenous peoples as simple or unsophisticated, as children of nature, etc.). Through treaty-making, the United States brought its legal system to bear on Indigenous peoples, and then broke its own laws. They set the rules of the game, then cheated.

Other popular conceptions—or misconceptions—about Indian treaties include that they are just “old pieces of paper” by which we don’t need to consider ourselves bound today, and/or that they were simply formalities or niceties provided to Indigenous peoples to benefit them as they naturally, inevitably lost their land bases as the U.S. lived out its Manifest Destiny. But if a treaty is just an old piece of paper, the same could be said of the United States Constitution—which, as it happens, assigns a much higher status to treaties. Treaty scholars often mention the “supremacy clause,” Clause 2 of Article VI of the Constitution, which states, “This Constitution, and the Laws of the United States which shall be made in Pursuance thereof; *and all Treaties made, or which shall be made, under the authority of the United States, shall be the supreme Law of the land*; and the Judges in every State shall be bound thereby, any Thing in the Constitution or Laws of any State to the Contrary notwithstanding” (emphasis added). Legally, then, treaties are absolutely on a par with the Constitution.[3]

See an interactive map of Indian Land Cessions (Treaties) in Minnesota.

Treaties are also, by definition, agreements between sovereign nations. By making treaties with Indigenous nations, the U.S. government



It is uncertain whether a map of the land ceded in the 1805 treaty exists. This map of the “Fort Snelling Military Reservation” was made in 1839. The treaty defined the ceded lands as “from below the confluence of the Mississippi and St. Peters, up the Mississippi, to include the falls of St. Anthony, extending nine miles on each side of the river.” St. Anthony Falls is shown at the top of this map of the military reservation. The East and West Bank campuses of the University of Minnesota Twin Cities sit on either side of the Mississippi (indicated in maroon) just south of the falls and thus lie within the 1805 treaty lands. After map of the Fort Snelling Military Reservation as surveyed by Lieutenant James L. Thompson in 1839.

was approaching Indigenous peoples on a nation-to-nation basis. By virtue of living independently on the North American continent for millennia before the arrival of Europeans, Indigenous nations have inherent sovereignty; importantly, in treaty-making the U.S. government merely recognized that sovereignty, rather than somehow granting sovereignty to other nations. Likewise, the U.S. government can't do and hasn't done anything to take away Indigenous sovereignty, despite the best efforts of early Supreme Court Chief Justice John Marshall. In a notorious series of decisions now known as the Marshall Trilogy issued between 1823 and 1832, the Court attempted to define Indigenous sovereignty out of existence by inventing out of whole cloth the concept of "domestic dependent nations." Massive confusion and inconsistency in the U.S. government's view of Indigenous sovereignty ensued and continues until the present, as illustrated by the fact that despite the Marshall Trilogy, the government continued to make treaties with Indigenous nations until 1874, when it arbitrarily discontinued the practice.

In the 1970s, one of the major demands put forward by the American Indian Movement (AIM) was for the U.S. government to resume treaty-making—to come back to the negotiating table with Indigenous nations on the basis of mutual sovereignty. In this way AIM can be seen as a sovereign rights, rather than a civil rights, organization. While civil rights movements aim for full participation in civil society and enjoyment of the rights guaranteed to all U.S. citizens, the Indigenous struggle for sovereign rights asserts, in effect, the right of Indigenous

nations to stand apart and self-govern; it pushes the U.S. government to honor its existing treaty obligations or, if it is unable or unwilling to do so, to renegotiate those agreements.

During his presidency, George W. Bush perfectly illustrated the confusion about Indigenous sovereignty that has pervaded federal Indian policy since the early 1800s. See video [here](#).

One final important concept to note for this discussion is that of usufructuary rights. In many treaties between the U.S. government and Indigenous nations, the Indigenous nation would cede land but retain the right to utilize the ceded lands in a variety of ways, most often for hunting, fishing, and gathering foods. During the 1990s, Ojibwe tribes in Minnesota and Wisconsin asserted their treaty-defined usufructuary rights by fishing for walleye at times and in ways that violated the two states' regulations, as enforced by their respective Departments of Natural Resources. When cited for violations, Ojibwe anglers mounted legal challenges based on the treaties, and the Supreme Court ultimately affirmed those rights. White anglers and other citizens expressed outrage that the Ojibwe were being "given special rights," but the Supreme Court decisions confirmed the Indigenous claim that through the treaties, they had simply retained rights they had always had in and on their own lands.[4] One might have hoped that these landmark cases would have permanently put to rest the "old pieces of paper" argument, but the temptation to ignore treaties whose provisions inconvenience the U.S. government and its Euro-American citizenry remains strong.

Land Grant or Land Grab?

To apply all of the foregoing to the institution by which we are both employed, we state that the University of Minnesota's Twin Cities campus was built on and stands on land that is both Dakhóta homeland and (legally, rightfully) Dakhóta land that the institution illegally

occupies. This is true both physically, with regard to the land on which this three-part campus sits, and philosophically, as at least some of the lands the federal government granted to the territory and then the state of Minnesota to endow a public university, were included in treaties the United

States government made with the Dakhóta Oyáte (nation) in 1805, 1837, and 1851.

The aforementioned March 2020 *High Country News* article created a major splash in the world of higher education as soon as it was published under the title “Land-grab universities” with the subtitle, “Expropriated Indigenous land is the foundation of the land-grant university system.” The article presents highlights of an extensive research project *High Country News* staff conducted over two years, tracing the processes through which the U.S. government acquired the lands it in turn granted to state governments to endow public universities. The bulk of federal land grants to state universities took place under the Morrill Act, signed by President Abraham Lincoln in 1862. The lands so granted were in the “public domain,” which sounds benign, but masks the fact that this simply means they had been expropriated from Indigenous nations but not opened up to private White settlement.[5] As longtime employees of Minnesota’s land-grant university, prior to beginning this exploration of treaty history we both subscribed to the common misconception that the federal government provided the state with land on which to (physically) build a higher education institution. In fact, the purpose of the Morrill Act and other federal land grants was to provide “seed money” for these institutions—to furnish states with endowments for their universities in the form of assets of land.

The University of Minnesota takes significant pride in predating Minnesota’s statehood. The “University of the Territory of Minnesota” was established in 1851, supported by a grant of two townships (46,080 acres of land) for its “use and support.” A grant of an additional two townships came in 1857; Minnesota became a state in 1858; and then the Morrill Act brought a windfall of 120,000 acres. The fledgling territorial university almost closed within a few years of opening; having accrued massive debts, it was only saved by the sale of much of the granted lands. The university’s first building, Old Main, was built on

a parcel of land on a bluff above the Mississippi River on its East Bank near St. Anthony Falls, a parcel gifted to the institution by a founding Regent of the University. In 1854, the sale of some of the original land grants allowed the university to purchase 27 acres surrounding this parcel, forming the nucleus of the original campus, now known as the East Bank campus of the University of Minnesota Twin Cities.[6]

This university would clearly not exist today had the federal government not provided these lands to the territorial and state governments. But the story of those grants doesn’t end in the 1860s. As *High Country News* discovered, “at least 12 states are still in possession of unsold Morrill acres as well as associated mineral rights, which continue to produce revenue for their designated institutions,” and Minnesota is one of them, with the State still holding 25,840 acres of Morrill Act lands and an additional 22,028 acres of mineral rights in its “permanent university fund.” The Department of Natural Resources manages these lands, which generate revenue in a variety of ways, particularly through timber and mining leases, and transfers that income to the university.[7] These realities place our vaunted land-grant university system squarely within the U.S. government’s colonial enterprise, more benignly known as westward expansion. As David Chang, University of Minnesota Professor of History and Chair of American Indian Studies, noted in his opening remarks for a 2018 campus symposium on Reparations, Repatriation, and Redress, the transfer of federal lands to states as endowments to support the establishment and operation of universities was “public land policy for white settlement, capitalist transformation, and the development of the state.” By endowing institutions whose primary purposes were to provide low-cost instruction in agriculture and other practical arts, the federal government furthered the establishment of an American society based on individually owned homesteads. As *High Country News* noted, the government accomplished this using “dubiously acquired Indigenous land.” To

state the matter more plainly, much of the land the federal government doled out to states was, quite literally, stolen from Indigenous peoples. This raises the question of what institutions like

our own are obligated to do to rectify the fact that they received stolen property and are built “not just on, but with” Indigenous land.

Dakhóta Treaties

As noted above, the three major treaties between the U.S. government and the Dakhóta Oyáte that included land cessions were signed in 1805, 1837, and 1851. These three treaties exhibit a wide range of tactics the U.S. government frequently employed while negotiating, enacting, and following through on Indian treaties; these are tactics which render the treaties and, with them, the U.S. government’s claims to the ceded lands, invalid. [8]

In 1805, explorer Zebulon Pike, who now has a mountain in Colorado named after him, came up the Mississippi River looking for sites for U.S. military forts. With the help of interpreters, he negotiated a treaty ultimately signed by the leaders of two Dakhóta villages. This very short document states that “the Sioux Nation” granted the U.S. government “full sovereignty and power” over an area including nine miles on either side of the Mississippi River from below the confluence of the Mississippi and Minnesota Rivers to St. Anthony Falls. In exchange for this land, “the United States shall, prior to taking possession thereof, pay to the Sioux”—and here Pike left a blank, so as signed, the treaty did not specify a price. Under the treaty’s third article, the Dakhóta retained usufructuary rights to the ceded lands.

Despite being so slim, the 1805 treaty took a convoluted journey through the ratification process. First it simply languished; President Thomas Jefferson finally submitted it to the Senate in 1808. Before ratifying it, the Senate needed to determine the payment amount, and although Pike had noted in his journal that the 100,000 acres the government was receiving through the treaty was “equal to \$200,000,” the Senate filled in the

blank in Article 2 with “two thousand dollars, or... the value thereof in such goods and merchandise as they shall choose.”[9] Even this meager payment, one percent of the land’s appraised value, was not even attempted until 1819, when “a quantity of goods worth two thousand dollars” was sent up the Mississippi to settle the treaty obligation. Along the way, some of the goods were diverted to settle a claim by members of the Sac and Fox nations for the murder of one of their own by a White man the previous year, but the U.S. government still considered the treaty paid in full when the remaining goods reached Fort Snelling for disbursement to the Dakhóta. The Dakhóta, unsurprisingly, disagreed, and the next time the government came to negotiate a land cession treaty, they didn’t hesitate to raise the issue of nonpayment for the last one.

Two other issues with the validity of the 1805 treaty encompass both ends of a spectrum from legalistic technicalities to fundamental intent. With regard to the former, after the Senate ratified the treaty, President Jefferson appears not to have formally proclaimed it, a necessary final step for it to take effect. As to the latter, the ambiguity of the language of “granting” land to the government for military posts opens up a possible interpretation that this agreement was never intended to constitute a land sale by the Dakhóta. Lawrence Taliaferro, the Indian Agent at Fort Snelling for nearly twenty years, subscribed to this view, noting in his journal that he viewed the “convention with Pike” as “nothing more than a perpetual lease” of land that was still “taken and deemed to be the Indian country.”[10]

In theory, subsequent land cession treaties could have clarified the status of the land included

in the 1805 agreement. For instance, in 1837 Bdewákhantŭwaj Dakhóta leaders gave up any claim to land east of the Mississippi River in exchange for \$1,000,000, but with payments structured in highly convoluted ways, including \$15,500 per year to be paid in the form of goods and provisions selected by the government and \$8,250 per year to be spent on “medicines, agricultural implements, and stock, and for the support of a physician, farmers, and blacksmiths,” which allowed the government to pay the salaries of White missionaries and other so-called agents of civilization. Another \$15,000 per year would come in the form of cash interest payments of 5 percent on \$300,000 that the government would invest in state stocks for this purpose, but the treaty cryptically specified “a

portion of said interest, not exceeding one third, to be applied in such manner as the President may direct.” One historian has noted that “all involved parties” agreed that this clause meant “the government was required to spend \$5,000 per year for the benefit of the Mdewakanton people.” The Dakhóta leaders who negotiated and signed the treaty consistently maintained that government representatives had assured them they would receive these funds directly, but the government later claimed they had informed the Dakhóta that the president intended to use these funds for the education of Dakhóta children. In fact, the government gave some of this money to White missionaries to support their schools, but ultimately most of these funds were simply never distributed.[11]



Artist Francis Millet’s depiction of the signing of the Treaty of Traverse des Sioux in 1851 gives an air of nobility to what were, in fact, shady dealings by the United States government. The painting still hangs in the Minnesota State Capitol.

Again, when the U.S. government next attempted to negotiate a land cession treaty in 1851, the Dakhóta balked and raised the issue of why they hadn't received what was promised to them in 1837. Thaóyateduta (His Red Nation, better known in English as Little Crow, who would go on to lead Dakhóta soldiers in the 1862 U.S.–Dakhóta War) told the government's treaty negotiators that the Dakhóta “would talk of nothing else” until the question of these education funds was resolved.

Through the 1851 treaties of Mendota and Traverse des Sioux (two treaties with the same terms, negotiated separately with different Dakhóta bands), the Dakhóta ceded their claims to all remaining lands in Minnesota. There are myriad problems with these treaties, starting with the additional coercion tactics government officials employed during the negotiations. Frustrated by Dakhóta leaders' recalcitrance, Commissioner of Indian Affairs Luke Lea told them, “Suppose your Great Father wanted your lands and did not want a treaty for your good, he could come with 100,000 men and drive you off to the Rocky Mountains.”^[12]

To this duress the negotiators added outright fraud with an infamous document known as the “traders' paper.”^[13] As had become customary in Indian treaties, government officials planned to divert funds from the amount they agreed to pay for the land to settle Dakhóta hunters' debts to fur traders. As increasing White settlement in the Territory of Minnesota reduced the availability of game, Dakhóta hunters found it increasingly difficult to procure enough furs to pay for goods the traders had advanced to them on credit. In treaty negotiations, however, White traders could simply state the total amount they were owed; they were not required to provide any documentation to support their claims. A list of traders and the amounts owed to them was drawn up, and during the signing of the Treaty of Traverse des Sioux, Dakhóta leaders were led through a

process of signing two copies of the treaty and this additional document, which they and others present believed to be a third copy of the treaty. Even a White missionary who assisted in translating the terms of the treaty during the negotiations and attended the signing ceremony was unaware of the content of the third document, through which a huge portion of the payment for the land cession was siphoned off to White traders with no accountability. Ramsey was later investigated by Congress for fraud, but his fellow Republicans ultimately dropped the matter with no charges or sanctions.^[14]

Jameson Sweet, who is Dakhóta, received his Ph.D. from the University of Minnesota, and is now Assistant Professor of American Studies at Rutgers University, has reflected, “You can point to every treaty where there's some kind of fraud, where there's some kind of coercion going on, or they're taking advantage of some extreme poverty or something like that so they can purchase the land at rock bottom prices. That kind of coercion and fraud was present in every treaty.”^[15] Interestingly, though, it's not only modern scholars who acknowledge these issues; contemporary critical voices can easily be found as well. For example, when asked to review the 1805 treaty in 1856, the U.S. Senate's Military Affairs Committee ultimately concluded:

“It does appear that General Pike made an arrangement in 1805 with two Sioux Indians for the purchase of the lands of that tribe, including the Faribault island, but there is no evidence that this agreement, to which there is not even a witness, and in which no consideration was named, was ever considered binding upon the Indians, or that they ever yielded up the possession of their lands under it... [I]t was never promulgated, nor can it be now found upon the statute books, like any other treaty—if indeed a treaty it may be called—nor were its stipulations ever complied with on the part of the United States.”^[16]

The *St. Peter Tribune*, the local newspaper of a Minnesota River Valley town, editorialized in 1861 that “It is little else than a farce to call our agreements with the Indians treaties.... They have no power to enforce them, no minister or consul to present their views or defend their rights.”[17] By this time conditions among the Dakhóta, who were now confined to a small reservation along the Minnesota River, were becoming dire; the government’s failure to make treaty payments would culminate in starvation in the summer of 1862, and with no other recourse to compel the government to fulfill its obligations, some Dakhótas saw going to war as the only option available to them.

Canadian scholar Sam Grey once posed the question, “How do you steal a continent?”, and answered with what at first sounds like a quip, but reflects the treaty-making process accurately: “You redefine stealing.”[18] When examined, these “supreme laws of the land” quickly take on the appearance of a thin veneer of legitimacy over wholesale land theft. It’s also clear that White settlers understood this reality at some level. Historian Roy Meyer noted that as soon as

Rent Is Due

So now we have come back to the pressing question of what we do with this information. Knowing the truth of how our institution fits into the history of the dispossession of Dakhóta people and how we have benefitted and continue to benefit from the theft of Dakhóta lands should obligate us to take reparative action (we categorically reject “but that happened a long time ago and we aren’t the ones that did it” as a moral excuse).

At the 18th Annual A.I.S.A. (American Indian Studies Association) conference, held in Albuquerque in 2017, the common theme permeating presentations and discussions was focused on what the colonial educational institutions (colleges and universities) are doing to acknowledge,

the 1851 treaties were signed—prior, that is, to their ratification by the Senate and official enactment—White settlers began “pouring onto the ceded lands... crossing the Mississippi ‘in troops,’ making claims, and building shanties on lands which they as yet had no legal right to intrude upon.”[19] These settlers could rest assured that the government would complete any needed legal maneuvers to allow them to stay.

The legality, or lack thereof, of the Dakhóta treaties took a final turn in the aftermath of the 1862 Dakhóta–U.S. War, when Congress passed an act abrogating all treaties with the Dakhóta. International law allows for unilateral abrogation by any party to a treaty, but such a withdrawal should result in a return to the status quo ante. [20] The U.S. government’s abrogating the Dakhóta treaties but maintaining its claim to all the lands included in those treaties represents perhaps the ultimate legalistic sleight of hand. This brings us back to our earlier analogy of a real estate transaction in which the buyer decides after the closing to stop making the mortgage payments but still occupies and claims to own the house.

honor, and give back to the Indigenous peoples whose lands they occupy, legally or illegally. Some of the simplest (in concept, if not in implementation) steps institutions can take include making sure Indigenous people don’t have to pay for their programs and services. Within the University of Minnesota system, which encompasses five campuses across the state, one campus currently has a tuition waiver in place for Native students. The University of Minnesota Morris is built on land formerly occupied by an Indian boarding school where the focus was to eradicate native culture and language. The last managers of the boarding school were a group of nuns who, when they decided to get out of the education business and gift the school’s buildings and grounds to the federal government,

attached a stipulation that as long as the property was used as any sort of school, no Native pupil should be charged to attend. When the federal government gave the property to the state for the establishment of another public university campus, this stipulation went along with it. As currently operationalized, this policy provides for any student who is an enrolled member, or the child or grandchild of an enrolled member, of a federally recognized tribe to receive a full waiver for the cost of tuition. As a result, Native students comprise over 20 percent of U of M Morris's student body, a situation virtually unheard of in a public university.

Here on the Twin Cities campus, the Bell Museum of Natural History, the state's official natural history museum operated in partnership with the University of Minnesota, recently implemented free admissions for Native people. Significantly, the Bell Museum's Board of Directors chose not to require tribal enrollment or ID to claim free admission, thus sidestepping the thorny issues of federal recognition and blood quantum criteria. The Museum has also made it clear that this policy is not an act of charity toward Indigenous people; rather, it is an acknowledgement that the museum occupies Dakhóta land, so Dakhóta and other Indigenous people should not have to pay a fee to tour the facility. An official land acknowledgement, including a recognition that Dakhóta people are the original natural scientists of this land, was literally built into the museum, and four dioramas within the main exhibit halls include commentary on Minnesota habitats, environments, and seasons in Dakhóta and Ojibwe, thus helping to document

and preserve these endangered languages. The Museum's Board has expressed a commitment to continually identifying more steps they can take to honor both Indigenous worldviews and epistemologies and Indigenous people themselves.

As another example, *High Country News* notes that "South Dakota State University has recently redirected income from its remaining Morrill [Act] acres into programming and support for Native students hoping to attend SDSU."^[21] But all these initiatives evade the question of our institutional obligations to Indigenous people who have no interest in participating in any of our programs as students or visitors. We must stretch our conceptions of what is possible to start to consider the question from this angle, but we're not without examples here either. In New Zealand, the government has returned a significant amount of land to the Waikato Maori tribe, the most fundamental and obvious way to right the wrong of illegally seizing the land in the first place. In this case, "land return" means the government recognizes the Waikato tribe as the rightful owners of the land, which includes the city of Hamilton. It doesn't, however, mean that all non-Maori people have been driven from the land, and all their homes and businesses destroyed or taken over. Instead, the Waikato tribe collects rent from non-Maori businesses and institutions, including the University of Waikato. ^[22] A model like this affirms Indigenous sovereignty by directly providing resources to the tribe to do with as they please, rather than allowing the university to decide what it wants to do "for" Indigenous people. Ultimately, we feel strongly that this is where this conversation needs to go.

Hináǎ ded unyákuŋpi ye/do.

We are still here.

Despite the best efforts of the Minnesota state government to ethnically cleanse us/them from Minnesota after the 1862 war, Dakhóta people have always been, and are still, here, still at home, and unfortunately sometimes homeless, within our/their homelands. We/they know our/their history, and have not forgotten the treaties. This is another reason it is critically important for institutions like the University of Minnesota not

to unilaterally decide what amends might look like and what it is willing to (con)cede—to give up—in the pursuit of justice, but rather to approach Dakhóta communities as sovereign entities, including the four federally recognized tribal nations within the present borders of Minnesota, as well as the diaspora of communities in North and South Dakota, Nebraska, Montana, and Canada that represent the Dakhóta exile.

Mní kiŋ wakháŋ ye/do. Mní kiŋ phežúta ye/do.

Water is sacred. Water is medicine.

The East Bank and West Bank portions of the University of Minnesota Twin Cities campus straddle the Mississippi River and lie within the boundaries of a national park, the Mississippi National River and Recreation Area. The university sits on and utilizes this river and other waters that, from a Dakhóta perspective, are also sovereign entities, as are the land itself and the many plant and animal nations that live on the land and in the waters. In this perspective, another major shortcoming of most land acknowledgements is that they don't actually acknowledge the land in this way.

The Dakhóta connection to the land and all that live and exist here is important. The Dakhóta people and other Indigenous peoples have seen for thousands of years that we must be aware that we co-exist with other life. Human beings are not the most important life on earth; in fact, we can't survive without help from our relatives, but they

can manage quite well without us. The Dakhóta philosophy of Mitákuye Owás'iy, "all my relations," or "I am related to all that is," reflects this understanding by acknowledging that all things from water, plants, and animals to the stars are part of our fellow creation and we must maintain a respectful relationship with all of these things we are connected to. This brings us back to the observation that traditionally, the Dakhóta and other Indigenous peoples did not construe their relationship to land in terms of ownership, but rather of belonging and stewardship. Again, we mention this not to romanticize Indigenous people, but rather to suggest that if we can peel back the layers of legal sleight-of-hand through which, as Martin Case puts it, Indigenous land was transformed into U.S. property;^[23] if we can return treaty lands to their rightful owners; then we open up the possibility of paying the lands and waters themselves, as well as the lands' original inhabitants, the respect they are due.

Footnotes

[1] There are many different ways of writing the Dakhóta language, which did not have a written form until the arrival of European-American missionaries in the nineteenth century. Throughout this article we use one of a handful of writing systems that consistently represent the language phonetically, to make it easier for learners to pronounce words correctly.

[2] Robert Lee and Tristan Ahtone, “Land-grab universities: Expropriated Indigenous land is the foundation of the land-grant university system,” *High Country News* vol. 52, no. 4 (March 30, 2020). Accessed online at <https://www.hcn.org/issues/52.4/indigenous-affairs-education-land-grab-universities>.

[3] Martin Case, *The Relentless Business of Treaties: How Indigenous Land Became U.S. Property* (St. Paul: Minnesota Historical Society Press, 2018), 4–6.

[4] The Great Lakes Indian Fish and Wildlife Commission (GLIFWC), established as result of the Ojibwe treaty rights court cases, provides excellent educational materials on treaty rights, including “A Guide to Understanding Ojibwe Treaty Rights,” <http://www.glifwc.org/publications/pdf/2018TreatyRights.pdf>.

[5] Lee and Ahtone, “Land-grab universities.”

[6] C.W. Hall, *The University of Minnesota: An Historical Sketch* (Minneapolis, 1896), 12.

(Resource available in the University of Minnesota Libraries’ Digital Conservancy at <https://conservancy.umn.edu/handle/11299/59620>.)

[7] “Minnesota’s Permanent University Land and Fund,” Minnesota Department of Natural Resources Division of Lands and Minerals report, 2017. https://files.dnr.state.mn.us/lands_minerals/permanent_university_handout_fy17.pdf.

[8] The information in this section was compiled from three major sources: Gwen Westerman and Bruce White, *Mni Sota Makoce: The Land of the Dakota* (St. Paul: Minnesota Historical Society Press, 2012); Roy W. Meyer, *History of the Santee Sioux: United States Indian Policy on Trial*, rev. ed. (Lincoln: University of Nebraska Press, 1993); and the *Why Treaties Matter* virtual exhibit developed by the Minnesota Humanities Center in partnership with the Minnesota Indian Affairs Council and the Smithsonian’s National Museum of the American Indian, <http://treatiesmatter.org>.

[9] Westerman and White, *Mni Sota Makoce*, 141.

[10] Westerman and White, *Mni Sota Makoce*, 147.

[11] Linda M. Clemmons, “‘We Will Talk of Nothing Else’: Dakota Interpretations of the Treaty of 1837,” *Great Plains Quarterly* vol. 25 (Summer 2005), 173–85 (see especially pp. 180–1).

[12] William G. LeDuc, *Minnesota Year Book for 1852* (St. Paul: W.G. LeDuc, 1852), 79–82; cited in Meyer, *History of the Santee Sioux*, 83. Meyer explains that the *Minnesota Year Book* contained “a reprint of a day-by-day account of the treaty negotiations, published in the *Minnesota Pioneer* from July 3 through August 14, 1851.”

[13] The traders’ paper slipped in with the Treaty of Traverse des Sioux is widely seen as one of the most egregious instances of fraud in U.S.-Indigenous treaty-making. See Westerman and White, *Mni Sota Makoce*, 180–81 and 190–92.

[14] Ramsey’s investigation and acquittal by the United States Congress are mentioned briefly by Roy Meyer, *History of the Santee Sioux*, 87 and Westerman and White, *Mni Sota Makoce*, 192. Meyer notes that William Watts Folwell’s *History of Minnesota*, vol. I, pp. 462–470, provides a more detailed account of the investigation.

[15] Quoted in Lee and Ahtone, “Land-grab universities.”

[16] The report can be found in the University of Oklahoma College of Law Digital Commons at <https://digitalcommons.law.ou.edu/cgi/viewcontent.cgi?article=2272&context=indianserialset>. The quotation is taken from the *Why Treaties Matter* virtual exhibit, <http://treatiesmatter.org/treaties/land/1805-dakota>.

[17] Quoted in *Little Crow and the Dakota War* (2017 film), which cites the April 3, 1861 *St. Peter Tribune*.

[18] Sam Grey, “The Past as Present: Settler Colonialism and Justice after Indigenous Genocide,” East Side Freedom Library *What’s in A Name?* Speakers Series (St. Paul, MN: March 31, 2016).

[19] Meyer, *History of the Santee Sioux*, 84.

[20] Howard J. Vogel, “Rethinking the Abrogation of the Dakota Treaties and the Authority for the Removal of the Dakota People from their Homeland,” *William Mitchell Law Review* vol. 39, no. 2 (2013), 538-581.

[21] Lee and Ahtone, “Land-grab universities.”

[22] We first learned about the University of Waikato paying rent to the Waikato-Tainui Māori tribe in a conversation with Dr. Sophie Nock, Senior Lecturer in Te Pua Wānanga ki te Ao (Faculty of Māori and Indigenous Studies), during the 2020 Native American and Indigenous Studies Association (NAISA) conference, which was held on that campus. Information on the return of land to the iwi (tribe) can be found at <https://nzhistory.govt.nz/page/waikato-tainui-sign-deed-settlement-crown>. This site includes a link to the Deed of Settlement, which lays out the terms of the university’s lease.

[23] Martin Case, *The Relentless Business of Treaties: How Indigenous Land Became U.S. Property* (St. Paul: Minnesota Historical Society Press, 2018).

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Monica Siems McKay is European-American, a descendant of German and Swiss settlers of Illinois and Missouri. She has an M.A. in Religious Studies from the University of California Santa Barbara, where her research focused on Dakhóta history. She has been learning the Dakhóta language for over 20 years and teaching it in community settings for over 10 years. Monica is Assistant Director of the Center for Community-Engaged Learning at the University of Minnesota Twin Cities.

FEATURE

RATTLESNAKE EFFIGY MOUND ANCESTORS STILL TEACHING

By Jim Rock

For centuries “science” has been thought of, taught, and practiced in a particular pattern and model, with its origins in European philosophical traditions. Things that were not science were story, or anecdote, or folklore, lesser forms of knowledge somehow. Currently this western orientation of science has tremendous cultural power; just think of all the times policymakers say they “follow the science.”

*But what if we understood science differently, as an explanation of biological or physical phenomena that was grounded in observation and testing/confirmation, but that wasn’t written down in official journals, but was rather conveyed orally over generations? A global movement of Indigenous and Western-trained astronomers is posing that very question. One project, *Native Skywatchers*, includes collaboration with Indigenous astronomer Jim Rock, the*



Rattlesnake. Image courtesy of Duncan Sanchez.

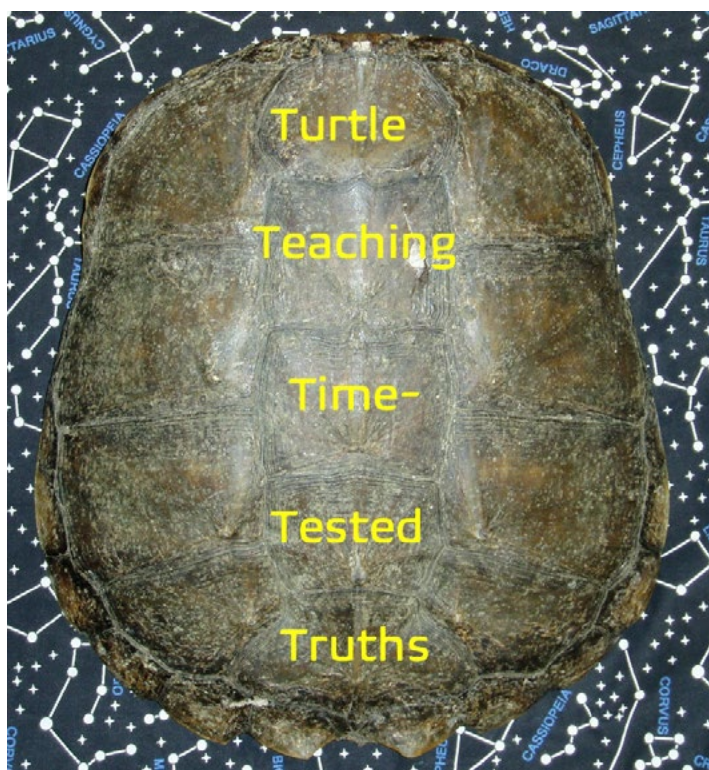
author of this feature. Rock's writing exemplifies a nonlinear, multi-modal way of conveying knowledge that some would argue is an essential part of knowing the world in new ways, ways

critical to meeting the enormous challenges we face.

– Patrick Nunnally, St. Paul, MN

Keya Wita Akan Pahá Zuzéča K'a Hupkake Kiŋ Henáĥ *Wówičakĥe** Waúŋspewičhakhiyiŋ Kta Čhín

KWAPZ(KH)²W²KČ (13)



T T T T T ☆ ☆ ☆ ☆ ☆

REM(A/A) OTIST S-TK*&IAG**T (16)



Rattlesnake Effigy Mound Ancestors at Afton of Turtle Island Still Teaching Spacetime-Tested* (and) **Truths

* Kapemni

** IAG, Indigenous Astro-Geographical

Seeing Snake’s head, tail & body joined together as a one-eyed, Cyclopean Wakinyan

(Thunderbird) sees 16 Wičháhŋpi (Stars) in Dakota Zuzéča (Snake) Constellation: Head ¶ + 3 Tail ¶¶¶ + 12 Body ¶¶¶¶¶¶¶¶¶¶¶¶¶¶ = 16 ¶¶¶¶¶¶¶¶¶¶¶¶¶¶

The Snake’s Head ¶¶

“Power plus place equals personality,” said Vine Deloria Jr., whose father mentored and baptized my Dakota father, who was **Dekši** Vine’s friend to the end. So first, “**Óhiŋniyan Tákuškaŋškaŋ k’a Mihúŋkake k’a Mitákuyepi, mičhaŋté waštéya etáŋ pidámaya yedo. Wičhoni mitháwa wópida taŋka!**” It is with deepest heartfelt gratitude that I give thanks for life to the Always Moving Power who moves what moves, to the ancestors, elders, mentors, relatives and beings in Dakota homeland of

my birth where the sky reflects the waters. Great thanks for helping me feel, hear, see and write about these sacred places, such as **Bdote, Wakaŋ Tipi** and **Hoǵáŋ Owáŋka Kiŋ** of **Mni Sota Makoče. Mahásaŋni Biidabinokwe, waniyetu wikčemna sám zaptaŋ pidamaya yedo!** I also acknowledge and say thank you to my “other skin,” “First Light of Day Woman,” for 15 winters together.



The Three Tail Shakers ¶14, ¶15, ¶16 (or sequentially ¶12, ¶13, ¶14)*

Rock and Gould (2018) initially described REMA (Rattlesnake Effigy Mound at Afton) within “Indigenous Riverscapes and Mounds: The Feminine Relationship of Earth, Sky and Water.” In the two years since, an improved perspective has emerged to explain why the numbers work even better to tell the symbolic story in decolonized Dakota units of **wičišpa**, pronounced “weecheeshpa” and measured as Dakota cubits instead of English feet, of course!

The Snake mound was first measured by Lewis (in 1883) twenty years, or only one generation,

after the Dakota exile. He recorded the snake was a total of 534 feet from head to tail, with a head length of 88 feet, the body of 390 feet, and the shaker tail as three mounds totaling 56 feet (18, 18 and the final end mound of 20 feet, see figures 4 and 5). But if the body is actually 266 Dakota **wičišpa** (cubits), then it better represents the number of days we spend connected by our umbilical cord for 9 moons, in mom’s growing belly upon **Turtle Island Mother Earth!** So these aren’t just burial, but birth mounds. In this case, a snake may represent an umbilical cord (**čekpa**).



Also in this journal is an article titled “Sky Watchers, Earth Watchers...” which lengthened to 1,862 words, or 7 x 266! If words were years, 1862–63 was our Dakota exile. We return to this idea later where 7 x 38 = 266 cubits or days in the snake body.** Therefore, the author believes this flood-watching and eclipse-watching snake effigy mound is intended to be read as a symbolic, umbilical cord between Earth and Sky. It also joins suns and moons with an amazing ability to predict certain eclipses with 99.97% accuracy. This riverside sandbar site, “**Hoǵáŋ Owáŋka Kiŋ** is the Fish Campsite (see figures 6, 7, and 8). Before

the author acronymized the snake mound as REMA, ancestors may have called it **Pahá Zuzéča Siŋté Ĥda** (PZSĤ, Rattlesnake Mound) as a form of homage to **Uŋktehi** who rules the waters and aquifers. REMA, like the Greek *rhēma* (ῥῆμα), is an utterance or spoken word or logos (λόγος). “What is REMA saying in **Zuzéča iyápi uŋ wičhóiyē** (snake speech)?” Harry Potter is a Parselmouth with Parseltongue ῥῆμα REMA speech of the Basilisk Serpent. But our **Pahá Zuzéča Siŋté Ĥda** is ten times larger than a Basilisk! 1 Head ¶ + 3 Tail ¶ ¶ ¶ = 503 words in 4 ¶ ¶ ¶ ¶ so far!

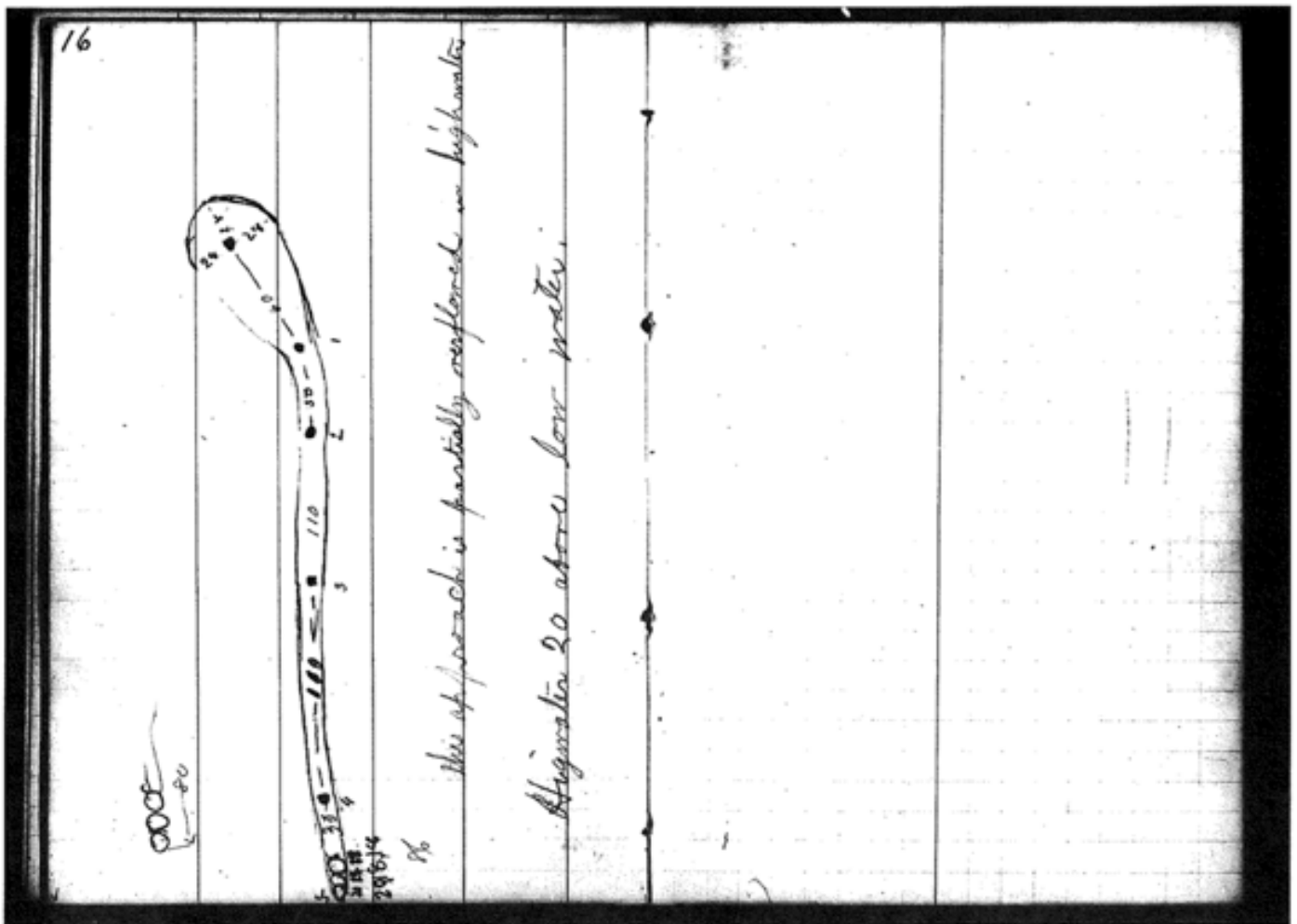


Figure 4: Detail from Lewis, T. H. (1887). *Science* 9 (220): 393–94 [Measurements from 6-25-1883 journal, pp. 15–16].



Figure 5: Detail from Lewis, T. H. (1887). *Science* 9 (220): 393–94 [Measurements from 6-25-1883 journal, pp. 15–16].

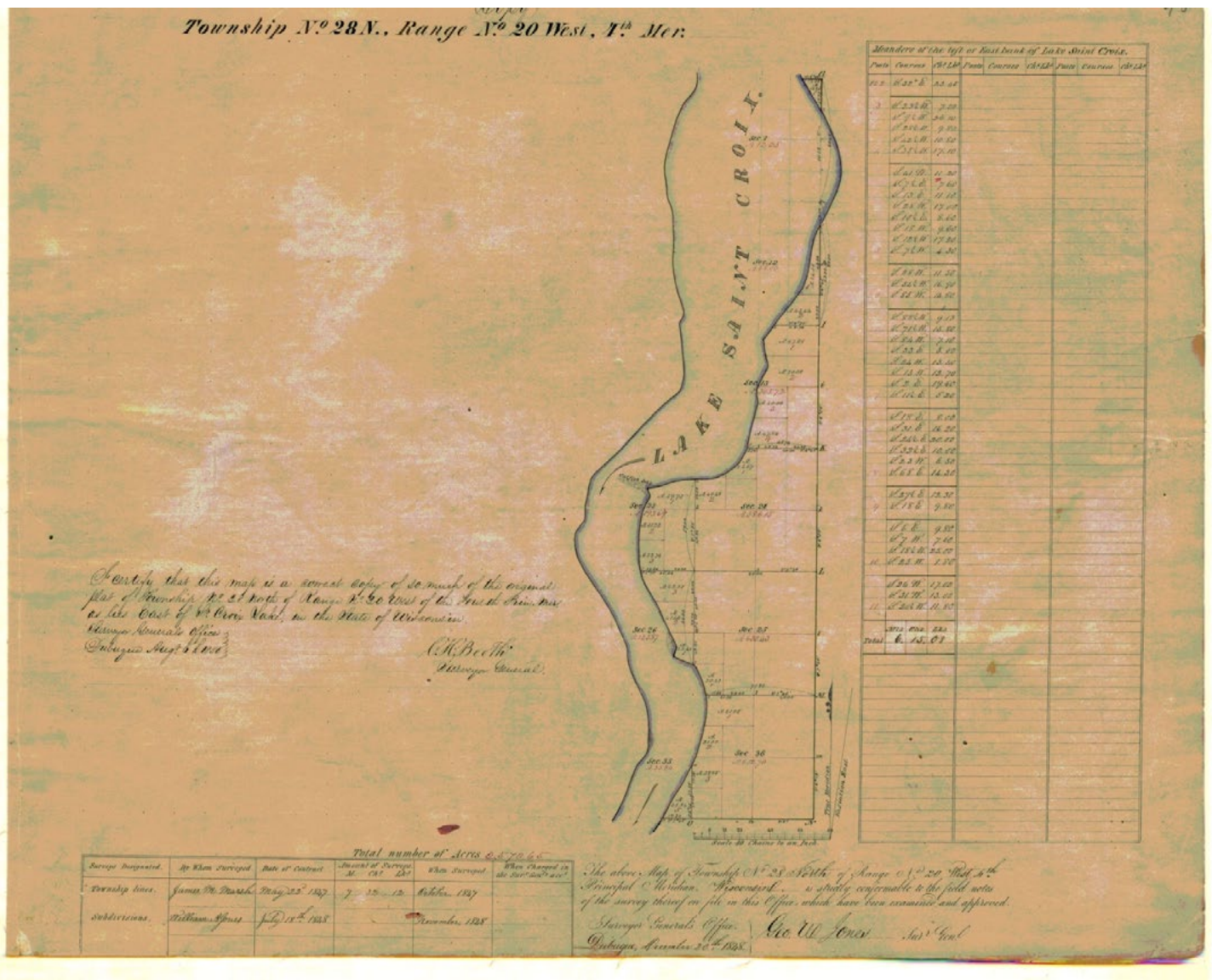


Figure 6: Wisconsin Township No. 28 N. Map 1850. Surveyor General's Office 1847-1848. Dubuque. [See Catfish Sandbar which Dakotas called Hogan Owanjka Kin].



Figure 7: Current view with Marina. Image courtesy of Earthstar GeoGraphics, Dakota County, USDA FSA, DigitalGlobe, GeoEye, Microsoft, CNES via ESRI.

REMA's ῥῆμα (utterance) / wičhóiyē (words) / hoye (voice) ¶2

Instead of piling basketfuls of earth to construct a snake mound from a one-foot-high tail, to a two-foot-high neck joining the human-size head of five and a half feet, this article piles ones with zeroes, as if letters and numbers in words, sentences and paragraphs. These words are arranged with the same hope they reflect some

of what REMA has encoded. This paper carries similar symbolic intent. But REMA's designers and builders required loving toil to speak clearly without words. REMA's symbolic, serpentine voice (ῥῆμα) still continues to speak to us today, though she is greatly damaged and disturbed beneath a fifty-year-old city dike.



5.5 tattooed words on one cubit? ¶3

If the above acknowledgement (one ¶) and abstract-synopsis (three ¶ ¶ ¶) paragraphs symbolically represent the snake's head and three tail-rattle mounds, then these 12 ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ ¶ are re-constructing and reading the possibly pregnant body until it grows to 1360 words. These 1360 words represent both 266 days and

266 day pregnancy = 1360 words ¶4

This word-snake analogy continues: [Head ¶, 117 + Tail ¶ ¶ ¶, 386] = 503 words divided by 1863 total = 27.0%. So the 1360-word Body divided by 1863 = 73.0%. Now apply these percentages to the snake's total length of 364 cubits, confirming the body is 266 cubits or 73% of a year (9 months) representing pregnancy. The head

and tail represent the remaining 98 days of the year since conception, but after birth. Breathing through an umbilical cord for 266 days = 9.01 synodic months and 98 days off-cord = 3.32 months for 12.33 syn. mos./yr.

and tail represent the remaining 98 days of the year since conception, but after birth. Breathing through an umbilical cord for 266 days = 9.01 synodic months and 98 days off-cord = 3.32 months for 12.33 syn. mos./yr.

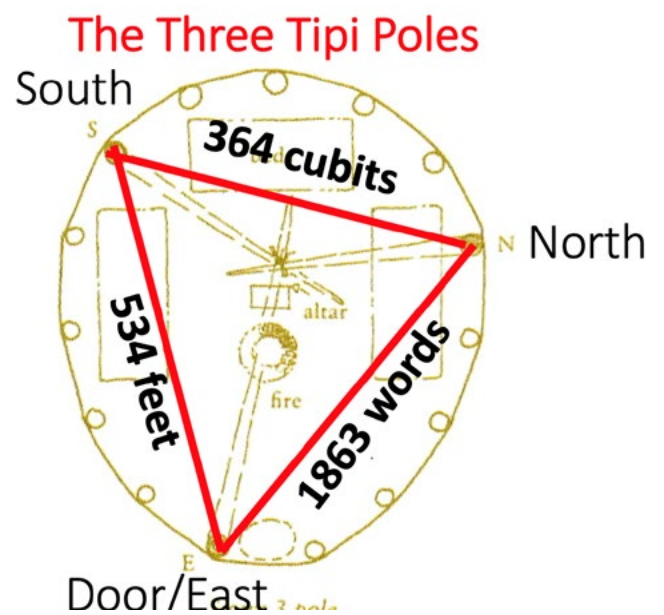
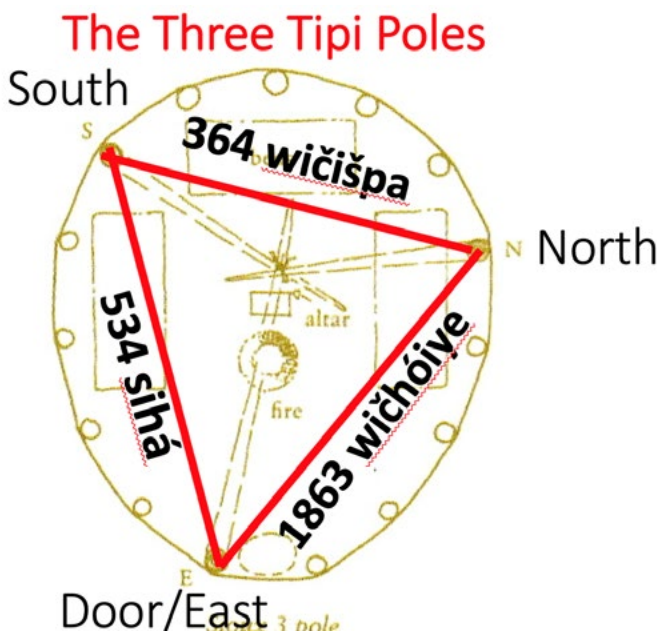


Figure 1A: The Three Tipi Poles. Modified from original courtesy of Tom Bean. Via Scott Thybony (2003). *The Tipi: Portable Home of the Plains*. Western National Parks Association.

Figure 1B: The Three Tipi Poles. Modified from original courtesy of Tom Bean. Via Scott Thybony (2003). *The Tipi: Portable Home of the Plains*. Western National Parks Association.

2018 – 2020 Hands-Feet-Cubits ¶5

So this is offered with even greater confidence than two years ago to update and further affirm Rock and Gould’s (2018) synopsis and abstract as stated:

By examining the strong feminine cosmology connected to these sites through a lens of Critical Indigenous Pedagogy of Place (CIPP) along with the study of astronomy and Indigenous environmental education...we can now say with relative confidence, that these mounds were used for measuring and commemorating cycles of time for well over one or two thousand years. Their use predicted the reoccurrence of feminine lunar and masculine solar syzygy (eclipse measurement), and held numerical and symbolic interpretations of spacetime cycles....These mounds mirror earth with sky as interdisciplinary expressions of art, humanities, science, math, engineering and technology. We also examine the strong feminine cosmology connected to these sites and the impact of colonial settler practices through a lens of ecofeminism and CIPP. Through this research we believe we have decoded some of the meaning

and purpose behind these amazing earthworks. After examining a decolonized measuring system, the not-so-hidden meanings became even more apparent.

It is probable that cubits, feet and hands were all used to build REMA avoiding decimal units. Whole number ratios work well. Using three hands (**napé**) as a foot (**sihá**), we see that the last tail mound = 3 h./ft. x 20 ft. = 60 hands, and the other two mounds before it are 3 h./ft. x 18 ft. = 54 hands each. So the tail is also 168 **napé** (or 56 feet or 38 cubits). The body is 266 cubits or 390 feet or 1170 hands. The head is 56 feet wide (2 x 28 feet or 38 cubits) by 88 feet (60 cubits or 264 hands) long. So seven tails, 7 x 38 = 266 cubits equals the body, a ratio of **7T:1B**. Since the head’s width is another 38 cubits, is it counted as a ninth part to the 7 + 1 “tails”? Is this part of ceremonial snake-cutting knowledge into segments? Maya oral tradition says a snake could be cut into 7 to 9 or 13 parts. So this snake article’s head = 1¶, body = 12¶, and tail = 3¶.

7T:1B Above, [B-T]/S Below See Fig. 2 below ¶6

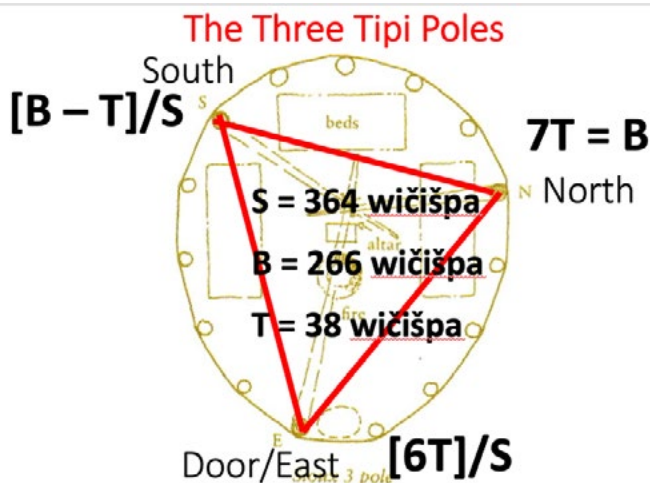


Figure 2: The Three Tipi Poles. Modified from original courtesy of Tom Bean. Via Scott Thybony (2003). The Tipi: Portable Home of the Plains. Western National Parks Association.

More precisely, the entire snake is 364 cubits or 534 feet or 1602 hands. 1602 H. divided by 6 H. high neck = 267 days. So $13 \times 28 = 364$, but $9.5 \times 28 = 266.0$ and $9.0 \times 29.53059 \text{ dys./syn. mo.} = 265.775!$ *** The ratio of body to snake is $1170:1602 \text{ hands} = 73.03\%$. So $0.7303 \times 364.0 \text{ dys./yr.} = 265.8 \text{ days/pregnancy}$. The Dakota Red Day star (planet Venus) is associated with pregnancy and twin average appearances of 263 days a.m. or p.m. in a 584 day cycle (Lee, Rock,

and Wilson 2012). So $5 \times 584 = 8 \times 365$ is an eight year return of Venus to its sidereal place in the stars. The author noticed: If $B = 7T$ and $[B-T] = kS$ then $6T = kS$; where $k = 0.626$. **[Body minus Tail]/Snake** = $[266 - 38] \text{ cubits}/364 \text{ cubits} = 0.626$. Also $1002 \text{ hands}/1602 \text{ hands} = 0.6255$, the inverse of which is $1.598(8)$. Finally, $1.598(8) \times 365 \text{ days} = 583.56 \text{ days}$, very close to the Venus sidereal period of 583.92 days (0.06% error= 99.94% accuracy). See Fig. 3 below:

B or no B \ units	feet	cubits	hands	mean
[B - T]/S	0.625(5)	0.626(4)	0.625(5)	0.625(8) 0.030% error
[6T]/S	0.629(2)	0.626(4)	0.629(2)	0.628(2) 0.027% error

Earth Sidereal Year	365.256363 dys	= 0.62550
Venus Sidereal Year	583.92 dys	

Figure 3: Earth and Venus sidereal years. Image courtesy of Jim Rock.

VENUS : EARTH RATIO 79 minutes or 27 minutes ¶17

By applying the “Snake Hands” ratio (yes, snakes have hands!) of 0.6255 times 584 Venus days we derive **365.292 days** per Earth year! This is just 0.014% error. Also 23.93 hrs/day x 365.292 dys/yr = 8741.44 hours/year instead of 8740.2456 or 1.19 hour = only **79 minutes more per year!** This is 99.986% accurate! Using an even better Venus value shows:

$1602 H/1002 H = 1.598(8) = 583.92 \text{ days}/[? \text{ days for Earth year} = \mathbf{365.224... \text{ days}}]$.

9 Moons = Pregnancy while 405 Red Moons < 33 Years ¶18

Dakotas use 405 red tobacco ties in various ceremonies, while the Maya calculated 405 red moons = 46 Tzolkin of 260 (13 x 20) days = 11,960 days. So a “red moon” is a synodic lunar period of 29.53086 days, not 29.53059 days, as NASA measured in 1972 with an earthly laser reflected by a lunar mirror. This is only 20 seconds per month or 0.001% error = 99.999% accuracy! 405 moons (32.7454 years) is a triple tritos (3986.628 days) eclipse cycle:

$3 \times 135 = 405$ lunations. Six examples of 33 years follow: Moses carried a snake staff for 33 + 7 years. Was Jesus’ lifespan 405 moons ending

This 0.0182 day difference is 0.005% error (99.995% accuracy) **or only 27 minutes more per year!** Were Dakotas measuring Venus or Earth to 99.9% or 99.99% perfection using a snake? The answer is...Yes! Also, the Great Ballcourt of the Maya is 545 feet or 11 feet (or 8 cubits) longer than REMA (2.0% difference). It was dedicated to KukulKan, their flying, feathered Serpent Venus a.k.a. QuetzalCoatl.

with an eclipse? His recently deceased follower, civil rights icon John Lewis, served 9 months beyond 405 moons in Congress before returning to the stars. Chris “down by the river” Farley of 1964 Madison died in 1997 Chicago at 12,360 = 33.8406 yrs. = 405 red moons + 400 days. Madison to Chicago lie on the greatest annual lunar standstill alignment (see ¶12)! Naya Rivera lived 12,231 days = 414.18 red moons or 129 days more than Farley. Malinalli “Doña Marina” Malin-che/tzin, 33-55 yrs., b.1496 – d.1529/1551? = ? red moons. See CihuaCoatl-Coatlikwe connection.

Snake Tracks and Serpent Paths X Serpent Tracks and Snake Paths ¶19

The Great North American Eclipse crossed Turtle Island on Aug. 21, 2017. A Saros 145 family member with a 1963 total solar “relative” crawled further north across Canada just grazing Maine. Saros family #136 began in 1340 C.E. and occurs 71 times every 18.03 years. This interval of 1280 years has a 54 year proximity reoccurrence in a related shadow pattern [Since $3 \times 18 = 54$, and $1963 + 54 = 2017$]. Were these giant sinuous paths on the ground considered as celestial snake (word-year#1805; Twin Bdotes taken by Pike) counterparts of Unktehi below? Dakotas

have a 16 star snake constellation as depicted in Lee and Rock’s D(L/N)akota Star Map (2012) and the accompanying guidebook (Rock and O’Rourke 2014).

By sending out observers and messengers, such serpent tracks could be validated and studied. Other non-Saros paths still need to be investigated for likelihood of REMA (#1836 REMA still Dakota; Wisconsin Territory) vicinity ((#1837 REMA lost to treaty) crossings (#1838 Trail of Tears; Iowa Territory).

Natural Literacy and Natural Numeracy = Nature's Programming ¶10

A (#1839) generation (#1840) may (#1841) only (#1842) briefly (#1843) look (#1844) back (#1845) upriver (#1846; Iowa statehood) to (#1847) its (#1848 Wisconsin statehood) ancestors (#1849 Minn. Territory) from (#1850) its (#1851 Treaty, more land gone) own (#1852) place (#1853) in (#1854) the (#1855) river (#1856) of (#1857) spacetime (#1858 Minn. Statehood). We (#1859) see (#1860) through (#1861) our (#1862) own (#1863)... **Paper-Snake ENDS HERE. 503 + 1360 = 1863...** **But these 12 plus 393 more words reach 405 words beyond 1863. 1863 + 405 red moon words = 2268... or 248 years from now? Since 2020 – 248 = 1772 six years post-Carver at Wakan Tipi Cave.**

We see through our own...lenses, languages and location while remaining tied to a tree on the riverbank. What messages did the ancestors leave

Death Rattle for Rattlers? ¶11

Imagine a daily killing of five and a quarter snakes for 15 years from 1967 (#2020) to 1982. In Houston County alone, 28,685 timber rattlesnakes were bountied for \$1 to \$8 per snake. So \$100,000 nearly bought their extinction. Minnesota was the last state to offer such bounties. A veterinarian and the Minnesota Herpetological Society gained sponsorship of

630-Mile Snake Path ¶12

Gould and Rock (2016, 2017) and Rock and Gould (2018) have researched the riverside mounds under threat and in need of interpretation from an Indigenous, astro-geographical, archaeo-astronomical perspective. REMA shows a remarkable use of 18.03, 18.61 and 19 year eclipse cycles observed with incredible precision

us (#1883 Lewis measures REMA)? By natural literacy and natural numeracy (Rock 1997) they painstakingly wrote and encoded life and birth into an effigy snake mound. The Gen X and millennial generations may think of REMA as coders or software developers. Programming is how you get computers to solve problems and to instruct the computer to perform tasks. What tasks or problems was REMA solving? What information was stored and processed to give answers? How was this output data displayed, read and interpreted? These codes and illustrations are offered in Rock and Gould (2018). Yet snakes were killed and the snake mounds razed without ever learning the $\rho\eta\mu\alpha$ of REMA. This computational serpent and (#1989 see law next ¶) its messages were left to sewage and landfill, instead of being read fervently or “religiously.”

bills to stop this. Those voting against were 12%, so the bills were passed and signed into law May 3, 1989 (Minnesota House of Representatives 1990). This was the Chinese year of the snake, one month before Tiananmen Square and the millennial generation was being born. As REMA's tail is 10.5%, more than this (12%) still wanted snakes killed to extinction.

(99.97%) by Dakota ancestors (Rock and Gould 2018). But long distance implications show at least a 630-mile network from REMA through 21,000 rattlesnake and thunderbird mounds at Madison (Ho-Chunk) and on over to Chicago and the Giant Serpent Mound Ohio (see figures 9 & 10).

Ohio Syzygies ¶13

In closing, because of CoVid-19, Rock was unable to deliver lectures requested by Ohio State University for their 150th anniversary on (1870–2020) spring equinox. Like the University of Minnesota, Ohio State is a land grant university by the (im)Morril(a)l Act of 1862.

1,862-3 words for this article is the exile year from our Dakota homeland. 1862–3 was also the start of \$25 to \$200 bounties on Dakota people (25 times more than snakes a century later). The author's intent for Ohio and this article of 1863+405 words was to show a linear, lunar connection between our sites along the GALSA/A, greatest annual lunar standstill azimuth/angle

(≈131–133 degrees). When the 1883 Lewis data (1887) was converted 135–137 years later by the author to cubits, hands and feet, it more strongly affirmed a beautiful, feminine, long-distance Earth-Moon-Venus-Ohio-Wisconsin-Minnesota relationship to ceremonially and generationally walk from full moon to full moon for 30 days at 21 miles/day every 18.6 years. The Ohio Great Serpent also seems to be a symbolic, umbilical cord to/from earth with solar-lunar eclipse syzygies. This hypothesis would substantiate TEK of long-term phenology and phenomenology shared across Indigenous communities over a millennia or two ago. Mitakuye Owasin!

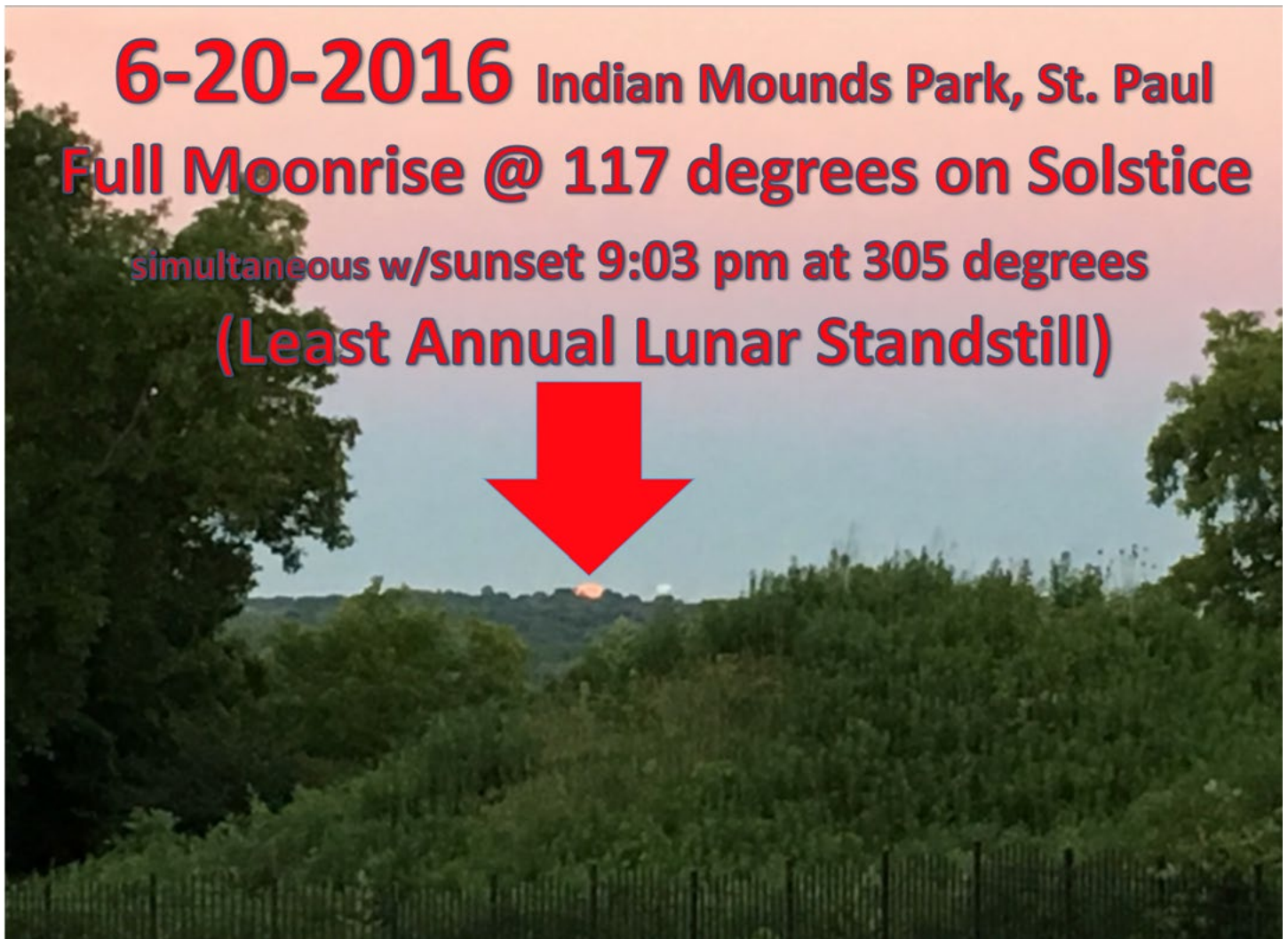


Figure 10: Solstice at Indian Mounds Park. Image courtesy of Jim Rock.

17 Dakota + 1 Non-Dakota = 18 Glossary Terms

Bdote

where rivers join, especially the Mni Sota Wakpa & Wakpa Taŋka (@Twin Cities) but also where the St. Croix meets Wakpa Taŋka (Misi Ziibi)

čekpa

navel, umbilical cord, [twin(s)/čekpapi], 7th child (birth order)

dekši

uncle

kapemni*

twisting, spinning...like crossed tipi poles with above & below mirrored



Hoǵáŋ Owáŋka Kiŋ:

The Fish Camp (Afton, Minnesota)

hoye

voice

Mitakuye Owasiŋ!

We are all Relatives...all my Relations!

Mni Sota Makoče

land where the water reflects the sky

napé

hand

Pahá Zuzéča Siŋté Ĥda

(PZSĤ) rattle(tail) snake mound...a.k.a. REMA

sihá

foot

TEK

traditional ecological knowledge

Uŋktehi

horned snake creation story being who rules waters & aquifers. esp. Wakan Tipi cave

Wakaŋ Tipi

A cave in Dakota birth creation story which mirrors star of bison backbone (3 stars)

Wakiŋyaŋ

Thunderbird creation story being who brings storms, lightning & thunder from West

wiĉáhŋĥpi

Star, old style star symbol was *kapemni



wiĉišpa

Dakota cubit from elbow to tip of middle finger...in REMA's case about 17.6 inches

wiĉhóiyē

word(s)

** The 266 word short article became 7 times longer as I wrote, which is like a foreshadowing of the 7 x 38 cubit tail, which makes a 266 cubit umbilical cord snake body. I also implicitly conjecture that because as Ocheti Shakowin Oyate we embody the Seven StarFire Nations in our Buffalo and Dipper constellation(s). This implies the Tipi rope is an umbilical cord as the three stars in the bison backbone are the three

tipi poles. Everything is polysemous for us like Indigenous symbolic hypertext to travel to other dimensional meanings...Also 1862 is the year settlers use to define us or contain/limit/keep us in our war-torn subjugated state. So I'm writing beyond 1862-2 here to include the now and future decolonized revivification.

***The year was thought of as 13 moons of 28 days (=364 not 365) and pregnancy as 9 moons

of 29.555 days, but decimal units can be avoided by using ratios. The Body minus Tail (B-T) mnemonic as well as 7 tails (7T) mnemonic both help to achieve awesome accuracy when using hands compared with cubits. Venus is related to pregnancy and fertility for us because it is a morning or evening star for 263 days on average and pregnancy is 266 days.

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Patrick Nunnally is a lecturer in the Department of Landscape Architecture in the College of Design at the University of Minnesota. He also teaches in the College of Food, Agriculture, and Natural Resource Sciences and was one of the lead scholars for the University's John E. Sawyer Seminar, "Making the Mississippi: Formulating New Water Narratives for the 21st Century and Beyond," funded by the Andrew W. Mellon Foundation. Nunnally's teaching and writing are public-facing, connected to community, and focused on the Mississippi River as a corridor for environmental justice and climate change. You can find more about his work at landwaterplace.umn.edu, a website offering resources on questions of environmental justice, community, and environmental change.

FEATURE

INDIGENIZING ENVIRONMENTAL THINKING

By Waziyatawin, Roxanne Biidabinokwe Gould, Clement Loo, Samantha Majhor, Sara Černe, Bonnie Etherington, Andrew M. Freiman, Agléška Cohen-Rencountre, Adam W. Coon, Sarah Peele, Wendy F. Smythe, Christine Taitano DeLisle, and Becca Gercken

A key component of the work of the Humanities-led Environmental Stewardship, Place, and Community Initiative is an emphasis on considering how higher education might be

changed by centering ways of knowing that have often been dismissed or diminished by traditional Western academic systems. Vital to this work is recognizing academia's participation in and



Lake Itasca. Image courtesy of Sara Černe.

perpetuation of settler colonial logics and the ways these limit understandings of place, other-than-human relatives, environmental challenges and their possible solutions. Participants in the Initiative, as well as many people beyond it, are focusing on ways to Indigenize and decolonize environmental thinking, education, and relations with the world and each other.

We asked scholars and thinkers from within and beyond the academy to share a short response about what this work might look like. Specifically, we asked people to respond to the following prompt: As we face environmental challenges, such as climate change, extraction economies, (over)development, loss of habitats and ecosystems, pollution, and other harms,

what might Indigenous ways of knowing offer to address these global concerns? How might Indigenizing and/or decolonizing our methodologies transform higher education teaching and research?

The responses here offer insights, experiences, reading suggestions, and provocations. We at Open Rivers still have a lot to learn about this work; we suspect we are not alone. As one respondent reminds us, even the questions we pose here demonstrate settler logics. Still, we hope you'll engage with these responses and learn with us.

– Laurie Moberg, Managing Editor

Waziyatawin

In our age of catastrophic climate chaos, Indigenous wisdom may be the only wisdom of value. Indigenous cultures throughout the world have a demonstrated capacity to live on the same land base over millennia without destroying it. Rooted in understandings of the interconnectedness and spiritual essence of all beings, pre-colonial Indigenous ways of being strove to be in good relationship with all of creation.

Western civilization, on the other hand, has never demonstrated a capacity for sustainability. On the contrary, from an environmental sensibility, Western civilization destroys every landscape it touches. Industrialization has only intensified and exacerbated the destructive impulse of Western society, which is rooted in the myth of human supremacy. Thus, in a few short centuries, Americans have all but destroyed our wetlands, our prairies, and our forests while poisoning our

air, water, and soil. The toxification and hyper-exploitation of the very ecosystems essential to our survival are the predictable outcomes of treating other life forms as inferior and expendable.

In spite of this utter failing to protect what is vital to our future survival, academic culture has often marginalized and denigrated Indigenous ways of knowing and being, relegating them to the realm of quaint or colorful supplements to the nucleus of Western knowledge. In this context, decolonizing Western education at its most fundamental requires shattering the social evolutionary worldview that places Western education at the pinnacle of knowledge with Indigenous knowledge far below it. If scholars want to contribute to saving the planet, that paradigm must be reversed. On issues of long-term sustainability, Indigenous knowledge, time-tested over thousands of years, must be given the primacy it deserves.

Roxanne Biidabinokwe Gould, Being a Good Relative in Someone Else's Homeland

Indigenous peoples are not the overseers or stewards of the places in which we live. We are part of the ecosystem, the very entrails, insides, and soul of that place. Our creation begins in our homeland where we have lived for millennia worked to be in right relationship with all the beings of that place (Cajete 1999).

Indigenous peoples believe there is a direct link between the well-being of Indigenous peoples and the well-being of the planet, but the reality is we are often the miners' canaries made to test the waters to see how much destruction the planet can endure before there is no return (Gould and Day 2017).

In academia there are many theoretical models that can provide guidance on how to understand our planet's decline. Ecosocialism places capitalism at the heart of the problem. Ecofeminism (Shiva and Mies 2014) interrogates toxic patriarchy as the reason for the abuse of women and Mother Earth. Both offer important contributions to the discussion, but Critical Indigenous Pedagogy of Place locates Indigenous epistemology at the forefront, while promoting

a community-based process that sheds light on locally grounded sustainable solutions aimed at reinhabiting and decolonizing Indigenous homelands (Gould 2018).

Like many Indigenous people today, I do not live in the homeland of my ancestors. Because of marriage and work, I now reside in the homeland of the Dakota of Mni Sota Makoce. I have a responsibility of reciprocity as a guest in the Dakota homeland to the original inhabitants and their traditional Indigenous knowledge. I also have the responsibility to work with them to dismantle those destructive systems that continue to harm Dakota homelands, Dakota people, and the planet.

Contemplating this future requires expansive thinking on the part of us all. For non-Dakota people, it asks that you challenge, re-examine, and reject the racist and colonialist programming to which you have grown accustomed. It also asks that you rethink the values of domination, consumption and exploitation that have become a part of American society. (Waziyatawin 2008, 14)

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Clement Loo, Decolonizing and Indigenizing Higher-Education

Every definition of “sustainability” that I can think of includes some mention of the mutual flourishing (or some synonym thereof) of all people (as well as non-people) living on the planet.

The difficult question is: what counts as flourishing? Even if one only focuses on humans, there are numerous understandings about how a human might flourish. These different understandings are influenced and modified by values, history, minoritization, marginalization, and a host of other economic, political, social, and cultural factors.

The context dependency and complexity of flourishing is one of the many reasons why those of us whose efforts are aimed at pursuing sustainability must be better at integrating Indigenous knowledges and perspectives into our work and our institutions. To promote the flourishing of

all, one must understand what flourishing means across a wide range of cultures. Given such a need for understanding the many ways that flourishing might be defined across cultures, we must include a broad range of voices and perspectives in our conversations about and decision-making processes relevant to sustainability.

To have effective and inclusive discourse, we must be intentional about the format of our conversations. We must, informed by partners representing marginalized communities, be careful to consider how we engage in discourse. Higher education must take steps to ensure that our practices appropriately recognize and respond to different cultural assumptions about the proper and good ways that individuals and communities should relate to one another. This, I contend, is at the heart of decolonization and Indigenization.

Contributions from the “Indigenous Art and Activism in Changing Climates” Project

The Mississippi River has always facilitated currents of trade, activism, art, and research as a site of constant cultural, environmental, and political exchange. As a collective of graduate students and junior faculty, and as members of the Mellon Foundation Humanities Without Walls (HWW) project, “Indigenous Art and Activism in Changing Climates: The Mississippi Valley, Colonialism, and Climate Change,” we bring together responses to the *Open Rivers* prompt that foreground collaborative and interdisciplinary approaches and highlight multidimensional understandings of *Indigenous* relationally with the river and its tributaries. Project participants came from six different institutions and we met as a group at sites from the headwaters of the Mississippi to the Gulf, reading scholarly

and creative texts about these places while prioritizing embodied, experiential research methods—from canoeing, to visiting Indigenous earthworks, and hearing from and working with Indigenous artists and community members. Over two years of gathering along the river and researching, we have generated individual and collective questions about the Mississippi that connect Indigenous engagements with the river to thinking through decolonizing methodologies and global environmental challenges: What confluences have emerged between Indigenous research, art, and activism in the context of the river? What does “humanities without walls” mean in the context of Indigenous Studies? How are particular Indigenous river histories made visible by collaborative practices and pedagogies

of art and activism? As part of our emphasis on team-based research, our responses to these questions regarding environmental stewardship, place, and community are developed in

conversation with each other and, much like a river's tributaries, take shared waters in different directions.

Samantha Majhor, “Indigenous Art and Activism in Changing Climates” Project

River networks sprawl and span across our homelands, sustaining life and carrying it to connect through other water systems across the globe. This is part of the understanding that reverberates from the D/Lakhóta phrase “mní wichóni”—water is life. Native American and Indigenous Studies (NAIS) is like the river in this way, in its methods and in the way NAIS scholars focus on relations and relationality. I often

think that NAIS methodologies work as a bridge between the silos of knowledge that academia tends to produce: arts and sciences, trade and design, business and agriculture. Indigenous knowledges and methodologies point us toward the networking, the relationships, and the maintenance of relationships between humans and other-than-humans, and NAIS methodologies ask us to focus on these relationships by attending



HWW Group with Jim Rock at Indian Mounds Regional Park, Minnesota. Image courtesy of Sara Černe.

to relational networks situated in place. No one person, people, city, state, or nation can put humans on the track to reaffirming our responsibilities to the river; its expanse reaches beyond these other bodies. Here, in Mnisóta Makóče, we tend to call the river ᠬᠠᠬᠢ Wąkpá in the Dakhóta language—river of the falls. This is not what all Dakhóta people call this river all the time, but where I am now, just north of Minneapolis/St. Paul, this is the name that gets used most often

because this is where one will find waterfalls along the Mississippi. The name attends to the river’s particular features in this spot. The river has many other names, names dictated by other relationships with and observations of the river, depending on one’s place along the river and its tributaries. NAIS methodology suggests that one get to know the river in a multivalent way and embark on a reciprocal relationship that lives in place but, inevitably, ripples downstream.

Sara Černe, “Indigenous Art and Activism in Changing Climates” Project

The collaborative nature of the project and the Indigenous artists and activists we met during our site visits to the Upper and the Lower

Mississippi made evident the importance of the local in addressing global environmental concerns. The experience underscored the necessity



HWW members Jacki Rand and Agléška Cohen-Rencountre at the Mississippi Headwaters, Lake Itasca, Minnesota. Image courtesy of Sara Černe.

of considering longer historical perspectives within particular spaces—of going deep while remaining rooted in place—all to better understand broad issues that transcend and connect specific local geographies. For me, embodied engagement with places and histories along the river made concrete the abstract notions of dispossession and extraction, processes that take place across the river valley as well as nationally and globally. Conversations with Jim Rock, Director of Indigenous Programming at the Alworth Planetarium at the University of Minnesota Duluth, for instance, highlighted the longevity and relational geography of Native mounds in the Mississippi's watershed. Disregarding Dakota traditions developed in relation to this space, the

relatively recent settler activity of the nineteenth and twentieth centuries destroyed many sacred sites in the greater Minneapolis area such as Wakan Tipi and Spirit Island. This was done in the name of Western progress and (over)development, a mentality that disrupts local ecologies and causes a chain of devastating consequences. While it is common for younger students to engage in place-based learning, higher education seems to devalue the method. If we wish to collectively unlearn some of the practices and mindsets that led to the age of Great Acceleration, we could do worse than to make relationality, accountability, and sustainability crucial to humanistic education, anchoring and modeling these values in local environments.



Lake Itasca. Image courtesy of Sara Černe.

Bonnie Etherington, “Indigenous Art and Activism in Changing Climates” Project

In Minneapolis in 2018 our Humanities Without Walls group had the privilege of hearing from Nibi (water) walker Sharon Day (Anishinaabe) who described how she along with other Nibi walkers journeyed from the headwaters of the Mississippi River to the Gulf, carrying the clean water with them to “remind the water” in the Gulf what it once was. This action compelled thinking about what the river carries and is shaped by as it travels toward the ocean, what the waters leave behind, and what they accumulate in their passage. Shipping traffic carries oil and other goods upriver. Corn, beans, wheat, and more flow out, and the waters bear with them currents

of silt, nitrates, and other forms of pollution. At the same time that the accumulation of sediment is critical for resisting land loss in the Louisiana Delta and sustaining complex river-ocean ecosystems, nitrates trigger growing dead zones in the ocean and rising seas inundate entire communities near the river mouth. Actions such as Day’s Nibi walks indicate that conversations about Indigenous sovereignty and water rights up and down the river and its tributaries do not exist in isolation from each other. We can only address issues down river (such as land loss) and their impacts on multi-being populations when also considering issues upriver (such as



The HaHá Wakpá at Hidden Falls Regional Park, Minnesota. Image courtesy of Sara Černe.

levee or pipeline building), and vice versa. This kind of thinking (or walking) with the river also suggests that lasting and equitable solutions to the environmental issues faced by Indigenous

peoples with relationships to the Mississippi must contend with histories of settler colonialism and extractive capitalism at local, national, and global scales.

Andrew M. Freiman, “Indigenous Art and Activism in Changing Climates” Project

In 2019 we met in Oxford, Mississippi with filmmaker Monique Verdin (Houma) and visual artist Sarah Sense (Chitimacha) to discuss Indigenous art, activism, and the loss of Indigenous land in the Louisiana Delta. Levee systems and sea walls along the Lower Mississippi have reduced sedimentation, while

canals built by the petroleum industry have killed wetlands through saltwater intrusion. For Indigenous communities, losing land means losing life itself. Our conversations made it clear that the practices of settler colonialism are still in operation. Indigenous land is being overtaken by the petrochemical industry that sees the land



Itasca rocks. Image courtesy of Agléška Cohen-Rencountre.

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simply as a “sacrifice zone” where money can be made quickly, disregarding its historical, social, or religious meaning. Worse still, climate change, the rearguard of American colonialism, is wiping land off the map for good. In 2011, thirty-five place names had to be retired from local maps—they no longer exist. Multiple Indigenous communities are trying to relocate to higher ground, a difficult process further hindered by ignorant and racist federal expectations and recalcitrant local officials. Government-sponsored relocation isn’t

a success story, only part of a series of short-term solutions. The Biloxi-Chitimacha-Choctaw of Isle De Jean Charles recently left the relocation program because it left out historical members of the tribe. In order to combat the destructive habits of petroleum extraction, universities could work to divest from fossil fuels and diversify their energy systems, while also working to invest in/support Indigenous artists, thinkers, and elders who are the lifeblood of their cultures’ futures.



Portage. Image courtesy of Agléška Cohen-Rencountre.

Agléška Cohen-Rencountre, “Indigenous Art and Activism in Changing Climates” Project

My initial thoughts about the prompt focus on settler colonial logics that are made more evident

through our collective HWW inquiries that center Indigenous place and ways of knowing.



Wading. Image courtesy of Agléška Cohen-Rencountre.



Canoe detail. Image courtesy of Agléška Cohen-Rencountre.

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As an Očéti Šakówiŋ dual citizen, I struggle with the question of what Native people contribute to global issues regarding the environmental abuses for profit. The question, which speaks to what Native and Indigenous epistemologies and ontologies offer to a global healing from these politically driven environmental abuses, prioritizes *settler acquisition* of Native and Indigenous knowledge as the epicenter of that healing. In our current climate, there will continue to be growing interest in Native and Indigenous ecological stewardship and thus Native and Indigenous

science. I believe our work as HWW scholars helps to expose settler colonial logics at the roots and lessen the burden placed on Native and Indigenous peoples to compartmentalize trauma. “What might Indigenous ways of knowing offer in order to address these global concerns?” In short, there is no singular Indigenous way of knowing, and therefore the framing of this question itself is derived from a colonial perspective that is embedded within ongoing Native and Indigenous dispossession. So what more can Natives offer when we already give everything?



HWW group in canoes at Skokie Lagoons, Illinois. Image courtesy of Agléška Cohen-Rencountre.

Adam W. Coon, Centering Native Methodologies

As part of the Mellon Environmental Stewardship, Place, and Community Initiative cohort at the University of Minnesota Morris, we have discussed the need to center Native methodologies—not just talk about them as a topic, but instead as a lens through which to interpret situations, analyze texts, and develop solutions to contemporary issues and problems.

In thinking about Nahuas in Mexico, they offer methodological perspectives that are especially useful today. One that comes to mind is *ixtla-matlistli*, which literally means “knowledge with the face”; this perspective values personal experiences and needing to be personally involved in an issue to come up with effective solutions. This demonstrates a different idea of an intellectual;



Group at Itasca. Image courtesy of Aglėška Cohen-Rencountre.

a lot of times when people hear “intellectual” they think of someone locked in a room with an objective view, but *ixtlamatlistli* emphasizes this conception of needing to be in the thick of things to know how to offer the best solutions.

Further, this aligns with the idea of seeing elders as key knowledge producers. Elders have so many years of experience that they are able to draw on to offer effective solutions. In today’s society, there is often a perception that elders are on their way out, and we isolate them in retirement homes. In Nahuatl, there isn’t even a word for that because the concept of isolating elders is so foreign and wrong. I mention this because it ties into a view as seeing the past as in front of us rather than behind. In English and Spanish, the word “past” itself conveys the idea of being behind us, but in Nahuatl, and many other Native nations, the past is perceived as in front of you. If something is unknown, it is the future, and it is behind you where it cannot be seen. The knowledge from the past, however, will help guide you in encountering the unpredictable, dynamic present and future.

Tied into this is the idea of having a reciprocal relationship with the past. For example, even though the Day of the Dead in Mexico is

sometimes exoticized, it is all about reciprocity with one’s past and one’s relatives. Even though these relatives have died, people still have a special relationship with the knowledges that they’ve given, and they are remembered and recognized for that. The dead have given their knowledges and the living give back by acknowledging them with pictures on an altar in honor.

Perspectives like this are especially useful for today and valuable for tackling contemporary problems like some of the current environmental challenges. The emphasis on reciprocity, for example, is absolutely key: what you take, you give back. For example, in Nahuatl, people have a reciprocal relationship with the land because it is a relative, the Earth Mother. It is a relationship, not something you can barter or trade. In Western perspectives there is a strong tendency to compartmentalize, but in Nahuatl, people and place are interconnected dynamically and this helps to provide a wider picture, a panorama. Drawing on these interconnections offers different strategies for confronting contemporary environmental challenges.

Sarah Peele and Wendy F. Smythe, Decolonizing Science to Save Mother Earth

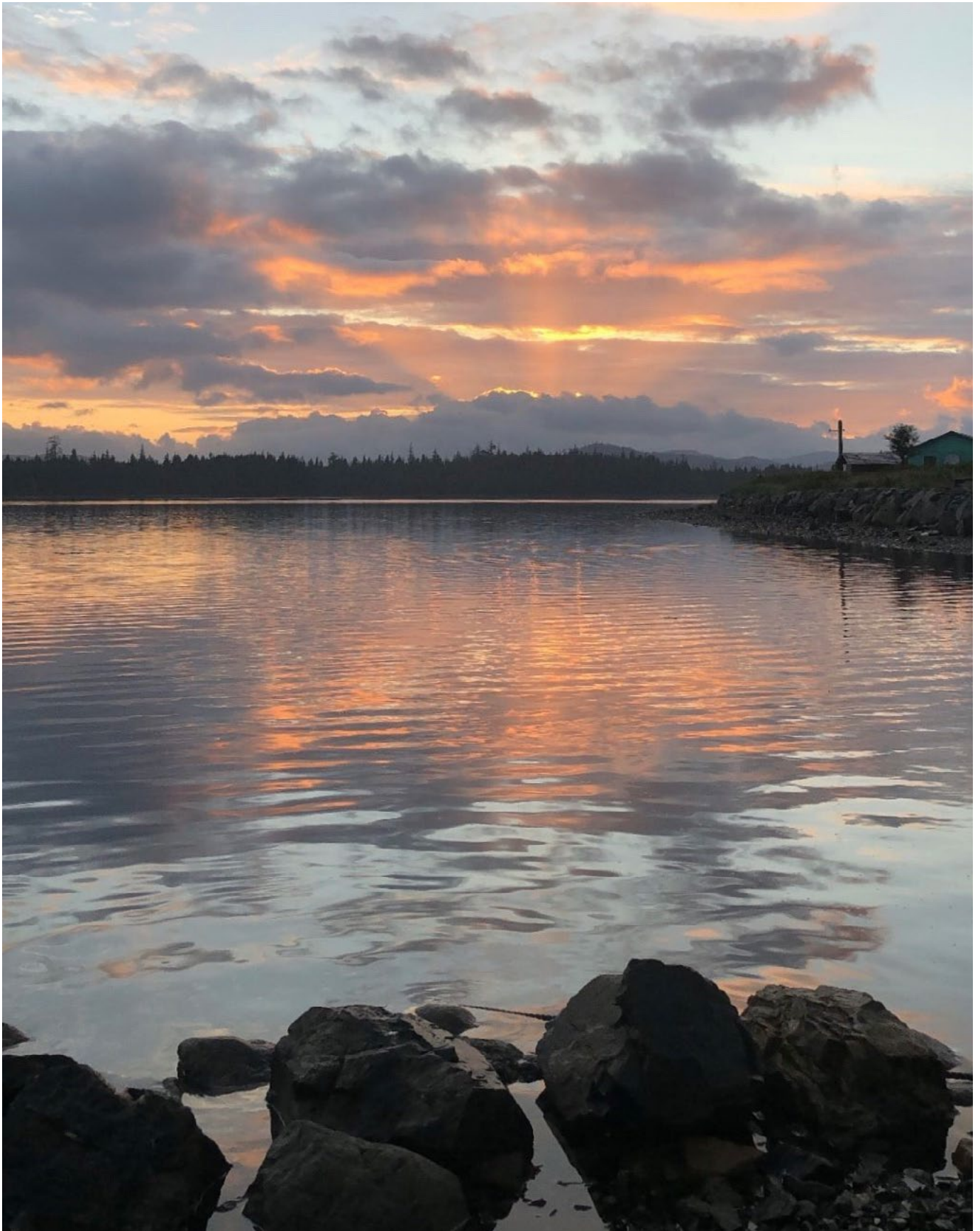
Indigenous ways of knowing, as taught through Traditional Knowledge systems, draws upon thousands of years of quantitative and qualitative understanding and has supported Indigenous people in harmony with nature since time immemorial. Traditional ways of knowing are grounded in the belief that we are caretakers of Mother Earth, recognizing the connectedness of all things such that the impacts we extend upon the environment—water, air, land, and all living things—returns to us. This is reflected in the destructive practices imparted upon the environment through the extraction of oil, gas, minerals,

and timber, all of which have had a profound negative impact on fragile ecosystems around the globe. This is exhibited through the extinction of hundreds of species of plants and animals, contamination of food and water resources, and the increase in global temperatures which causes rapid ecological shifts, such as thawing in the arctic and the subsequent release of methane deposits further exacerbating global warming and collapse of ecosystems.

If we take a step back and critically examine these practices it is evident that there is an urgent need



Coastal waters in the traditional territory of the Haida people of Hydaburg, Alaska. Image courtesy of the Hydaburg Geoscience Program.



Hydaburg sunset. Image courtesy of Sarah Peele.

to interact with our environment in a different way. At this critical juncture in history, we would benefit from decolonizing methodologies and Western knowledge in favor of utilizing traditional ways of knowing as knowledge and

practices that sustained sophisticated Indigenous communities who have existed living in balance with nature for tens of thousands of years as current practices have pushed us to the edge of extinction in only a few hundred years.

Christine Taitano DeLisle

From our creation stories and oral traditions, and as reflected in our sustainable farming and fishing practices, Indigenous peoples have always known and *felt* that we are extensions of the land (and waters and skies), and that with that knowledge comes the reciprocal heavy lifting that we must do to care for the gift of land and relations. Even centuries-old Indigenous childbirth knowledge and the practice that dictates the proper burial of a child's companion, the placenta, in the land, as a protective measure of keeping a newborn safe and keeping that child (into adulthood) tied (and responsible) to land, reminds us of these embodied connections. In Guåhan in the Marianas (in the Oceanic region of Micronesia) where I was born and raised, these land-body relationalities, which require tremendous *guinaiya* (love),

metgot (strength), and *afuetsao* (obligation), are aptly captured in the Indigenous CHamoru vernacular: *taotao tâno'* (people of the land). In the age of climate change and global pandemic, the need to heed Indigenous ways of knowing and to center Indigenous embodied practices around the land becomes all the more urgent. As teachers, historians, scholars, writers, poets, and activists, we must be mindful of whose lands we are on and center when possible place-based Indigenous ways of knowing not as mere *quaint* acts of cultural expression, but as Indigenous political acts of reclaiming, nation-building, mitigating, and prioritizing community wellbeing amid ecological breakdown and environmental destruction (and desecration) and against ongoing forms of settler colonialism.

Becca Gercken

As a way to engage these questions, I'd like to suggest some readings and authors:

Truth & Bright Water by Thomas King

In this novel, environmental degradation may not be central, but it shows how the deterioration of the land is tied to spiritual health and mental health issues in the community. As an example, one of the characters, Monroe Swimmer—"Famous Indian Artist"—does "restorations" by painting Indians into famous artworks. He "restores" Indigenous communities by making churches and residential schools disappear from their landscapes by painting the buildings so that

they blend in with the land itself. His restorations often have an environmental component: he paints a wooden platform green and leaves it on the prairie "Teaching the Grass About Green" (43) and uses a kite with "wings, painted bright blue," (44) when he is "Teaching the Sky About Blue" (49).

King, Thomas. 1999. *Truth & Bright Water*. Toronto: HarperFlamingo Canada.

Tracks by Louise Erdrich

This novel, which takes place from 1912-1924, tells the story of what is happening to an Anishinaabe community as their land is being broken up by the Dawes Act. The story focuses on

how the community responds to this change, and the underlying tension of the push for Western development and a Western notion of resources is central to the book. Other books in this series touch on this topic, but *Tracks* has the greatest emphasis on topics related to environmental change.

Erdrich, Louise. 1988. *Tracks*. New York: Henry Holt & Co.

***Ceremony* by Leslie Marmon Silko**

Set in the immediate aftermath of World War II, the novel demonstrates how the health and well-being of a community is tied to the land it is on. It explores the tensions between how white people are using the land and understanding resources and how the Laguna Pueblo people are using the land and understanding resources. There is commentary on schooling, scientific knowledge, and Indian knowledges as well. The book is controversial because Silko wrote about ceremonial things that are not to be shared with outsiders, and her decision to do so upset many in her community. When I've asked elders if it's okay to teach this book given its controversial content, I've been told that it's okay because the ceremonies are stronger than any book.

Silko, Leslie Marmon. 1977. *Ceremony*. New York: The Viking Press.

***The Marrow Thieves* by Cherie Dimaline**

A novel of speculative fiction, *The Marrow Thieves* is set in the not-too-distant future, when climate change has wreaked so much havoc on human's health that white people have lost the ability to dream, which is making them very sick. Native people, who are still able to dream, become the target of a government campaign to

extract their bone marrow and give it to white people so they can dream. The book includes commentary on climate change, clean water, residential schools, and the struggle to survive. Dimaline, Cherie. 2017. *The Marrow Thieves*. Toronto: Cormorant Books Inc.

Joy Harjo

Harjo's poems frequently offer commentary about Indians' changing relationships with the natural world in the face of colonization and assimilation. Harjo has served as poet laureate since 2019 and is the first Native American poet to hold the position.

***National Monuments* by Heid Erdrich**

This collection of poetry is about how white science is comfortable using brown bodies as spectacle, treating these bodies differently than white remains. There are poems about grave markers, anthropologists' representations of brown people, and archaeologists' treatment of brown remains. The book offers commentary on federal Indian policies such as NAGPRA and ARPA, drawing attention to the fact that these regulations meant to protect are doing a marginal job because they rely on Western epistemologies for evaluation.

Erdrich, Heid. 2008. *National Monuments*. East Lansing, MI: Michigan State University Press.

Craig Santos Perez

Perez, a Chamoru poet, has work that explicitly focuses on environmental issues and offers engagement on environmental change from a Pacific Islander perspective.

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About the Authors

Waziyatawin is a Dakota writer, teacher, and justice advocate from the Pezihutazizi Otunwe (Yellow Medicine Village) in southwestern Minnesota. She earned her Ph.D. in American History from Cornell University and has held tenured positions at Arizona State University and the University of Victoria where she also served as the Indigenous Peoples Research Chair in the Indigenous Governance Program. Currently, Waziyatawin is executive director of the Dakota nonprofit Makoce Ikikcupi, a reparative justice project supporting Dakota reclamation of homeland. She is the author or co/editor of seven volumes, including *What Does Justice Look Like? The Struggle for Liberation in Dakota Homeland* (Living Justice Press, 2008) and, most recently, *Pezihutazizi Oyate Kin: The People of Yellow Medicine* (Living Justice Press, 2019).

Dr. Roxanne Biidabinokwe Gould (Grand Traverse Band Odawa/ Ojibwe) currently serves as associate professor of Indigenous education in the College of Education at the UMN-Duluth. Roxanne's research and work is global with a focus on Indigenous peoples, education, land justice, critical pedagogy of place, ecofeminism, traditional ecological knowledge and environmental sustainability. Her research includes Indigenous sacred site restoration, Indigenous food sovereignty, examination of Bolivia's agreement with Mother Earth and Living Well model, and Indigenous women's water teachings, traditions, and the work they do to protect it.

Clement Loo is an assistant professor of Environmental Studies and the Student Success Coordinator for Equity, Diversity, and Intercultural Programs at the University of Minnesota Morris. He also serves on the Advisory Council and the Diversity, Equity, and Inclusion Committee of the Association for the Advancement of Sustainability in Higher Education (AASHE) and is a fellow of the Institute on the Environment's Educator program. His research and teaching focuses on food justice and equitable/inclusive stakeholder consultation as a tool to improve the robustness of scholarship and practice within higher education. In his free time, Clement rides his scooter or uses fishing as an excuse to explore the shores of the many streams and lakes in Minnesota.

Samantha Majhor is an assistant professor of Native American Literature in the English department at Marquette University. Her current project explores the portrayal of natural and cultural materials, like beaded dresses, books, cars, and rivers in Native American literature in order to elucidate long-held indigenous philosophies about human and nonhuman relationality and materiality.

Sara Černe is a visiting assistant professor of English at Northwestern University and a former Franke Fellow at Northwestern's Alice Kaplan Institute for the Humanities. Her first book manuscript centers on race and the environment in twentieth- and twenty-first-century literature along the Mississippi River. Sara grew up in Ljubljana, Slovenia, and has lived in the Midwest for the past six years.

Bonnie Etherington is a Mellon Sawyer Environmental Futures Postdoctoral Associate at the University of Colorado Boulder. She earned her Ph.D. in English from Northwestern University, where she was also a Presidential Fellow. She is at work on a book manuscript entitled *One Salt Water: Writing the Pacific Ocean in Contemporary Indigenous Protest Literatures*, and her first novel, *The Earth Cries Out* (Vintage NZ, 2017), was shortlisted for the William Saroyan International Prize for Writing and long-listed for the New Zealand Book Awards. Bonnie was born in Aotearoa New Zealand and raised in West Papua.

Andrew M. Freiman is a Ph.D. student at the University of Mississippi where he studies representations of the environment and labor in American petro-fictions. He received his M.F.A. in poetry in 2015 and has pieces published in Bayou Magazine, Atticus Review, and Dreginald. He was born in Memphis, Tennessee and raised in Austin, Texas.

Agléška' Rebecca Cohen-Rencountre (enrolled Lower Brule Sioux Tribe) Oglala, Sicangu, Mdewakanton is a Ph.D. candidate in American Studies at the University of Minnesota Twin Cities campus. The university is situated in traditional and modern-day Dakota homelands. Agléška is a Winkte parent, scholar-activist whose dissertation research is based in Rapid City, South Dakota, an urban Indigenous space of where they were born and raised.

Adam W. Coon is assistant professor at the University of Minnesota Morris. He specializes in contemporary Nahua cultural production, contemporary Indigenous literatures, and language revitalization. He analyzes how Nahua authors of the last three decades complement one another in displacing the Mexican nationalist narrative that positions them as "not present in the present" and reduces their ethical perspectives to exotic folklore.

Sarah Peele is a Haida, Tlingit, and Caucasian woman from Hydaburg, Alaska. She is a Haa Yoo X̱'atángi Deiyí: Our Language Pathway scholar double majoring in X̱aad kíl (Haida language) and biology at University of Alaska Southeast. She plans on following a career path that will incorporate her passion for her heritage language, traditional values, and science.

Wendy F. Smythe, Ph.D. is an assistant professor at the University of Minnesota Duluth; she holds a joint appointment between the Departments of American Indian Studies and Earth & Environmental Sciences. She was named the 2019 Professional of the Year by the American Indian Science and Engineering Society for her interdisciplinary research in geoscience, Native Education, and policy. In 2020 Dr. Smythe was elected to the AISES Board of Directors.

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Christine Taitano DeLisle is associate professor of American Indian Studies, University of Minnesota-Twin Cities where she teaches courses on Indigenous resurgence, Indigenous women's history, and public history. DeLisle is CHamoru born and raised in Guåhan (Guam) and her research interests span Indigenous oceans, lands, and waters across Oceania and Turtle Island. She is a member of the Guam-based CHamoru women's advocacy organization, I Hagan Famalåo'an Guåhan, and is currently involved in revitalization projects between Dakota peoples and Native Pacific Islanders of Mni Sota Makoce.

Becca Gercken is an associate professor in English and a founding faculty member of the Native American and Indigenous Studies major. With co-lead Kevin Whalen, Gercken has led the summer "field school" course on Indigenous Education, in which students study contextual literature and archival materials and use that knowledge to craft an understanding of the Morris campus' boarding school history. Gercken received the Horace T. Morse Award for Outstanding Contributions to Undergraduate Education in 2017.

FEATURE

NAVIGATING INDIGENOUS FUTURES WITH THE MISSISSIPPI RIVER

By Vicente M. Diaz, Michael J. Dockry, G.-H. Crystal Ng,
Virajita Singh, Daniel F. Keefe, Katie Johnston-Goodstar, Roxanne
Biidabinokwe Gould, Jim Rock, and Christine Taitano DeLisle



President Gabel and project members and community representatives take “a spin” aboard the waa herak NOAA’s Arc. From front to back: Mat Pendleton, Lower Sioux Community, Indigenous Futures Project; Eric Chapman, Lac du Flambeau Tribal Council member, Manoomin Project; President Gabel; Dockry, Manoomin Project; and Diaz, Indigenous Futures Project.

Indigenous Relationalities At, In, and With H̄aḥáwakpa [Dakota] / Misi-Ziibi [Anishinaabe] / The Mississippi River

N*avigating Indigenous Futures* was an all-day event, held September 19, 2019 at the University of Minnesota Twin Cities' east bank of the Mississippi River, to help celebrate Dr. Joan Gabel's inauguration as the University System's seventeenth president.

The event was hosted by two U of M Grand Challenge Research Grant teams: a U of M Twin Cities team of biophysical and social science researchers and Anishinaabe tribal partners, named *Kawe Gidaa-Naanaagadawendaamin Manoomin / First We Must Consider Manoomin (Anishinaabe) / Psin (Dakota) / Wild Rice*



Joe Graveen shows President Gabel how to carve manoomin ricing sticks near the Wigwam Jrs. drummers. Clockwise, from left: Bree Duever, Manoomin Project coordinator; President Gabel; Graveen; Tristan Mustache, drummer; John Johnson, Sr., Lac du Flambeau project partner; Edward Poupart, Lac du Flambeau, Wigwam Jrs. drummer; Elliot Johnson, drummer, and Ganebik Johnson, drummer. Image courtesy of Laura Matson.

Project (hereafter, Manoomin Project), and an interdisciplinary team of U of M Twin Cities and Duluth STEM, Humanities, and Social Sciences researchers, called the *Back to Indigenous Futures Project* (hereafter, Indigenous Futures Project). The event welcomed our new president by showcasing our projects' activities, results, findings, and other material outcomes. On display, too—indeed, *embodied and enacted*—were important social, cultural, and political intangibles. In fact, so much more happened, and remains to happen, as a result of this larger research collaborative celebration that took place on, in, and with the River, thereby calling attention to the River's own power to move, shift, churn, bend, wend, connect, and, in so many other ways, shape and alter its course and boundaries. And affect our courses in the process of engaging it. In this essay, we introduce our projects and call attention to the larger political, social, and cultural stakes that our research projects, individually and collectively, raise for and with our Indigenous community partners. Central among these stakes are the relations of ethics and kinship that attach to water and knowledge pertaining to water for Dakota and Anishinaabe and other Indigenous communities, as well as how such relations point to yet larger domains of belonging and connectivity beyond water, and about which academic research would do well to recognize, understand, and work with. Paramount in these larger sets of what we might call Indigenous Relationalities, or the web of interconnected relations of kinship and ethical regard among Indigenous people, land, water,

and sky scapes, include the agential or personhood status of otherwise non-human “natural” elements, their interconnectivity that occurs at multiple and simultaneous temporal scales and logics, and the need for intellectual and social agility and nimbleness to keep apace with, in our case, “water” and Indigenous knowledge about water and interconnected relationships.

We chose to name the event *Navigating Indigenous Futures* for a confluence and constellation of academic and non-academic reasons, while the decision to hold it at the River—a no-brainer for us—expressed the centrality of building relations in a special place that is itself also understood and related to by Indigenous peoples as an ancestral relation or relative. And so, the idea of Indigenous Relationalities (IR), a concept to which we will return shortly, also swirls around, shapes, and connects these projects.

For starters, both projects examine and explore new forms of interdisciplinary and intercultural research through building good relations with Minnesota's Indigenous communities: for the Manoomin Project, with Anishinaabe communities of Northern Minnesota, Wisconsin, and Michigan; for the Indigenous Futures Project, with Dakota and Pacific Islander (Micronesian) communities of rural, west Minnesota.

In addition, both projects focus on water and water traditions. And they focus on Indigenous mobility.

First We Must Consider Manoomin

The Manoomin Project and its Anishinaabe partners acknowledge wild rice as simultaneously a food, an elder, and a site, all of whose presence was/is historically prophesied. Anishinaabe teachings tell of originating travel, through sky and later through water, in search of a home, a place to be recognized, where “food grows on

water” (Benton-Banai 1988). Manoomin—or “the good berry” in Anishinaabe—is central to Anishinaabe cultural practice and seasonal cycles (David et al. 2019; LaDuke and Carlson 2003; Schuldt et al. 2018; Yerxa 2014). Manoomin and nibi (water in Anishinaabe) are indelibly linked, and Anishinaabe women hold ceremonial

responsibilities to maintain that relationship such that the “manoomin harvest was the most visible expression of women’s autonomy in Ojibwe [Anishinaabe] society” (Child 2012: 25). In this Indigenous Futures event that brought together Indigenous peoples from varied places, it is important to recognize that the wild rice-water-human relationship is not just an Anishinaabe experience, and in fact, this relationship transcends any one ecosystem or body of water. Wild rice, known as *psij* in Dakota, was once abundant across Dakota lands, where our event was held, and served to sustain Dakota peoples (Prairie Island Indian Community Land & Environment Department n.d.).

Today, learning from tribal partners, the Manoomin team recognizes wild rice’s status as food, kin, and home, a reality that cannot and ought not be divorced from any aspect of

scientific research on “it.” Guided by Indigenous knowledge holders, we contemplate manoomin’s physical, cultural, and spiritual relationships to and with all the non-human and human elements surrounding it. For example, one tribal member stated, “Of course we know the sediment is important [for manoomin]—it is what muskrat picked up and put on turtle’s back in our origin story.” By example through its own relationships, manoomin is teaching the team to deepen our own relationships with each other and with water by sharing time together on manoomin lakes and rivers. In the process, a mutual trust and respect have emerged that are transformative as we move an academic endeavor to reckon with the important connections between water, manoomin, people, and Indigenous Knowledge. “First,” as we put it in our project’s name, “we must consider Manoomin.”

Back to Indigenous Futures

For its part, the Indigenous Futures Project explores the relationship between canoe culture revitalization (Low 2015) and learning in Dakota and Micronesian Pacific Islander sets of Traditional Ecological Knowledge (TEK) about water and skies; in both cultural systems, as for the Anishinaabe and manoomin, we might say that to know the peoples is to know their waters is to know their land is to know their skies. For example, in Dakota cosmology, the concept and practice of the *kapemni*—defined loosely but powerfully as “all that is above is reflected below” and vice versa (Goodman 1992; for Ojibwe/Anishinaabe, see Gawboy and Morton 2014)—cannot be detached from knowing the spiritual and temporal significance of specific water and land and sky scapes. What Dakota call the *Bdote*—the confluence of the Mississippi and Minnesota Rivers near present-day Fort Snelling—is the portal from which humans first entered this world from the sky world, and through which in death they return. The sacred

Bdote, like other sacred sites, like *Wakháŋ Thípi* in nearby St. Paul, connects humans in deep time and cosmic reach through sacred and everyday relations with lands, waters, skies, and other forms and sites of being (Gould and Rock 2016).

Pacific Islanders, even when displaced thousands of miles from their island homes, can also find connectivity in prairie lands/waters/skies/peoples by remembering and putting into practice traditional knowledge of seafaring, which requires deep and instrumentalized knowledge of local skies and waters, land forms, and the travel habits of creatures indigenous and endogenous to the locale (Diaz, forthcoming). Descendants of seafarers whose voyages span four to six thousand years and cover two-thirds of the earth’s watery surface, contemporary Pacific Islanders—now beached in rural west Minnesotan plains—seek to learn their traditional knowledge of seafaring, which must now necessarily include learning all they can about Dakota land/water/



Nelisa Elias, Micronesian Community of Milan, and Daniel Keefe, Indigenous Futures. Image courtesy of Jim Rock.

skies, and human and other-than-human beings indigenous to this place (Diaz 2019a).

If good relations are required for both Grand Challenge research projects to succeed and to model appropriate modes of conducting research, the concept and practice of *Indigenous Relationalities* (IR) also features prominently even if it is not named as such in both projects. A theoretical and methodological component in the field of Indigenous Studies, both on account of the concept's ubiquity in Native worlds, and more recent efforts by Indigenous scholars to apply it in academic settings (Todd 2017, 2018), IR expresses how the key concept of *Indigeneity* (Alfred and Corntassel 2005) can also be further understood in terms of the relations of kinship and reciprocal caregiving and caretaking that exist between human and non-human beings, including the relationalities that exist among land, water, and sky scapes, as these are also understood as sentient, ancestral relatives. An ontological as well as analytic category, that is to say, a concept that has to do with Native ways of being, Native ways of knowing, and Native ways of analyzing and understanding the social, natural, and supernatural worlds (Whyte 2018), the concept of Indigeneity can be defined as the claims and conditions of aboriginal belongings and relations to human and non-human peoplehood and places in terms of a people's and place's vernacular practices, and the knowledge systems that emerge from them (Diaz 2019b).

In our projects and at the *Navigating Indigenous Futures* event, IR was expressed as a praxis that embodies relationships with each other and with the River. In this regard, Indigenous Relationalities is expressed through walking the land together and canoeing the water together. IR names how Indigenous people have historically reckoned their sense of selves and sense of purpose through deep relations of kinship and stewardship with other beings, beginning with land/water/skies.

In terms of innovative interdisciplinary collaboration across Humanities, Social Science, Art, Design, and Computer Engineering fields and disciplines, we in the Indigenous Futures Project also began a process of forging new relations among academic units that are typically siloed from each other (much as how humans, non-humans, and land forms—like traditional disciplines—are typically compartmentalized as conditions for conventional ways of knowing). Against such fragmentations and self-enclosures, we embraced the rigors of building relations as a guiding principle among ourselves and with our Dakota and Pacific Islander relatives, drawing upon and experimenting with processes and technologies such as participatory design and embodied computing as they engage with—learn from and help advance—Dakota and Pacific Islander Traditional Ecological Knowledges to explore the interphase between new/old ways of knowing inside and outside the academy. Like the Bdote, our interdisciplinary and intercommunity partnership is a confluence of potential futures, one that brings Indigenous communities and the University together in ways that align and mutually benefit academic research and Indigenous community resurgence through traditional knowledge in the hopes of imagining a shared future. Thus, at a moment when increasing numbers of individuals and units at the University of Minnesota struggle to address Minnesota's ongoing history of settler colonization of Indigenous land/water/skies, and to redress ongoing histories that have severed Minnesota's Indigenous peoples' relations with their worlds (Waziyatawin 2008), we and our community partners chose to welcome President Gabel by showcasing our research projects and relations at, with, and even *in* the River, and by explicitly recognizing the River itself as both a powerful site and living agent. For this reason the celebration required asking, and making it possible for Indigenous community partners to join us at, on, in, and with, the River, beginning with ceremony to ask the River to welcome and take care of us.

With these Indigenous relatives and relationships to the River, we opened the day and welcomed our community partners and several of our classes of undergraduate and graduate students with ceremony, drum, and music. The day featured tangible and intangible products and outcomes of all of our relations:

- Exhibits and displays, experiential (embodied) learning “stations” (on topics such as TEK around traditional watercraft and water) featuring the use of Indigenous water craft as well as Virtual Reality canoe sailing and celestial navigation;
- Model canoe and architectural canoe house designs from past U of M Catalyst Workshops; modules that juxtapose the concepts and practices of “culture” and “cultivation”; and
- New models of manoomin research, natural resource management, and traditional Anishinaabe manoomin cultural implements (like rice knocking sticks).

Caught in Rough Waters

In the midst of writing the final draft of this essay on our “shared effort at marking and celebrating the start of a new era toward a just future” at and with the River, our projects and relations, ostensibly like all others, were severely disrupted by the deadly COVID-19 pandemic and the eruption, in Minnesota and across the country, of civil unrest and uprising over systemic race inequalities and other injustices. But for Indigenous peoples in particular, the turmoil is all too familiar; our communities continue to

We also celebrated with music and song (Anishinaabe youth drumming; Pacific Islander chanting and singing). Two highlights were President Gabel’s canoe outing on the River on a Micronesian outrigger canoe with Anishinaabe, Dakota, Micronesian, and U of M partners, and the ceremonial launching of two new traditional watercraft—an 18 ft. Dakota wata or dugout canoe, and a 20 ft. Waa herak, or traditional outrigger sailing canoe from the Central Carolines Islands in Micronesia. The canoes were built, respectively, in the Lower Sioux Community and in Milan, Minnesota (Canoe Project 2020; Elias et al. 2019; Kelly 2019) through U of M Grand Challenge and U of M Extension Southwest Regional Sustainable Development Program grants.

In name, process, and spirit, *Navigating Indigenous Futures* in, on, and with the River drew—draws—from the power of innovative interdisciplinary and community-engaged research and learning to enact older and deeper Indigenous Relationships between human and other-than-human beings as a different, possibly unprecedented, way to mark and celebrate the start of a new era toward a just future.

suffer the disproportionate brunt of such natural and human-made catastrophies and tragedies. Just when we thought we inaugurated a new relation at and with the River on campus, the pandemic and social eruptions come along to unleash additional stress and obstacles in our path forward. But like the River, we surge on.

See more images in the [Navigating Indigenous Futures Gallery](#), this issue.

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Vicente M. Diaz is Pohnpeian and Filipino from Guam. An interdisciplinary scholar, Diaz founded and heads The Native Canoe Program in the Department of American Indian Studies, University of Minnesota Twin Cities campus. The program uses Indigenous water craft for community-engaged teaching and research on Indigenous water traditions. Diaz's research is on comparative Indigenous cultural and political resurgence in Oceania and the Native Great Lakes and Upper Mississippi River region, particularly through the lens of Trans-Indigenous theory and practice, which foregrounds Indigenous histories and technologies of travel and mobility and pan-Indigenous solidarity.

Michael J. Dockry is a member of the Citizen Potawatomi Nation with traditional territories around southern Lake Michigan and contemporary tribal lands in Central Oklahoma. Dockry is an assistant professor of tribal natural resource management at the University of Minnesota Twin Cities in the Department of Forest Resources and an affiliate faculty member of the American Indian Studies Department. His research and teaching focus on incorporating Indigenous knowledge into forestry and natural resource management. His work supports tribal sovereignty and addresses Indigenous environmental issues across the United States with a focus on the Great Lakes and in South America with a focus on Lowland Bolivia.

G.-H. Crystal Ng is an associate professor in the Earth & Environmental Sciences Department at the University of Minnesota Twin Cities. She is interested in how different aspects affecting the hydrologic cycle—including the atmosphere, plants, soil, microbial activity, and geochemistry—interact with each other. She studies how links among these elements help to determine how the environment will respond to perturbations, including climate change, land use and land cover change, and contamination. She works in collaboration with social scientists and Tribal partners in Minnesota and Wisconsin to gain a more integrative and holistic understanding of how natural and human dimensions are intertwined.

Virajita Singh is Senior Research Fellow at the University of Minnesota's Center for Sustainable Building Research (CSBR) and adjunct faculty in the School of Architecture, College of Design. She leads Design for Community Resilience, a participatory design program she founded in CSBR that serves communities, particularly across rural Minnesota, in envisioning their futures through buildings and landscapes. She is Co-PI with her interdisciplinary university colleagues in collaboration with Dakota and Micronesian community members in western Minnesota on the Grand Challenges Research project 'Back to Indigenous Futures,' that explores what it means to find applied synergies between community, land, and indigenous culture-based knowledges and practices, virtual reality and embodied computing, and participatory design.

Daniel F. Keefe is a Distinguished University Teaching Professor and associate professor in the Department of Computer Science and Engineering at the University of Minnesota. His computing research centers on interactive data visualization and immersive computer graphics. Keefe is also a visual artist, and much of his work involves art+science collaboration, recently with a focus of high-lighting/revealing the human behind the data.

Katie Johnston-Goodstar is an associate professor in the University of Minnesota School of Social Work where she teaches in the Youth Studies and Social Justice programs. Katie conducts Participatory Action Research with communities, most often with Indigenous youth, to explore and interrogate institutions such as schools and youth development organizations, and improve community well-being through the revitalization of Indigenous knowledges.

Dr. Roxanne Biidabinokwe Gould (Grand Traverse Band Odawa/ Ojibwe) currently serves as associate professor of Indigenous education in the College of Education at the UMN Duluth. Roxanne's research and work is global with a focus on Indigenous peoples, education, land justice, critical pedagogy of place, ecofeminism, traditional ecological knowledge and environmental sustainability. Her research includes Indigenous sacred site restoration, Indigenous food sovereignty, examination of Bolivia's agreement with Mother Earth and Living Well model, and Indigenous women's water teachings, traditions, and the work they do to protect it.

Jim Rock (Dakota) M.A.Ed. is University of Minnesota Duluth's Director of Indigenous Programming at the Marshall W. Alworth Planetarium and an instructor in the Physics and Astronomy Department at Swenson College of Science & Engineering. Rock teaches in the Honors Department as well and offers an ethno- and archaeoastronomy course called Native Skywatchers which includes Turtle Island (N., C. & S. America) and Oceania. He has worked or designed experiments with NASA and NOAA and is co-author of the 2014 *D(L)akota Star Map Constellation Guidebook* and other publications on Dakota and regional Sky-Earth connections.

Christine Taitano DeLisle is associate professor of American Indian Studies, University of Minnesota Twin Cities where she teaches courses on Indigenous resurgence, Indigenous women's history, and public history. DeLisle is CHamoru born and raised in Guåhan (Guam) and her research interests span Indigenous oceans, lands, and waters across Oceania and Turtle Island. She is a member of the Guam-based CHamoru women's advocacy organization, I Hagan Famalão'an Guåhan, and is currently involved in revitalization projects between Dakota peoples and Native Pacific Islanders of Mni Sota Makoce.

FEATURE

NAVIGATING INDIGENOUS FUTURES GALLERY

By Vicente M. Diaz, Michael J. Dockry, G.-H. Crystal Ng, Virajita Singh, Daniel F. Keefe, Katie Johnston-Goodstar, Roxanne Biidabinokwe Gould, Jim Rock, and Christine Taitano DeLisle

This photo gallery is a companion visual to the article “Navigating Indigenous Futures with the Mississippi River,” this issue.

The River Runs Through Us

For Dakota and Ojibwe respectively, Ĥaḥáwakpa / Misi-Ziibi is at once place and sentient being, a site, but also a relative—and a set of relations,

of kinship and of relations of reciprocal and mutual custodianship. The River has been “here” for millennia, and yet, as the proverb goes, has



*Detail from original. Between the east and west banks of the University of Minnesota Twin Cities campus, as taken from the Washington Avenue Bridge.
Image courtesy of Vicente M. Diaz.*

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also never remained at any one place in any one moment on account of its ceaseless flow. Yet, paradoxically, it “remains” steadfast and constant,

filled or fed as it is, continuously, through cycles of regeneration, from sources originating from all directions, including from above and below.



Between the east and west banks of the University of Minnesota Twin Cities campus, as taken from the Washington Avenue Bridge. Image courtesy of Vicente M. Diaz.

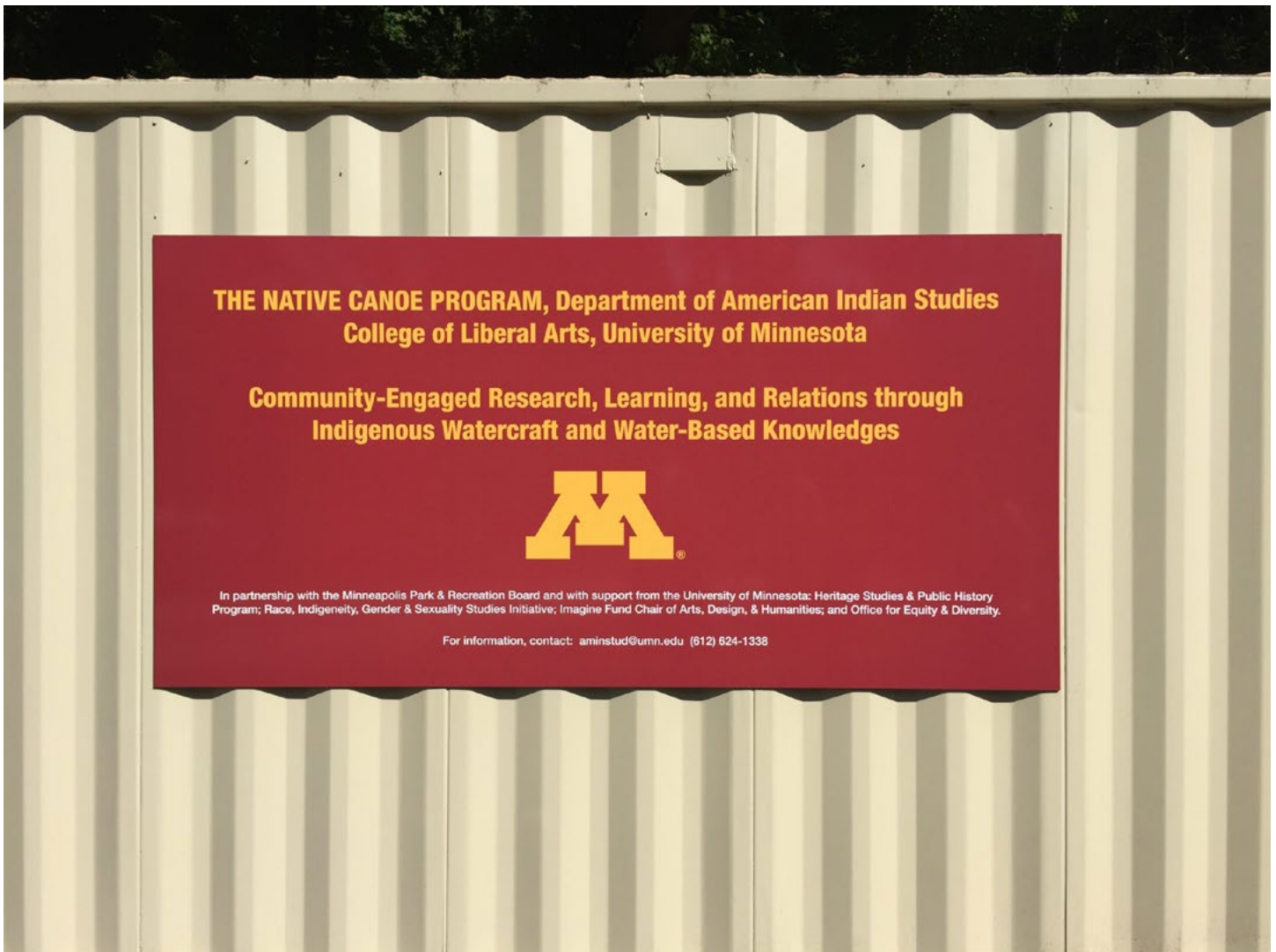


This is the small boat launch where the U of M crew team, and canoe/kayak recreators, enter and exit the River. Image courtesy of Jim Rock.

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Historically and structurally, the River has also been changed—damaged—by, and to suit, settler colonial logics and relations. Yet, for us who as researchers bank on its many dimensions and possibilities, the River is also a place upon and a relationship with whom we might also build

relations of kinship and reciprocity with Dakota and Ojibwe communities in the shared hopes of together building new / old ways of knowing and being for a more just future, one that flows from renewing proper relations in decidedly Indigenous terms.



Founded in 2017, the Native Canoe Program is housed in the Department of American Indian Studies at the Twin Cities campus, and operates out of a refurbished shipping container, facing the boat launch, to and from which we seek to build proper relations for engaged community research, teaching, and learning on and off campus. Photo courtesy of the Native Canoe Program.



*Graduate students in the U of M's Heritage Studies and Public History program, Jacob Bernier and Chrissy Pettit also helped found the student organization, Canoe Rising, for connecting students to canoe revitalization projects in the Indigenous communities, and, of course, to find more legitimate reasons to just get out on the water.
Photo courtesy of Jacob Barrier/Canoe Rising.*

Under Canopies

The Manoomin and Back to Indigenous Futures teams showcased posters, cultural artifacts and implements, and cultural skills demonstration, including traditional watercraft and virtual reality canoe and celestial navigation simulations. After an early morning set up, which included a water ceremony down the river, at Wakháŋ Thípi, in St. Paul, our community partners from Dakota, Pacific Islander (Chuukese, from Micronesia), and Ojibwe communities from Minnesota and

Wisconsin opened the event with prayer, drumming, and music to begin the all-day activities and celebration. Under a canopy of trees that framed a small field between the cliff and the River bank, we set up a dozen canopies to hold people, exhibits, and displays associated with our work. Here mixed students, staff, administrators, and project partners from the community with the tangible and intangible values of our shared labor.



Exhibit and demonstration canopy booths went up quickly on a beautiful, clear sunny Fall morning. In no time at all we were ready to roll! Image courtesy of Yifan Liu.



Project faculty assigned pertinent materials to acquaint their students with academic research and scheduled their classes to meet together so that their students could also engage with each other and with project community partners. We also wanted students to appreciate the visceral, multisensoried “feel” of research with Indigenous communities. Images courtesy of Yifan Liu.



Juxtaposition of scale model watercraft and other water-related implements, art, weavings, mats, and carvings. The large canoe is of an Ojibwe wiigwaasi jiimaan or birchbark canoe. The brown canoe at the far end is of a Dakota wata or dugout. At the center, with the sail, is a Micronesian waa herak or outrigger sailing canoe. Objects courtesy of the Native Canoe Program. Image courtesy of Yifan Liu.

Canoe Beings

The Indigenous Futures Project, aided by a U of M Extension Southwest Region Sustainable Development Partnership (RSDP) grant, partnered with the Chuukese (Micronesian Pacific Islanders) Community of Milan, Minnesota and the Upper and Lower Sioux Communities to build a waa herak/sailing outrigger canoe and a wata/traditional Dakota dugout as part of a shared effort in community resilience and decolonization through the revitalization of traditional canoe and

water knowledge systems. The canoe building projects were supervised by traditional navigator Mario Benito and canoe carver Laureano Dilipwy from Polowat Atoll in the Central Carolines region of Chuuk State, the Federated States of Micronesia. Both canoes were blessed through Dakota and Polowat prayer and ritual, and launched on the Mississippi River during the event.



Men from the Micronesian community secure the Dakota wata/dugout onto a dolly. Behind, looking off to the side, is Mat Pendleton, Director of the Lower Sioux Recreation Center, which hosted the Micronesian carvers in their community. Looking on is the canoe building project coordinator Bob Ryan. Image courtesy of Jim Rock.



Polowat navigator Mario Benito unlashes the mast of the waa herak/outrigger sailing canoe, built with assistance from Upper and Lower Sioux community members. His assistant, Laureano Dilipwy (gray hoodie), looks on in the foreground, while project researchers Katie Johnston-Goodstar, Roxanne Gould, and Lakota elder Charlene O'Rourke take photographs. Image courtesy of Jim Rock.



The American folk singer and activist Woody Guthrie often painted the phrase, “This machine kills fascists,” on his guitar. These “machines” battle settler colonialism with the kinetics and vibrations of Indigenous cultural revitalization and performance. Image courtesy of Jim Rock.



*The Dakota wata readies for its own inaugural launch, but not before ceremonial blessing.
Image courtesy of Yifan Liu.*



*Benito blesses the waa herak. From choice of tree, to felling, to first cut, to initial launching, the life of a canoe—whether Dakota, Ojibwe, or Pacific Islander—is marked by ceremony and prayer. It, too, is an object, a sentient being, and a powerful site of relations.
Image courtesy of Yifan Liu.*

At the River

We chose to celebrate President Joan Gabel's inauguration by welcoming her to the River and to give her the means to feel what research means to us and our community partners. Ojibwe song

and drumming alternated with Micronesian chanting as she made her way to and from the boat launch to meet with us. For a full list of our participants in attendance, see Appendix One.



*Dakota Language Instructor Čhaŋtémaza Neil McKay (center, light blue shirt and black hat) welcomes President Gabel at the bank of the River, as Indigenous Futures researcher and Director of the Native Canoe Program, Vicente M. Diaz (red wrap-around) and Micronesian leader Gabriel Elias (next to McKay) look on.
Image courtesy of Lisa Miller/University of Minnesota.*



Manoomin researcher G.-H. Crystal Ng describes the Manoomin Project to President Gabel. Front Row L-R: Ng; Dean John Coleman, College of Liberal Arts; Dan Keefe, Indigenous Futures; President Gabel. Back Row L-R: Manoomin researchers Michael Dockry, Cara Santelli (in shorts and sunglasses), and Diana Dalbotten (in skirt, black t-shirt, and glasses). Image courtesy of Lisa Miller/University of Minnesota.



Manoomin and Indigenous Futures Projects' Community Leaders greet President Gabel. Left to right: John Johnson, Sr. and Joe Graveen, Lac du Flambeau Band of Lake Superior Chippewa; President Gabel; Diaz; and Gabriel Elias, Micronesian Community of Milan. Image courtesy of Lisa Miller/University of Minnesota.



Micronesian harmonies reverberated throughout the day. Though not indigenous to Minnesota, members of this community are no strangers to the River and to campus, having themselves been first welcomed in 2016 at the launching of the Native Canoe Program, and having visited the campus numerous times for various activities and events. Image courtesy of Lisa Miller/University of Minnesota.



*Jim Rock and other Indigenous Futures team members with President Gabel.
Back L-R: Christine DeLisle, Roxanne Gould, Charlene O'Rourke, and Bob Ryan.
Image courtesy of Lisa Miller/University of Minnesota.*



President Gabel and project members and community representatives take “a spin” aboard the waa herak NOAA’s Arc. From front to back: Mat Pendleton, Lower Sioux Community, Indigenous Futures Project; Eric Chapman, Lac du Flambeau Tribal Council member, Manoomin Project; President Gabel; Dockry, Manoomin Project; and Diaz, Indigenous Futures Project.



Below Franklin Avenue Bridge, looking south. The canoe, NOAA's Arc, was built in the Micronesian island of Guam in 2012 as part of an Indigenous Sustainability grant funded by the U.S. National Oceanic and Atmospheric Agency (NOAA). The name plays on the famous biblical story of saving humanity and other creatures with an ordained vessel, but the use of the "c" in Arc (as opposed to the letter "k"), signifies the historic and geographic "trajectory"—the long 'arc'—of indigenous Pacific Island mobility. It should not surprise us to find such vessels in, among other places, the Mississippi River.

Image courtesy of Lisa Miller/University of Minnesota.

Manoomin People

The drum beat and the drummers' voices of the Wigwam Juniors drumming group from Lac du Flambeau set the tone and kept the pulse beating throughout the day for the Manoomin Project's introduction to the Indigenous Futures Project, University of Minnesota students, and to President Gabel. The group was led by John Johnson, Sr., Tribal Council Member, Lac du Flambeau Band of Lake Superior Chippewa, and

joined by Kelly Applegate, Director of Resource Management, Mille Lacs Band of Ojibwe. The drummers were Ganebik Johnson, Lac du Flambeau Band of Lake Superior Chippewa; Tristan Mustache, Lac Courte Oreilles Band of Lake Superior Chippewa; and Elliot Johnson, Lac du Flambeau Band of Lake Superior Chippewa.



Ojibwe Wigwam Juniors Drumming Group (clockwise): John Johnson Sr. (brown t-shirt), Kelly Applegate, Ganebik Johnson, Tristan Mustache, and Elliot Johnson.

Image courtesy of Yifan Liu.



Manoomin Project members William “Joe” Graveen, a wild rice technician from Lac du Flambeau Band of Lake Superior Chippewa, and Lac du Flambeau Tribal Council Member Eric Chapman take a break with Laura Matson, U of M postdoctoral fellow, to enjoy the day together and carve some knocking sticks. Left to right: Matson, Graveen, and Chapman. Image courtesy of Yifan Liu.



Joe Graveen shows President Gabel how to carve manoomin ricing sticks near the Wigwam Jrs. drummers. Clockwise, from left: Bree Duever, Manoomin Project coordinator; President Gabel; Graveen; Tristan Mustache, drummer; John Johnson, Sr., Lac du Flambeau project partner; Edward Poupart, Lac du Flambeau, Wigwam Jrs. drummer; Elliot Johnson, drummer, and Ganebik Johnson, drummer. Image courtesy of Laura Matson.



Today, manoomin harvesting is carried out using the traditional method of knocking with these sticks. Image courtesy of Cara Santelli.



Lac du Flambeau's Wildrice Cultural Enhancement Program. Alex Waheed (blue t-shirt), a U of M graduate student on the Manoomin Project, shows an attendee photos of collaborative environmental fieldwork conducted at manoomin sites with partners from Lac du Flambeau. Image courtesy of Yifan Liu.



At the culture cultivation booth, shown L-R, Bree Duever, Diana Dalbotten, graduate student Maddy Nyblade (back to camera), and Laura Matson present a poster describing the close partnerships that serve as the backbone of their collaborative project. Image courtesy of Yifan Liu.

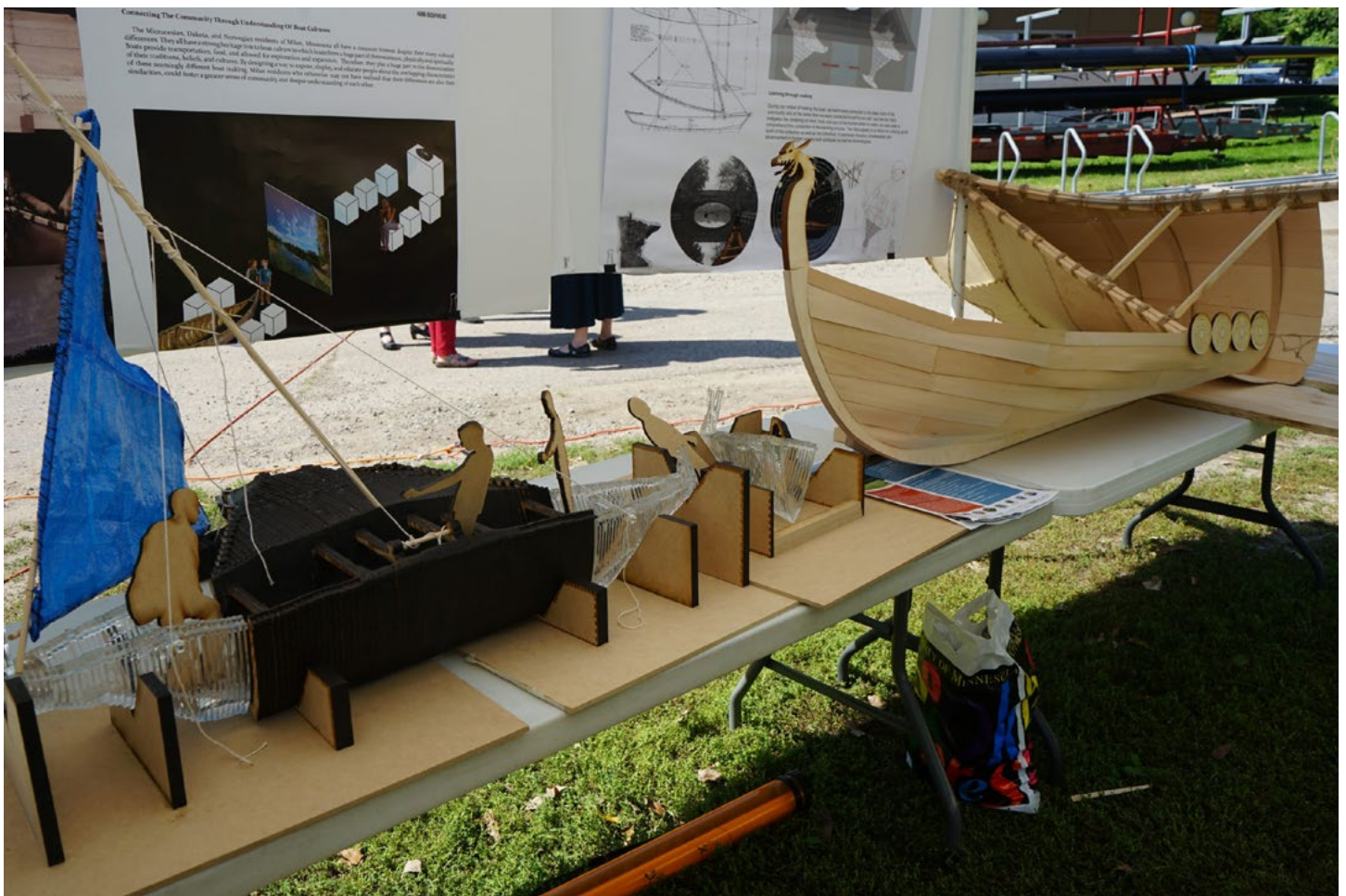
Catalyst Workshops

The Catalyst 2019 Architecture Studio Workshop Exhibit was titled “On Boat Culture and Making across Dakota, Micronesian, and Norwegian traditions.” In spring semester 2019, graduate students in the School of Architecture, College of Design, under Professor Virajita Singh, Indigenous Futures Co-PI, considered what anthropologist Tim Ingold calls “the joining of forces of matter in improvisation through discovery” by exploring the synergy among the methods, the materials, and the making of Indigenous watercraft from Micronesian, Dakota,

and Norwegian boat culture in rural Minnesota. The products—model watercraft and poster presentations on what was learned in studio “joining” of method/material/and making—were also joined to questions of place and community as raised in analogous work, by students in Professor Dan Keefe’s Immersive Lab, which involved the rendering of method/material/making of Indigenous watercraft in virtual reality “photography and choreography.”



Virajita Singh, Indigenous Futures Co-PI, explains a poster presentation of the 2019 Catalyst workshop to a group of students. Image courtesy of Yifan Liu.



Display of the 2019 Catalyst workshop on “Boat Culture and Making”: models of traditional Micronesian, Dakota, Ojibwe, and Norwegian (Viking) boats, made with balsa and acrylic. Image courtesy of Yifan Liu.

Navigating Oceanic Stars in Dakota Lands where Water Reflects the Sky...in Virtual Space

Revitalizing traditional outrigger sailing technologies by fusing them with immersive computing technologies highlights the potential for individual (and group) first-person, multisensory storytelling and interactive teaching platforms. Such collaboration also leads to a symbiotic research relationship, where each technology informs new advances to the other. The 3D VR experience is

also kinetic and tactile: pull the mwel (Polowatese word for the “sheet” or line that controls the sail in boat lingo) to catch wind in the amara/sail and the waa herak/outrigger sailing canoe moves forward. Work the fatabwul/steering paddle to turn the mah or eyes/bow or front of the outrigger toward the star toward which lies one’s destination.



*Nelisa Elias, Micronesia Community of Milan, and Daniel Keefe, Indigenous Futures.
Image courtesy of Jim Rock.*



Composite screen capture and photo of VR experience by Milanesian community leader Gabriel Elias, at Dan Keefe's Interactive Visualization Lab at the University of Minnesota Twin Cities campus. Photo Courtesy of Dan Keefe, U of M I/V Lab.



This was what VR engineers call “experiencing a moment” or momentarily forgetting that one is in virtual space and feeling immersed and impacted by the experience. This unidentified student peers into the Micronesian night sky aboard a virtual voyaging canoe in virtual Micronesian waters...on the banks of the Mississippi. Image courtesy of Aaron Connor.



Edson Herman of the Micronesia Community of Milan pulls the sheet and works the steering paddle. VR is no longer only a visual technology. Image courtesy of Aaron Connor.



*An unidentified Ojibwe community member experiences another VR “moment.”
Image courtesy of Aaron Connor.*

Appendix One: Project Teams and Community Partners

Manoomin Project

Our interdisciplinary research team spans five University of Minnesota colleges and includes partnerships with four Minnesota and Wisconsin Bands and three inter-tribal organizations. U of M colleges: College of Science and Engineering; College of Food, Agricultural and Natural Resource Sciences; College of Liberal Arts; College of Biological Sciences. Tribal Partners: Fond du Lac Band of Lake Superior Chippewa, Mille Lacs Band of Ojibwe, Lac du Flambeau Band of Lake Superior Chippewa Indians, St. Croix Chippewa Indians of Wisconsin, 1854 Treaty Authority, Great Lakes Indian Fish & Wildlife Commission, and Great Lakes Inter-Tribal Council, Inc.

- Edward Poupart, Wigwam Jrs. Drummer
- Gage Poupart, Wigwam Jrs. Drummer
- Elliot Johnson, Wigwam Jrs. Drummer
- Ganebik Johnson, Wigwam Jrs. Drummer
- Tristan Mustache, Lac Courte Oreilles Band of Lake Superior Chippewa: Wigwam Jrs. Drummer

Tribal Partners

Lac du Flambeau Band of Lake Superior Chippewa:

- John Johnson, Sr., Former Vice-President of the LDF Tribal Council; Chairman of the Voigt Inter-Tribal Task Force
- Eric Chapman, Tribal Council Member; Wild Rice Cultural Enhancement Program Manager; Climate Resilience Initiative Project Lead
- William “Joe” Graveen, Wild Rice Cultural Enhancement Technician
- Erica Johnson

Mille Lacs Band of Ojibwe:

- Kelly Applegate, Director of Resource Management

Great Lakes Indian Fish and Wildlife Commission:

- Melonee Montano, Traditional Ecological Knowledge Outreach Specialist

Leech Lake Band of Ojibwe:

- TBD project partner, Division of Resource Management

(Fond du Lac Band of Lake Superior Chippewa is a close project partner, but all representatives were occupied with their wild rice population survey and could not attend.)

University of Minnesota Team

Co-Principal Investigators (Co-PIs):

- G.-H. Crystal Ng, Assistant Professor, Department of Earth and Environmental Sciences, College of Science & Engineering (CSE), U of M Twin Cities (UMTC)
- Mike Dockry, Assistant Professor, Department of Forest Resources, College of Food, Agricultural and Natural Resource Sciences (CFANS); Department of American Indian Studies, College of Liberal Arts (CLA), UMTC
- Laura Matson, Postdoctoral Fellow, Center for Changing Landscapes, CFANS, UMTC
- Cara Santelli, Associate Professor, Earth and Environmental Sciences, CSE, UMTC
- Dan Larkin, Assistant Professor, Department of Fisheries, Wildlife and Conservation Biology, CFANS, UMTC

Indigenous Futures Project

Our interdisciplinary research team spans eight University of Minnesota colleges and units in the Twin Cities and Duluth campuses, and includes partnerships with four Indigenous communities and organizations in Minnesota. U of M Twin Cities and Duluth colleges and units: College of Liberal Arts; College of Science and Engineering; College of Design; College of Education and Human Development; College of Education and Human Service Professionals; Swenson College of Science & Engineering; Marshall W. Alworth Planetarium, and the Center for Sustainable Building Research. Tribal and Indigenous Partners: Lower Sioux Indian Community, Community Council; Upper Sioux Indian

Students:

- Hannah Jo King, PhD, Forest Resources, CFANS, UMTC
- Maddy Nyblade, PhD, Earth and Environmental Sciences, CSE, UMTC
- Alex Waheed, MS, Earth and Environmental Sciences, CSE, UMTC

Researchers:

- Bree Duever, Center for Changing Landscapes, CFANS, UMTC
- Diana Dalbotten, St. Anthony Falls Laboratory, CSE, UMTC

Full Tribal and U of M project team list may be found at: <https://manoominpsin-gc.dash.umn.edu/people/>.

Community, Board of Trustees; Makoce Ikikcupi; and the Micronesian Community of Milan, MN.

University of Minnesota Team

Co-PIs:

- Vicente M. Diaz, Associate Professor, American Indian Studies, CLA, UMTC
- Katie Johnston-Goodstar, Assistant Professor, School of Social Work, College of Education and Human Development (CEHD), UMTC

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- Dan Keefe, Associate Professor, Department of Computer Science and Engineering, CSE, UMTC
- Roxanne Gould, Associate Professor, Indigenous and Environmental Education, College of Education and Human Service Professionals, U of M Duluth (UMD)
- Virajita Singh, Senior Research Fellow, Center for Sustainable Building Research, College of Design, UMTC

Extended Academic Team:

- Christine DeLisle, Associate Professor, American Indian Studies, CLA, UMTC
- Stephen Guy, Associate Professor, Computer Science and Engineering, CSE, UMTC
- Jim Rock, Director of Indigenous Programming, Marshall W. Alworth Planetarium, Swenson College of Science and Engineering, UMD
- Hyun Soo Park, Assistant Professor, Computer Science and Engineering, CSE, UMTC
- Meixi Ng, Presidential Postdoctoral Fellow, American Indian Studies, CLA, UMTC

Graduate Research Assistants:

- Cary Waubanasum, Social Work, CEHD, UMTC
- Clarissa Seidle, Social Work, CEHD, UMTC

Community Partners

- Lower Sioux Indian Community, Community Council; Upper Sioux Indian Community, Board of Trustees
- Mat Pendleton, Director, Lower Sioux Indian Community Youth Center
- Adam Savariego, Upper Sioux Indian Community
- Charlene O'Rourke, Lakota Elder
- Waziyatawin, Makoce Ikikcupi
- Gabriel Elias, Micronesian Community of Milan, MN
- Michael Elias, Micronesian Community of Milan, MN
- Robert Ryan, Project Angechu Community Development Plan, Micronesian Community of Milan

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About the Authors

Vicente M. Diaz is Pohnpeian and Filipino from Guam. An interdisciplinary scholar, Diaz founded and heads The Native Canoe Program in the Department of American Indian Studies, University of Minnesota Twin Cities campus. The program uses Indigenous water craft for community-engaged teaching and research on Indigenous water traditions. Diaz's research is on comparative Indigenous cultural and political resurgence in Oceania and the Native Great Lakes and Upper Mississippi River region, particularly through the lens of Trans-Indigenous theory and practice, which foregrounds Indigenous histories and technologies of travel and mobility and pan-Indigenous solidarity.

Michael J. Dockry is a member of the Citizen Potawatomi Nation with traditional territories around southern Lake Michigan and contemporary tribal lands in Central Oklahoma. Dockry is an assistant professor of tribal natural resource management at the University of Minnesota Twin Cities in the Department of Forest Resources and an affiliate faculty member of the American Indian Studies Department. His research and teaching focus on incorporating Indigenous knowledge into forestry and natural resource management. His work supports tribal sovereignty and addresses Indigenous environmental issues across the United States with a focus on the Great Lakes and in South America with a focus on Lowland Bolivia.

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Jim Rock (Dakota) M.A.Ed. is University of Minnesota Duluth's Director of Indigenous Programming at the Marshall W. Alworth Planetarium and an instructor in the Physics and Astronomy Department at Swenson College of Science & Engineering. Rock teaches in the Honors Department as well and offers an ethno- and archaeoastronomy course called Native Skywatchers which includes Turtle Island (N., C. & S. America) and Oceania. He has worked or designed experiments with NASA and NOAA and is co-author of the 2014 *D(L)akota Star Map Constellation Guidebook* and other publications on Dakota and regional Sky-Earth connections.

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GEOGRAPHIES

SKY WATCHERS, EARTH WATCHERS, AND GUARDIANS OF THE FORMER AND FUTURE GARDEN

By Jim Rock

In their 2016 article “Wakan Tipi and Indian Mounds Park: Reclaiming an Indigenous feminine sacred site,” Roxanne Gould and Jim Rock argue that “Like all Indigenous peoples, the Dakota relationship to place is core to their existence” (23). This relationship is multifaceted and needs to be explained in a manner that both takes time and requires simultaneous understanding of multiple perspectives. A central

tenet to Dakota thinking, per Gould and Rock, can be summarized and simplified “as above, so below”: we need to understand the heavens to understand the earth, and vice versa. These understandings come down through generations by stories told that concern place, birth, death, and the ceremonies that in many ways hold a culture together.



Image courtesy of Waziyatawin/Makoče Ikikčupi.

This Geographies column offers a window into this complex world.

-Patrick Nunnally, St Paul, MN

Oikonomos or Oikonomia (Greek, οἰκονομία, silent initial o) is an old world house guardian or today's economic/environmental steward for "rational use of the field resources" including slaves or the "rational economization of natural abundance." [i] Whereas here at Bdote, where the Wakpa Taŋka (Misi Ziibi) and Wakpa Mni Sota rivers join, thípi awáŋyaŋka (Dakota) means to watch over the thipi as to watch for approaching game, predators, or the threat of enemies.

So if Space and Turtle Island Mother Earth (Space&TIME) is our mutual Ultimate Thípi, then we must somehow "Ištásu thókhiyopñeunyanpi..." Basically, we trade eyeballs and tongues(k'a čeží) as more than two-legged relatives, and we learn from each other. As Earth is our thípi, we must all watch, live, work, and row together within the same wáta (canoe) circling through the ocean of spacetime. But it can also seem like the time to stop leaning thípi poles together with those whose individualized values are incompatible with our Mother's collaborative values. Systemic and personal acts of racism, aggression, and violence continue in the land O'MinNice.



Unktomi's Rainbow Tipi. Image courtesy of Jim Rock.



Unktomi. Image courtesy of Jim Rock.

Makoče Ikikčupi is a wonderful reparative justice project of Dakota land recovery for the return of our exiled relatives after 157 years away. See the [M.I. website](#).^[ii] See a five-minute explanation of our [vision](#).^[iii] Dr. Waziyatawiñ and her governing council, on which I serve, are building traditional earth lodges using Indigenous permaculture. Indeed, what is “perma-?” Yet even if we choose to live “off-grid” without electricity or light with dark skies on our 21 acres of non-reservation, yet original homeland, the state and local building and fire codes require certain infrastructure.

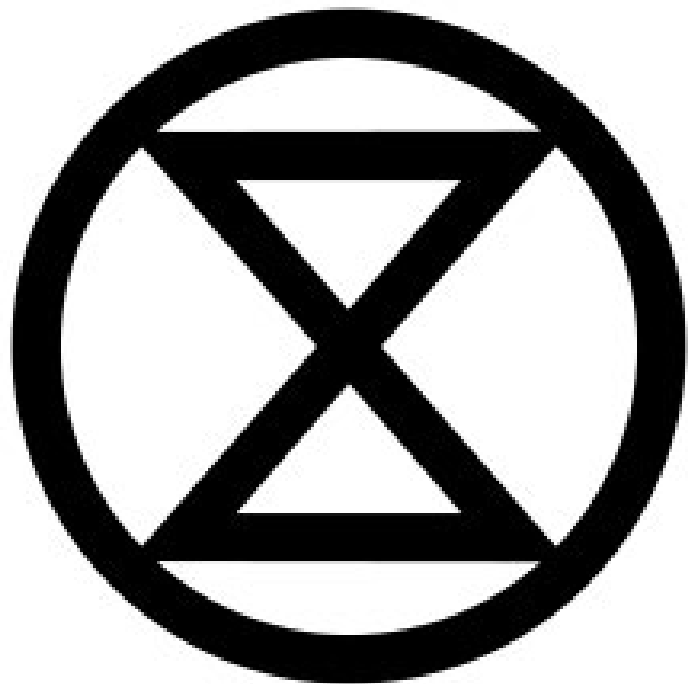
In September 2019, we received a cease and desist construction order after starting the first three lodges. The city came to the table with two attorneys and we came with two tobacco and prayer-loaded pipestone pipes, our ancient and highest law. Feeling the support and presence of our ancestors, we would now need to enlist Minnesota legislators to write, sponsor, agree, and vote on a new law in the only state with a divided floor like the National Congress. The separate, jacketed bills were SF4232 and HF4229. By February 2020, the city and the Minnesota tribes and other outstate tribes were in support.

It was looking quite possible for Indigenous people to legally live in sustainable ways to contribute to climate solutions until Covid-19 again stopped the vote and our lodges from this summer’s labor season. But should we have to ask our “great steward Euro-Father” for his benevolent permission to exist back on our own land? Waziyatawiñ’s (2008) book asks, “What does justice look like?”^[iv]

Yet some of us are still the descendants of the Tatan̄ka Oyate, the bison people. My Dakota father’s Yoda-like name was “[Bison Bull Black In Front Of Stand Not! BBBIFOSN](#)”

The bison was one of our keystone relatives who gave us life from the bison stars above to the earth prairies below. “Kapemni” is a powerful,

tipi-shaped, Sky-Earth mirror symbol of our life philosophy. But almost a decade ago, I saw Europeans waving flag and banner symbols with our Dakota kapemni symbol. Were these new allies waking up to our old ways? Around 2011, a UK street artist/activist, still only known as ESP, created a version of what we Dakotas would simply read as the kapemni. It has now developed the new meaning of an hourglass run out of time called the [Circle X symbol for extinction](#).



Extinction Symbol as Kapemni after Goldfrog ESP.

As above, so below. As we lose our constellational bison, turtle, elk, and other stars above to photoextinction by light pollution, we also lose the mirrored biological counterparts below to extinction by our daily and cumulative lifestyle choices. Now out of sight, mind, and memory to infinity...

Humans have feared what is out there beyond the campfire for millennia and until the first electric light bulb (streetlight in Cleveland, April 29, 1879), we had to burn combustibles (wood, whale oil, kerosene, natural gas) to light the



Earthlodge construction at Makoče Ikikčupi. Image courtesy of Jim Rock.

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night, unless we wished to be in the darkness beneath the countless stars. But now, 140 years later, two-thirds of the world's population never experience a truly dark sky. In the mid-1840s, Thoreau wrote, "I believe that men are generally still a little afraid of the dark, though the witches are all hung and Christianity and candles have been introduced."^[v]

Should our 1879 annual wintercount, buffalo-robe symbol have been a lightbulb? As the last few hundred of sixty million bison were being killed, this same year 1879 my great grandfather was born. Up to a decade later he was still seeking to gather any remaining bison chips to burn for heat and light on the prairie. A light can be relit with time and effort, but all the relative-life forms

extinguished on our watch during this Holocene-Anthropocene extinction cannot be re-animated. We are seeing loss of life 100 to 1,000 times higher than the natural rate as humans have become a "superpredator."^[vi]

What single painted symbol will we place on our wintercount spiral for 2020-21? Should it be a black ball of spikes for Covid-19? The first confirmed Minnesota case on March 1 was followed by a state of emergency declared March 13. This was the end of 2019 for us Dakotas. Our Dakota New Year came with the spring equinox and lock down. Should the symbol be a mask? Or should the symbol be a knee on a neck for an entire life eclipsed within 8 minutes? What should justice look like? Perhaps a skull and crossbones.



Kapemni Mirror of Earth-Sky and Tipi reflecting both. Image courtesy of Jim Rock.

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A true guardian/warrior/steward of Household Earth must now protect the darkness from powerful lights. Instead of more hyper, light-polluted, parking lots turning night-phobia into daylight false security, the International Dark Skies Association is taking action and reversing the harm done. In so doing, birds are better protected from flying into lit skyscrapers, and turtles, insects,

and our own bodies will suffer fewer changes to chronobiology leading from sleep deprivation and hormonal shifts to cancers. Our firefly relatives can't even find each other to mate. Do crickets, frogs, and fireflies need to turn up the volume and candlepower to get our attention? Who speaks for them? The Pacific hydrogen bomb tests of the '50s certainly turned up the megaheat, light,



Land, Sky, Tipi. Image courtesy of Jim Rock.

radiation, exile, and mutation of our relatives in Oceania. And what of the lost and fading night skies and our constellational star stories?

As an Indigenous astronomy professor, some of my previous collaborations were with NASA and NOAA where teamwork is critical to mission preparation, timeliness, accuracy, communication, and success. I was privileged to work on several projects, one of which was called Beautiful Earth, with Valerie Casasanto and others and Dr. Thorsten Markus who is the Principal Investigator of ICE-Sat2 launched almost two years ago this September. ICE-Sat2 is reflecting 10,000 green laser pulses per second earthward

and off the ice while traveling about 4 miles per second across the pole, to earth-watch from sky how ice is changing. It's melting way faster than we thought. Actually these laser beam pairs are 90 meters apart to also calculate elevation changes during each 90 minute pass over the pole. Ninety meters is over half of the two millenia-old REMA Giant Snake Mound (55.3% of REMA = 163 m). Minnesota's REMA is an Unktehi who is both flood watcher and eclipse watcher and who also gains elevation from 1 foot at the rattlesnake tail to 5.5 feet at the head. REMA is further explained by this author in a [separate article](#) in this same journal.



*Waiting for the roof poles and Earth covering for the earthlodge at Makoče Ikikčupi.
Image courtesy of Jim Rock.*

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In August 2020, NASA's ICE-Sat2 was joined by the ESA's Cryo-Sat2 to combine their orbital data swaths so as to "trade eyeballs" as said in the first paragraph. These paths actually look like thípi poles being leaned together (see first paragraph again), over our Earth Thípi Mother. We must be the accurate watchers of Her changing ice and ocean levels! Aháŋ! Watch it! Look out! Careful! See the [crisscrossing path](#)^[vii] of the polar thípi poles! See more of these [Earth-Skywatchers](#).^[viii] Also watch a 16-year view of [polar ice loss](#).^[ix]

A post on Nick Humphrey's [State of Cryosphere Page](#) wrote, "Watching the ice melt like this is freaking scary. I feel like Dorothy watching the

sand run out of the hourglass."^[x] Here is yet another reference to the kapemni-hourglass-Circle X extinction symbol. If a steward in the Greek biblical texts is supposed to watch, guard, and manage the affairs of a household while the owner is away...presumably until that land owner or Earthmaker/Land Creator returns, then that steward will be measured and judged accordingly in this Western view. Yet our local "Garden of Eden" at Bdote (river joining) as Čhokáya Kiŋ (the center) of Mni Sota Makočhe (the land where the water reflects the sky) is still here, albeit drained, exfoliated, paved, toxic, and 99% de-prairiefied and on life support since alien colonization.



Healthy sunshine over Zani Otunwe (Healthy Village) Lodge. Image courtesy of Jim Rock.

So consider the shock and horror of the original Turtle Island-loving caretakers or non-land-owning “stewards(?)” as they were displaced or removed by exile or death when invaders calling themselves “the new stewards” took over. Our ancestors watched these fever-crazed invaders clear-cutting and plundering every last tree, fur pelt, bird and mineral, etc. So who best modeled ethical Athenian stewardship?

Stewardship questions are not to be asked of us, since it assumes we Turtle Islanders were some kind of “stewards.” This is not even like equating cubits to feet or meters, which are at least all interconvertible lengths. But these invader “stewards” would go to any length for immeasurable profit and exce\$\$ beyond even the rational

thought of the mi\$ogynistic, philosophical, Greek economi\$t-\$laveholders.

Indigenous “First Residents” could not even conceive of owning The Mother, but rather we were to see ourselves as Her children in a loving relationship of gratitude and reciprocity. For well over a thousand generations we were asking permission for every heart-like strawberry and handful of water, thinking ahead of the seventh generation. We were not to overuse and abuse, nor to accumulate individual wealth, since others were in need of generosity and hospitality as our relatives. What \$emi-annual, balanced-\$pread-sheet \$ymbol does the colonial-\$ettler power of imperma-culture, mo\$t use, value, and remember? They rarely or never memorialize and remember the descendants of slaves (say their



Unktomi Tachekpa—Unktomi’s navel. Image courtesy of Jim Rock.

names) or the descendants and ancestors of First Nations Dakota (say their names) in Mni Sota Makoče.

So would you like that glass of water with micro-plastics over ice and a squeeze of MHC, (Methane Hydrate Clathrate) perhaps? To watch for the MHC gun, please see [here](#)[xi] and [here](#). [xii] Then look for the helpers, the sky watchers, the earth watchers, and the guardians of gardens past and future. Mom watches us, as we all watch over each other as relatives and over [Her](#). [xiii]

The above 1812 words are 193-4 more than 1619 Slaveships and 1620 Pilgrims...1812 for the year Fort Snelling was being built at Bdote and 46 years after 1766 when Jonathon Carver carved his family crest for Manifest Destiny and the Doctrine of Discovery in Wakan Tipi Origin Cave and our mother's womb to match the Bison Star above by the kapemni principle. Now add these 51+ more to reach 1863 words and years and our exile from our Origin Garden at Bdote where X marks the spot.

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Patrick Nunnally is a lecturer in the Department of Landscape Architecture in the College of Design at the University of Minnesota. He also teaches in the College of Food, Agriculture, and Natural Resource Sciences and was one of the lead scholars for the University's John E. Sawyer Seminar, "Making the Mississippi: Formulating New Water Narratives for the 21st Century and Beyond," funded by the Andrew W. Mellon Foundation. Nunnally's teaching and writing are public-facing, connected to community, and focused on the Mississippi River as a corridor for environmental justice and climate change. You can find more about his work at landwaterplace.umn.edu, a website offering resources on questions of environmental justice, community, and environmental change.

IN REVIEW

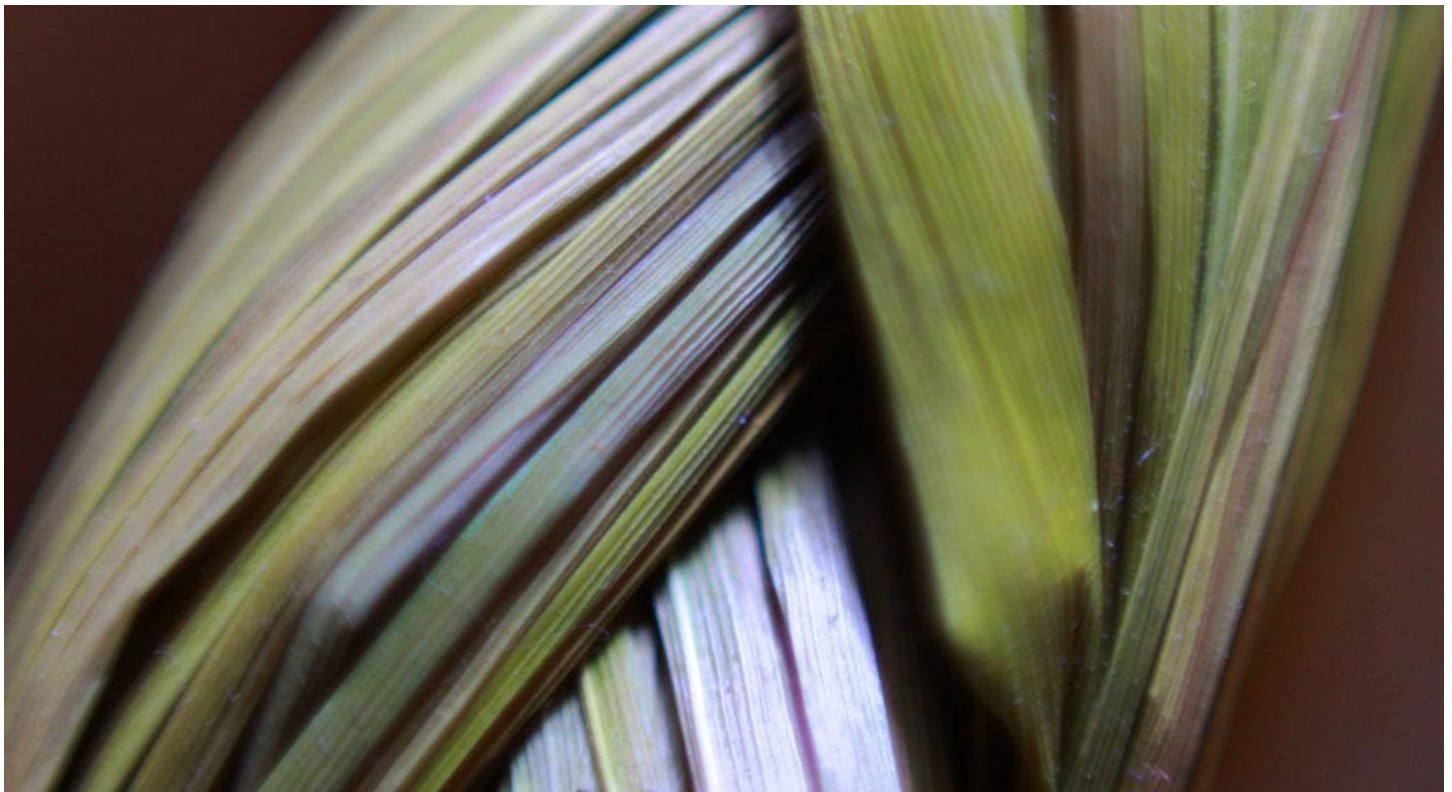
WOVEN WAYS OF KNOWING

By Mahin Hamilton

In a recent talk by Robin Wall Kimmerer, she explained that the importance of story in environmental work is that “it is story that invites you in, story that can change your heart.” Her book, Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teaching of Plants (2013), does exactly that—invites readers in to see the world differently. In a previous issue, we published a review of Kimmerer’s book written by Mahin Hamilton. We are republishing this column for two reasons. First, Hamilton’s review of Braiding Sweetgrass speaks to the central goals of this issue and the work of the University of

Minnesota’s humanities-led Environmental Stewardship, Place, and Community Initiative more broadly: honoring Indigenous ways of knowing and the precedence of these ways of knowing in curriculum, research, and relationships. Braiding Sweetgrass has surfaced again and again in conversations and work connected to the Initiative, so it is appropriate to highlight the book through this review.

Second, we are republishing Hamilton’s piece because in the uncertainty of this year, Robin Wall Kimmerer’s work offers words, practices, and Indigenous knowledge as a scaffolding or a



Braided sweetgrass, its three strands representing the three interwoven components of the book: scientific knowledge, Indigenous story, and personal narrative. Image courtesy of Jamieson Lawrence (CC BY-SA 4.0).

A hymn of love to the world.

—ELIZABETH GILBERT

BRAIDING
SWEETGRASS



Indigenous Wisdom, Scientific Knowledge,
and the Teachings of Plants

ROBIN WALL KIMMERER

“Braiding Sweetgrass” (2013) by Robin Wall Kimmerer. Published by Milkweed Editions.

compass for the future. Mahin Hamilton writes that Kimmerer has a poetic way of writing that invites you to slow down, to engage, and savor the words and the messages. This review is our invitation to you to do just that.

– Laurie Moberg, Managing Editor

Braiding Sweetgrass: Indigenous Wisdom, Scientific Knowledge and the Teachings of Plants (2013) is a nonfiction compilation of essays written by Robin Wall Kimmerer, a celebrated botanist, poet, and Indigenous member of the Citizen Potawatomi Nation. Each section of the book is broken down according to themes related to a different plant, Native teaching, or personal story. Many times it is a combination of all three.

As with the traditional braiding of sweetgrass, the ultimate purpose of this book is to weave together three ways of knowing: scientific knowledge, Indigenous knowledge, and the knowledge of the author herself, an Anishinabekwe scientist. Kimmerer combines these elements with a powerfully poetic voice that begs for the return to a restorative and sustainable relationship between people and nature.

She invites us to seek a common language in plants and suggests that there is wisdom and poetry that all plants can teach us. She goes further by explaining that, to her people, respect of earth and plant life is inherent. The earth, sky, water, and all living things are viewed as though they are each a nonhuman person—that is, a unique entity that should be cared for and respected, can be communicated with, has a story to tell, and has a lesson to teach. As she weaves together these lessons, she explains how each natural element plays a key role in the historic and modern survival of Indigenous people and their tribal cultures. Each essay weaves in the overarching themes of restoring balance between modern society and nature, and finding harmony between modern science and Indigenous teachings.

Kimmerer speaks continually of the importance of living with a reciprocal mindset between one another as well as between people and the land. It is a way of viewing how we care for and bestow blessings and gifts on one another and the world around us. She argues that this reciprocity creates a universal balance, which is restorative and can lead to a sustainable future for our planet through a return to abundance in the natural world. She writes that we have lost our historic communion with the earth as we have moved away from subsistence living and into lives of abundance. In her essay “Windigo Footprints,” she shares the Native story of Windigo, a mythical monster that is cursed to stalk the land in a never-ending quest for food. Yet its appetite is never satisfied; the more it consumes, the hungrier it becomes. “Consumed by consumption, it lays waste to humankind” (305). This tale was told by her people during the cold winter months, at a time when starvation was a reality. It served as a warning against sociopathology to a communal people that depended on the reciprocity of one another for survival. To compare this folk story in scientific terms, Kimmerer offers Windigo as an Indigenous study on a positive feedback loop or system imbalance. Kimmerer also uses this story as an allegory for the worst of modern society: consumerism, drug addiction, overuse of technology, and the prioritization of wealth and power over global health by large corporations. She reflects that the Windigo of old still roams the earth today.

Kimmerer’s personal and professional life stories are interwoven throughout the book so that it becomes part memoir, part voice for Indigenous peoples, part botanist handbook, and part plea to Western society for a return to ecological balance. She includes stories about her parents participating in rituals that they knew were important though they had not been taught the meaning because so much of her culture was lost when her people suffered the hardships of forced removal, starvation, war, disease, and persecution over the last few hundred years. She writes about clearing



*"Three Sisters" garden of corn, beans, and squash.
Image courtesy of Eli Sagor (CC BY-NC 2.0).*

a pond as an adult over many summers so that her children could swim there. It became a labor of love for the ecological restoration of the pond as well as for her children, and a way for her to play a small part in correcting the damage done by surrounding farm fields that were overfertilized but completely void of all microorganic life. She writes about slowly, painfully learning her native language, one that has been almost completely lost save for a few committed elders who are passing it on to interested people like her.

In “The Three Sisters,” Kimmerer shares the Indigenous practice of planting corn, beans, and

squash together in a mutually symbiotic dance of efficient polycultural elegance. Throughout the story, she repeats the statement that because of these seeds, the people might “never go hungry again” (131). But to Native people, these plants are more than just food. They are also a gift, and they have a lesson to teach about reciprocity. She weaves in the scientific rationale behind the success of this ancient practice as she explains how the three plants grow and benefit one another. Kimmerer shares how the Three Sisters explain the tenets of the Ojibwe people: “Being among the sisters provides a visible manifestation of what a community can become when its members



Kimmerer explains the premise of Indigenous sustainable harvest: never take the first thing you see, never take more than half, and only take what is given. This includes sockeye salmon, shown spawning here at Adams River, Canada.

understand and share their gifts. In reciprocity, we fill our spirits as well as our bellies” (134). Because the beans, corn, and squash are fully domesticated, they depend on the people to create the proper conditions for growth. In turn, people need the Three Sisters for sustenance. Ultimately, this way of growing together is a representation of a healthy reciprocal relationship, where gifts exchanged create an indefinite growth model of abundance.

The great beauty of this book is found in Kimmerer’s voice. She weaves story, science, and personal narrative with a beautifully poetic style that often characterizes Native storytellers. In “The Honorable Harvest” and “Burning Cascade Head,” she explains the deep respect that Indigenous people show all living things, how they never take the first thing they see, they never take more than half, and they only take what is given. This sustainable harvesting practice is incredibly rewarding for the health and success of entire ecosystems, which benefits the people in kind by creating even more food over time. She also explains how gifts are returned to plants and animals for harvesting their very lives so that the people can feed their families. Plants are gently tended to and are given gifts of tobacco. Animals are shown ceremony, prayers are spoken, and celebrations are held in the honor of their sacrifice.

There is a languid and peaceful quality to Kimmerer’s prose that reads like a meditation or dance, inviting the reader into the world she has created of small moments, big ideas, and alternate ways of thinking and knowing that may be strange and beautiful to some of her readers. These readers may be put off by the repeating thematic structure of the book, the storytelling, or even the fluidity of her writing style, and not everyone may agree with her conclusions.

I, however, loved reading this book and savored each essay. Kimmerer asks many questions that

deserve pondering. I am the type of reader that will normally devour a good book. With this book, I instead found myself slowing down to process the way she beautifully and simply sets the scene of a story, to capture the essence of a main idea, to find repeating elements, and to contemplate her comparisons and conclusions. Her comparison of the American Pledge of Allegiance to the Onondaga Thanksgiving Address in “Allegiance to Gratitude” is a good example of the way she weaves story with big ideas. This is a heavy, thoughtful analysis of the origin of two cultures that experience identity in very different ways. As such, it should be read with the intention of getting something new out of a familiar concept by looking at the same thing from a different perspective. I experienced reading this book as one should experience a fine wine: slowly, thoughtfully, and quietly. Kimmerer might say that the book asks to be read in this way.

If you enjoyed *Lab Girl* by Hope Jahren (2016), you may also appreciate this book. Both books illustrate the authors’ passion for and devotion to plants. These authors’ relationships with plants transcend the science lab and create a larger narrative than can be found in a scientific journal. In her book, Kimmerer asks the reader to learn a new way of thinking about the connection between Indigenous teachings and science, and between nature and humans. She begs the reader to imagine a world where these elements exist in a harmony that confers agreement, restores a damaged landscape, heals relationships, and ultimately creates a new modern language of sustainability based on modern scientific truths and Indigenous practices. If you are unfamiliar with the beauty of Indigenous storytelling or are looking for a book that can be picked up and skimmed over, you may miss the subtleties of this artfully crafted book. However, if you are looking for a book that invites you to take your time, savor each page, each question, and each big idea, be prepared to come away from it with a different way of seeing and knowing the world.

Recommended Citation

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PERSPECTIVES

AUSTRALIA'S LEGACY OF DENYING WATER RIGHTS TO ABORIGINAL PEOPLE

By Lana D. Hartwig, Natalie Osborne, and Sue Jackson

Water management in the Murray-Darling Basin has radically changed over the past 30 years. But none of the changes have addressed a glaring injustice: Aboriginal people's share of water rights is minute, and in New South Wales it is diminishing.

In the 1990s, governments tried to restore the health of rivers in the basin by limiting how much water could be extracted. They also separated land and water titles to enable farmers to trade water.

This allowed the recovery of water for the environment and led to the world's biggest water market, now worth billions of dollars. For a range of reasons, Aboriginal people have largely been shut out of this valuable water market.

Our research, the first of its kind, shows Aboriginal water entitlements in the Murray-Darling Basin are declining, and further losses are likely under current policies. This water injustice is an ongoing legacy of colonisation.



Darling River at Toorale National Park, New South Wales. Wikimedia: B 897 CC BY-SA 4.0.

An unjust distribution of water

A water use right, also called a licence or entitlement, grants its holder a share of available water in a particular waterway. Governments allocate water against these entitlements periodically, depending on rainfall and water storage. Entitlement holders choose how to use this water. Typically, they extract it for purposes such as irrigation, or sell it on the temporary market.

We mapped Aboriginal water access and rights in NSW over more than 200 years, including the current scale of Aboriginal-held water entitlements.

Across ten catchments in the NSW portion of the Murray-Darling Basin, Aboriginal people collectively hold just 12.1 gigalitres of water. This is a mere 0.2% of all available surface water (as of October 2018).

By comparison, Aboriginal people make up 9.3% of this area's population.

The first wave of dispossession

Under colonial water law, rights to use water, for example for farming, were granted to whoever owned the land where rivers flowed. This link between water use and land-holding remained in place until the end of the 20th century.

The second wave

During the last quarter of the 20th century, governments introduced land restitution measures, such as the NSW Aboriginal Land Rights Act (1983), to redress or compensate Indigenous peoples for colonial acts of dispossession.

We found water entitlements were attached to some of the land parcels that were transferred to

The value of water held by Aboriginal organisations was A\$16.5 million in 2015-16 terms, equating to just 0.1% of the value of the Murray-Darling Basin's water market.

We wanted to understand how these limited water rights affect Aboriginal people today, and the challenges, if any, they face in holding onto these entitlements. This required examining Australia's water history and its systems of water rights distribution.

What we found were key moments when governments denied Aboriginal people water rights and, by extension, the benefits that now flow from water access. This includes the ability to use water for an agricultural enterprise, or to temporarily trade water as many other entitlement holders do. We describe these moments as waves of dispossession.

As a result, Aboriginal people, whose traditional ownership of land (native title) was only recognised by the Australian High Court in 1992, were largely denied legal rights to water.

Aboriginal ownership under these processes – but this was the exception.

Land restitution processes intentionally restricted what land Aboriginal people could claim. They were biased against properties with agricultural potential and, therefore, very few of the properties that were returned to Aboriginal ownership came with water entitlements.

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At this crucial juncture in land rights reform, federal and state governments entrenched the inequity of water rights distribution by increasing the security of the water rights of those who historically held entitlements. Governments have yet to pay serious attention to the claims of Aboriginal people who see a clear connection between the past and the present in the distribution of water entitlements.

The native title framework has not helped the situation either. Native title is the recognition

that Indigenous peoples have rights to land and water according to their own laws and customs.

But it's difficult for those making a native title claim to get substantial interests in land and waters. The Native Title Act 1993 defined native title to include rights to water for customary purposes and courts are yet to recognise a commercial right to water.



Mirrool Creek at Ardlethan, New South Wales. The Mirrool Creek is a part of the Murrumbidgee catchment within the Riverina region, New South Wales. CC BY-SA 4.0 by Emily Hawthorne.

The third wave

We also identified a third wave of dispossession, now underway. From 2009 to 2018, the water rights held by Aboriginal people in the NSW portion of the Murray-Darling Basin shrunk by at least 17.2% (2.0 gicalitres of water per year). No new entitlements were acquired during this decade.

The decline is attributable to several factors, the most significant being forced permanent water

(and land) sales arising from the liquidation of Aboriginal enterprises.

With water rights held by Aboriginal people vulnerable to further decline, the options for Aboriginal communities to enjoy the wide-ranging benefits of water access may further diminish.

We expect rates of Aboriginal water ownership to be even smaller in other parts of the Murray-Darling Basin (and in jurisdictions beyond the Basin). Research is underway to explore this.

Australia urgently needs a fair national water policy

The Productivity Commission is now reviewing Australian water policy, and must urgently address the injustices faced by Aboriginal people.

In developing a just water policy, governments must work with First Nations towards the twin goals of redressing historical inequities in water access *and* stemming further loss of water rights. Treaty negotiations may offer another avenue for water reform

Over recent decades, Australia has been coming to terms with its colonial history of land management, returning more than a third of the continent to some form of Indigenous control under a “land titling revolution”.

But a water titling revolution that reconnects water law and policy to the social justice agenda of land restitution is long overdue. Indigenous peoples must have the opportunity to care for their land and waters holistically, and share more equitably in the benefits of water use.

Further Reading

[Water in northern Australia: a history of Aboriginal exclusion](#)

[No water, no leadership: new Murray Darling Basin report reveals states' climate gamble](#)

[Aboriginal voices are missing from the Murray-Darling Basin crisis](#)

[5 ways the government can clean up the Murray-Darling Basin Plan](#)

[Australia's inland rivers are the pulse of the outback. By 2070, they'll be unrecognisable](#)

[While towns run dry, cotton extracts 5 Sydney Harbours' worth of Murray Darling water a year. It's time to reset the balance](#)

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PRIMARY SOURCES

ENVIRONMENTAL STEWARDSHIP, PLACE, AND COMMUNITY: A READING LIST

By Christine Taitano DeLisle and Laurie Moberg

The humanities-led Environmental Stewardship, Place, and Community Initiative, funded by the Andrew W. Mellon Foundation, focuses on integrating Indigenous ways of knowing into the humanities, and in particular into humanistic approaches to

environmental challenges. Throughout the first year and a half of the grant, participants in the project have shared and discussed texts to create a common foundation for moving this work forward. Below is a selection of the readings that form this core.



Tettegouche State Park, Silver Bay, Minnesota. Image courtesy of Conner Bowe.

This Place

One pillar of this work is to consider how we understand and think about *this* place as an Indigenous place, Mni Sota Makoce.

Reading List for *This Place*

Diaz, Vicente M. 2019. "Oceania in the Plains: The Politics and Analytics of Trans-Indigenous Resurgence in Chuukese Voyaging of Dakota Lands, Waters, and Skies in Miní Sóta Makhóčhe." *Pacific Studies* 42 (1/2): 1–44. <https://www.academia.edu/42274941/>.

Gould, Roxanne. 2018. "Dream of Wild Health: Growing Garden Warriors and a Food Sovereignty Movement." *Green Theory & Praxis Journal* 11 (3): 3–16. <http://greentheoryandpraxisjournal.org/gtpj-volume-11-issue-3-november-2018/>.

Gould, Roxanne and Jim Rock. 2016. "Wakan Tipi and Indian Mounds Park: Reclaiming an Indigenous Feminine Sacred Site." *AlterNative: An International Journal of Indigenous Peoples* 12 (3): 224–235. <https://doi.org/10.20507/AlterNative.2016.12.3.2>.

Odegard, Tianna M. 2019. "What's in My Backyard? Empowering Indigenous Voices on Firefly Creek at Blue's Bottom." *Open Rivers: Rethinking Water, Place & Community*, no. 14. <https://editions.lib.umn.edu/openrivers/article/empowering-indigenous-voices/>.

Rock, James, and Roxanne Gould. 2018. "Indigenous Riverscapes and Mounds: The Feminine Relationship Of Earth, Sky and Water." Paper presented at the June 6-8, 2018 Hawaii University International Conferences [STEAM and Education]. Honolulu, HI. <https://huichawaii.org/wp-content/uploads/2018/07/Rock-Jim-2018-STEM-HUIC.pdf>.

Smith, Mona. 2018. "Learning from the Dakota: Water and Place." *Open Rivers: Rethinking Water, Place & Community*, no. 11. <https://editions.lib.umn.edu/openrivers/article/learning-from-the-dakota-water-and-place/>.

Smith, Mona M. 2016. "Owámniyomni, a Dakota Name for 'St. Anthony Falls.'" *Open Rivers: Rethinking The Mississippi*, no. 4. <https://editions.lib.umn.edu/openrivers/article/owamniyomni-a-dakota-name-for-st-anthony-falls/>.

Histories and Decolonization

Indigenous relations to place, however, are complicated by a history of colonization, removal, and genocide. Understanding the settler colonial histories and legacies of violence and trauma is vital for dismantling the ongoing gendered

violence of settler colonialism, for disrupting settler capitalist and materialist assumptions about the “natural world,” and for accepting responsibilities of what it means to be a good relative on Indigenous lands.

Reading List for Histories and Decolonization

Case, Martin. 2018. *The Relentless Business of Treaties: How Indigenous Land Became US Property*. St. Paul, MN: Minnesota Historical Society Press. <https://www.mnhs.org/mnhspress/books/relentless-business-treaties>.

Estes, Nick. 2019. “The U.S. Stole Generations of Indigenous Children to Open the West.” *High Country News*. <https://www.hcn.org/issues/51.17/indigenous-affairs-the-us-stole-generations-of-indigenous-children-to-open-the-west>.

Tuck, Eve, and K. Wayne Yang. 2012. “Decolonization is Not a Metaphor.” *Decolonization: Indigeneity, Education, and Society* 1 (1): 1–40. <https://jps.library.utoronto.ca/index.php/des/article/view/18630>.

Yazzie, Melanie K. and Cutcha Risling Baldy, eds. 2018. “Indigenous Peoples and the Politics of Water.” Special Issue, *Decolonization: Indigeneity, Education & Society* 7 (1). <https://jps.library.utoronto.ca/index.php/des/issue/view/2004>.

Indigeneity, Environmental Justice, and Activism

Indigenous peoples are often at the front of resistance movements, particularly standing up for other-than-human relations against violence, exploitation, and destruction. The following

readings demonstrate how Indigenous epistemologies, ontologies, and relations shape these activist movements.

Reading List for Indigeneity, Environmental Justice, and Activism

Boffa, Adam. 2019. "We Are Nations: What Environmental Justice Looks Like for Indigenous People." *Gizmodo*. <https://earther.gizmodo.com/we-are-nations-what-environmental-justice-looks-like-f-1839028507>.

Estes, Nick. 2019. "A Red Deal." *Jacobin*. <https://www.jacobinmag.com/2019/08/red-deal-green-new-deal-ecosocialism-decolonization-indigenous-resistance-environment>.

Estes, Nick, and Jaskiran Dhillon, eds. 2019. *Standing with Standing Rock: Voices from the #NoDAPL Movement*. Minneapolis: University of Minnesota Press. <https://www.upress.umn.edu/book-division/books/standing-with-standing-rock>.

Gilio-Whitaker, Dina. 2019. *As Long as Grass Grows: The Indigenous Fight for Environmental Justice From Colonization to Standing Rock*. Boston: Beacon Press. <http://www.beacon.org/As-Long-as-Grass-Grows-P1445.aspx>.

Sherwood, Yvonne P. 2019. "The Political Binds of Oil versus Tribes." *Open Rivers: Rethinking Water, Place & Community*, no. 13. <https://editions.lib.umn.edu/openrivers/article/the-political-binds-of-oil-versus-tribes/>.

Waziyatawin. 2008. *What Does Justice Look Like: The Struggle for Liberation in Dakota Homeland*. St. Paul, MN: Living Justice Press. <http://www.livingjusticepress.org/index.asp?SEC=%7B-C77C5426-031A-4F37-A7A4-09B76B8B3C5B%7D>.

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Whyte, Kyle Powys. 2018. "Settler Colonialism, Ecology, and Environmental Injustice." *Environment and Society* 9 (1): 125-144. <https://doi.org/10.3167/ares.2018.090109>.

———. 2018. "What Do Indigenous Knowledges Do for Indigenous Peoples?" *Traditional Ecological Knowledge: Learning from Indigenous Practices for Environmental Sustainability*. Edited by M.K. Nelson and D. Shilling, 57-82. Cambridge: Cambridge University Press. <https://doi.org/10.1017/9781108552998>.

Theory and Methods

The readings in this section challenge us to consider who are knowledge holders, how knowledge is produced, and the nature of knowledge itself. Offering insights, methods, and provocations,

these readings compel us to think about relatives, reciprocity, and settler legacies that shape disciplines and practices, research and teaching.

Reading List for Theory and Methods

Arvin, Maile, Eve Tuck, and Angie Morrill. 2013. "Decolonizing Feminism: Challenging Connections between Settler Colonialism and Heteropatriarchy." *Feminist Formations* 25 (1): 8–34. doi: [10.1353/ff.2013.0006](https://doi.org/10.1353/ff.2013.0006).

DeLisle, Christine Taitano. 2015. "A History of Chamorro Nurse-Midwives in Guam and a 'Placental Politics' for Indigenous Feminism." *Intersections: Gender and Sexuality in Asia and the Pacific* 37 (March). <http://intersections.anu.edu.au/issue37/delisle.htm> – <http://intersections.anu.edu.au/issue37/delisle.htm>.

DeLoughrey, Elizabeth. 2019. "Toward a Critical Ocean Studies for the Anthropocene." *English Language Notes* 57 (1): 21–36. doi: [10.1215/00138282-7309655](https://doi.org/10.1215/00138282-7309655).

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Diaz, Vicente M. 2017. "Stepping In It: How to Smell the Fullness of Indigenous Histories." In *Sources and Methods in Indigenous Studies*, edited by Chris Anderson and Jean M. O'Brien. New York: Routledge, 86–92. <https://www.routledge.com/Sources-and-Methods-in-Indigenous-Studies/Anderson-O'Brien/p/book/9781138823617>.

Moreton-Robinson, Aileen. 2017. "Relationality: A Key Presupposition of an Indigenous Social Research Paradigm." In *Sources and Methods in Indigenous Studies*, edited by Chris Anderson and Jean M. O'Brien. New York: Routledge, 69–77. <https://www.routledge.com/Sources-and-Methods-in-Indigenous-Studies/Andersen-O'Brien/p/book/9781138823617>.

Smith, Linda Tuhiwai. 2012. *Decolonizing Methodologies: Research and Indigenous Peoples*. 2nd ed. London: Zed Books. <https://www.zedbooks.net/shop/book/decolonizing-methodologies/>.

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Todd, Zoe. 2016. "An Indigenous Feminist's Take on the Ontological Turn: 'Ontology' is Just Another World for Colonialism." *Journal of Historical Sociology* 29 (1): 4–22. <https://doi.org/10.1111/johs.12124>.

Walter, Maggie, and Michael A. Guerzoni. 2020. "How a University Can Embed Indigenous Knowledge into the Curriculum and Why it Matters." *The Conversation*. https://theconversation.com/how-a-university-can-embed-indigenous-knowledge-into-the-curriculum-and-why-it-matters-147456?utm_source=fac...

Whyte, Kyle. 2018. "Critical Investigations of Resilience: A Brief Introduction to Indigenous Environmental Studies and Sciences." *Dedalus, the Journal of the American Academy of Arts & Sciences* 147 (2): 136–147. doi:10.1162/DAED_a_00497.

Wilson, Shawn. 2008. *Research Is Ceremony: Indigenous Research Methods*. Black Point, NS: Fernwood Publishing. <https://fernwoodpublishing.ca/book/research-is-ceremony-shawn-wilson>.

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DOI: <https://doi.org/10.24926/2471190X.7665>

About the Author

Christine Taitano DeLisle is associate professor of American Indian Studies, University of Minnesota-Twin Cities where she teaches courses on Indigenous resurgence, Indigenous women's history, and public history. DeLisle is CHamoru born and raised in Guåhan (Guam) and her research interests span Indigenous oceans, lands, and waters across Oceania and Turtle Island. She is a member of the Guam-based CHamoru women's advocacy organization, I Hagan Famalåo'an Guåhan, and is currently involved in revitalization projects between Dakota peoples and Native Pacific Islanders of Mni Sota Makoce.

Laurie Moberg is the managing editor for *Open Rivers: Rethinking Water, Place & Community* and the project manager for the Environmental Stewardship, Place, and Community Initiative at the University of Minnesota. She earned her Ph.D. in anthropology from the University of Minnesota in 2018. Her doctoral research investigates recurrent episodes of flooding on rivers in Thailand and queries how the ecological, social, and cosmological entanglements between people and the material world are reimagined and reconfigured in the aftermath of disasters. In her work at the University of Minnesota, Laurie brings her ethnographic sensibilities, attention to story, and interest in human-nonhuman relations to questions of water and absented narratives closer to home.

TEACHING AND PRACTICE

ON TEACHING *THE RELENTLESS BUSINESS OF TREATIES*

By Becca Gercken and Kevin Whalen

In spring 2020, two faculty members from the University of Minnesota Morris each incorporated a book called The Relentless Business of Treaties: How Indigenous Land Became U.S. Property by Martin Case into their course curricula. The book focuses on demystifying the stories and interconnectedness of the white male

treaty-signers responsible for dispossessing Indigenous peoples of their land. The following article shares their perspectives and reflections on teaching this text.

In addition, the Institute on the Environment and Institute for Advanced Study (U of M Twin



Tettegouche State Park, Silver Bay, Minnesota. Image courtesy of Josh Hild.

Cities) collaborated to coordinate a series of reading groups focused on the text. If you are interested in learning more about the *The Relentless Business of Treaties*, please check out

the [video introductions](#) Case put together for each chapter of the book.

– Laurie Moberg, Managing Editor

Disrupting the Relentless Business of American Mythmaking, Becca Gercken

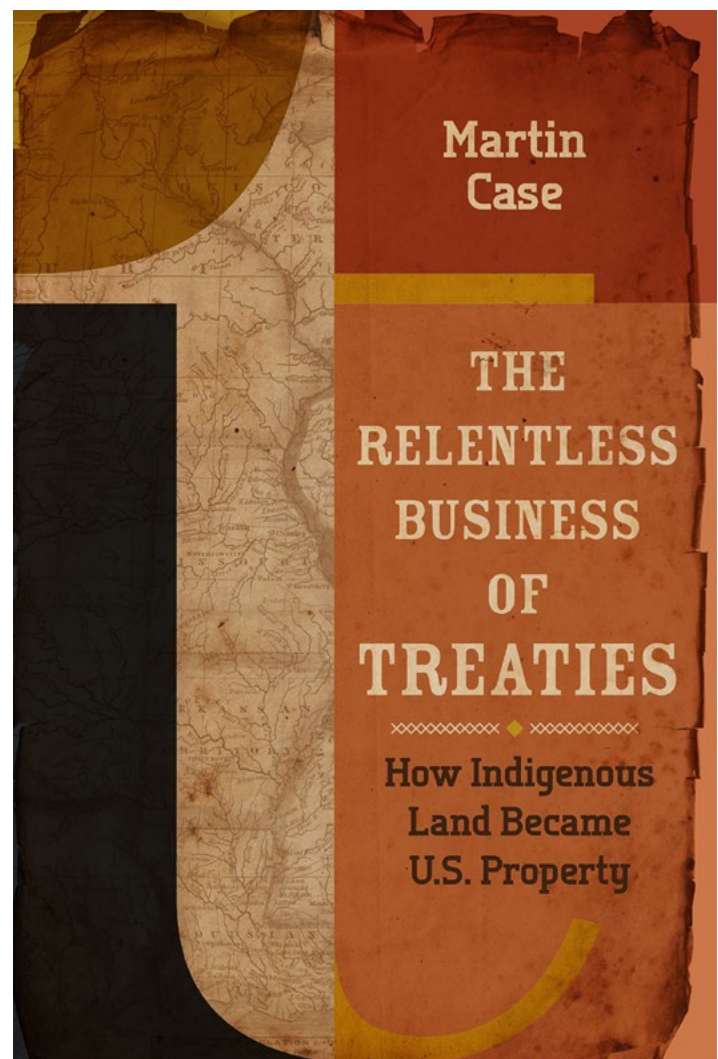
In the spring of 2020, I taught a class at the University of Minnesota Morris called *Honoring Native Treaties: Human Rights and Civic Responsibilities*. While a few of my students were Native American and Indigenous Studies (NAIS) majors or minors, most of my students had no academic background in NAIS. The course description reads as follows:

This course introduces students to North American Indigenous treaties with the United States and Canada, the human rights concerns these treaties bring into focus, and the civic responsibilities the treaties entail. We will consider both historical treaty issues, such as the 1868 Treaty of Fort Laramie and its implications for the ownership of the Black Hills, as well as contemporary movements tied to treaty obligations.

Our texts included government policies from the United States and Canada such as [The Marshall Trilogy](#) and [The Indian Act](#), the foundational Indian policy documents in the United States and Canada respectively, [The Universal Declaration of Human Rights](#) and [The United Nations Declaration on the Rights of Indigenous Peoples](#) as well as *Nation to Nation: Treaties Between the United States and American Indian Nations* (Harjo et al. 2014), *Compact, Contract, Covenant: Aboriginal Treaty-Making in Canada* (Miller 2009), and [The Relentless Business of Treaties: How Indigenous Land Became U.S. Property](#) by Martin Case (2018).

One of the key goals of the class was to disrupt dominant culture narratives about treaties through Indigenous viewpoints and texts and also

to challenge American myths—often perpetuated in western-centric American history classes—of the settlement of this country, in particular land acquired after the American Revolution. Case’s *The Relentless Business of Treaties* was



The Relentless Business of Treaties: How Indigenous Land Became U.S. Property, by Martin Case.

invaluable to this work in the ways that it challenges existing historical narratives.

See an interactive map of [Indian Land Cessions in Minnesota](#) by the Red Lake Band of Chippewa Indians.

For decades now there has been a shift in the way the story of America's westward expansion is told, from the first steps of acknowledging that there were well-established nations in place here when European explorers arrived to more recent work emphasizing the complex relationship of the United States to Indigenous nations.

Less work has been done to disrupt the "American Settler" myth of hardy capitalists populating, taming, and commercializing the West. *The Relentless Business of Treaties* changes that. Traditional history narratives foster a tendency to think of treaties as an end to fighting—as

"peace treaties"—but what Case's book shows again and again is that treaties between Indian nations and the United States are about land acquisition and resources in a much narrower and focused way than has been previously understood.

One of the things that most interested me about *The Relentless Business of Treaties* is that its focus on kinship shows that the Ameripean approach to treaty-making was similar to the Indigenous approach, which emphasized the relationships of the treaty-making partners. [1] Case's clarity that the story he is telling is of Ameripean families was also much appreciated: even though the kinship strategies exist among both Euro-American and Native treaty negotiators and signers, Case, unlike many scholars, makes no effort to speak for or to encourage readers to extrapolate to Indigenous experiences of treaty making.



Signs in front of Oceti Sakowin Camp, Camp Red Fawn, Standing Rock, Dakota Access Pipeline protests, 2016. CC BY 2.0. Image by Becker1999 (Paul and Cathy), Flickr.

Case's book was useful on its own, but it was profoundly helpful to have a text like *The Relentless Business of Treaties* in conversation with texts like *Nation to Nation: Treaties Between the United States and American Indian Nations* and *Contract, Compact, Covenant: Aboriginal Treaty-Making in Canada* because the books together challenge the persistent myth of white North American progress and work to address gaps in people's education about Western expansion. My students talked extensively in class about what an eye opener Case's book was for them, often starting by expressing their frustration with their K–12 education about the settlement of America.

And while Case's book is vital in helping us understand the historical context of treaties

in the United States, its value is not limited to history. Treaties between Indigenous peoples and the United States and Canada remain relevant today. In fact, treaties rights are at the heart of many—if not most—contemporary stories about Indigenous communities and their relationships to national governments. Standing Rock, Mauna Kea, Line 3, Wetsuweten Territory in Canada—all of these conflicts have treaty rights at their center. The media coverage of these conflicts tells us that treaty rights too often remain misunderstood by the public and ignored by the government. But it also tells us that treaty rights are alive and well and that Indigenous peoples will continue to fight for them. Those who read Martin Case's *The Relentless Business of Treaties* will have a better understanding of how and why these fights continue.

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Kevin Whalen

In the Spring of 2020, I taught a course on Ethnography and Ethnohistory at the University of Minnesota Morris. This was an upper-level, seminar-style course; we read anthropological and historical works written by, for, and sometimes about Indigenous communities in North America, and we thought about the methods and the ethical choices made by authors. Most of these books combined methods from history, including the close and contextual reading of documents and oral histories, and the cultural and linguistic analysis of anthropology. In the first weeks of March 2020, just before the Covid-19 epidemic drove us out of the classroom

and onto Zoom, we met in person for the final time. We talked about Martin Case's book, *The Relentless Business of Treaties: How Indigenous Land Became US Property* (2018), which dives deep into the lives and cultures of those who engineered treaties between the federal government and Native nations. Case demonstrated clearly and concisely how a relatively small group of businesspeople, many of them related to one another, engineered these massive land transfers; in the process, they used these newly privatized lands to enrich themselves and their families. By the end of the book, Case had torn a new hole in the fabric of our American myth about the

CA
1851
July 23

Millard Fillmore,
President of the United States of America:

To all and singular to whom these presents
shall come, Greeting,

Whereas a treaty was made and concluded
at Traverse des Sioux, in the Territory of
Minnesota, on the twenty third day of July,
one thousand eight hundred and fifty one,
between the United States of America, by
Luke Lea, Commissioner of Indian Affairs,
and Alexander Ramsey, Governor and
ex-officio Superintendent of Indian Af-
fairs in said Territory, acting as Com-
missioners, and the See-see-toan and
Wah-pay-toan bands of Dakota or
Sioux Indians, which treaty is in the
words following, to wit:

6813

4258

Page one of Treaty of Traverse des Sioux, 1851.

westward movement and so-called settlement of Indigenous lands. This was not a story about enterprising immigrants building new wealth from the sweat of their brow; it was a story about

treaty signers enriching themselves and their families, setting up vast, intergenerational business enterprises from lands they had swindled for pennies on the dollar.

Do we have to talk about old white men? (Yes.)

In the months to come, the Covid-19 pandemic, the murder of George Floyd and police violence toward black America would bring to light new conversations about race, class, and inequality in the United States, both in the past and the present. In more ways than one, Martin Case's book showed us how the enrichment of those who negotiated treaties laid a foundation for inequality in America, one built on the bedrock of the dispossession of Indigenous lands. But even as I passed out complimentary copies of the book, more than a few students raised an eyebrow.

Up to that point, the course on ethnography and ethnohistory had focused on authors and methodologies that centered Indigenous voices: relationships between language and knowing among the Cibecue Apache; Chickasaw language revitalization; Hopi running and modernity; and gaming and economic revitalization among the Florida Seminole.[2] At first glance, then, Case's book did not look like the others. A student offered a muted objection: "Do we really need to read a book about white people?"

Nuts and Bolts of Dispossession

As Case meticulously uncovered the backgrounds and biographies of treaty signers, a pattern emerged: the small, often interrelated group of men who negotiated treaties between tribes and the United States were the very same people who reaped immense wealth from newly secured lands: land speculators; owners of timber and trading and mining companies; future bureaucrats and administrators who would pull the strings of territorial government. Case's story ran contrary to the myths of American expansion that form the backbone of History Channel documentaries and high school textbooks—the idea that America was settled by hardworking pioneers, people who tilled the land and made something from nothing. There were settlers, sure—but they didn't just stumble into unoccupied lands;

instead, these newcomers purchased their lands from companies founded by treaty signers turned land speculators, men who had secured hundreds of thousands of acres of Indigenous lands and then turned around and made themselves rich. As students wrote and talked about *The Relentless Business of Treaties*, they circled around a central idea: the westward movement of non-Native people was not natural or inevitable, but the result of a careful and deliberate treaty-making process that often centered on the business interests of the non-Native signers. The effects of the treaties ripple down to the present and they continue to influence who has wealth and who lives in poverty, who has land and who doesn't. They set up inequalities that reach beyond the boundaries of reservations, that touch all of society.

Treaty Signers in a Time of Falling Statues

By the end of Case's book, student skepticism gave way to enthusiasm. We really *did* need to read about the white treaty signers to get a clearer understanding of how the treaties came to be, and

the changes they left in their wake. For the most part, students agreed that the tools of anthropology and history should be used to listen to voices that have been ignored for too long in the halls

of academia—black and brown and Indigenous, queer and disabled. But those tools can also be used to better understand the motivations of those with power, and to imagine a world that looks different from the one we have.

Three months after our class finished reading *The Relentless Business of Treaties*, much of the country was reassessing how we remember and memorialize our history. Activists from the American Indian Movement brought Christopher Columbus tumbling down in St. Paul, Minnesota, and statues of confederate soldiers and slaveholders have fallen across the American South. I would argue that falling statues help us

to see historical figures and the wakes they left behind them more clearly. Good scholarship does that too. Case's book and his methodology give students new information to rethink the legacies of the traders and businessmen who negotiated treaties in Minnesota and elsewhere and then made themselves richer for it: Ramsey and McCleod, Cass and Olmsted, and others. Most of these men don't have statues, a few do. Whether those statues fall tomorrow or stand for a hundred more years, fifteen young people now understand more clearly the dots that connect the dispossession of Dakota and Ojibwe people to inequalities that still plague us today.

Footnote

[1] The word Ameripean (sometimes spelled Ameropean) refers to Americans of European descent. Osage Poet and Medieval Scholar Carter Revard, PhD, first coined this term, which is widely used in indigenous studies. When Revard arrived in England as a Rhodes Scholar, he planted the Osage Nation flag and claimed England for the Osage people.

[2] Keith Basso, *Wisdom Sits in Places: Language and Landscape among the Western Apache* (Albuquerque: University of New Mexico Press, 1996); Jenny Davis, *Talking Indian: Identity and Language Revitalization in the Chickasaw Renaissance* (Tucson: University of Arizona Press, 2018); Matthew Sakiestewa Gilbert, *Hopi Runners: Crossing the Terrain between Indian and American* (Lawrence: University Press of Kansas, 2018); Jessica Cattelino, *High Stakes: Florida Seminole Gaming and Sovereignty* (Durham: Duke University Press, 2008).

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