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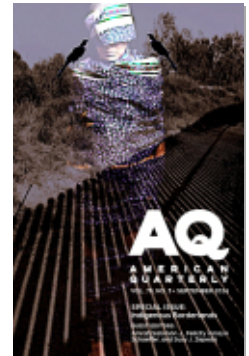
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Stars, Rivers, Seasons: Rethinking Borderlands Through Indigenous Earthworks

Chadwick Allen

Abstract. Relations across the Americas were grounded in detailed Indigenous knowledges, not only of these continents' diverse landscapes, but also of the observable intersections of earth, sky, and water. Engaging Dian Million's methodology of intense dreaming and LeAnne Howe's concept of tribalography, this essay considers constructed mounds, embankments, and other Indigenous earthworks as relational nodes within highly networked, multidimensional systems: as components within vast, interconnected civic and sacred environments. Typically sited along navigable waterways, Indigenous earthworks were often aligned to solar, lunar, and stellar patterns and events. Mapped in this way, the thousands of Indigenous earthworks built across the eastern half of the North American continent over thousands of years can be conceived as a series of constructed archipelagoes that potentially connect to other constructed archipelagoes sited across the Americas. The hemisphere can be (re)imagined in terms of both highly constructed alignments and highly coordinated seasons of gathering that cross contemporary borders.

This is the power of intense dreaming, of the intensification when boundaries shift and other views become available.

—Dian Million, "Intense Dreaming" (2011)

Those archaeologists or historians who experience . . . let's call it *irritation* . . . when confronted with "literary" or "imaginative" speculations about the past may want to skip to another essay in this special issue. My invitation to rethink American borderlands through the lens of Indigenous earthworks may make some of these readers uncomfortable, for it is meant as an invitation to conceptualize the deep past of the Americas not only *with* but also *in tension with* the available archaeological record and standard historical narratives.¹ It is meant as an invitation to break (at least momentarily) from the typical archaeological focus on delimiting *local geographies* (the sites of excavation) in order to engage the imagination on the scale of the *continental* or possibly the *hemispheric*. And it is meant as an invitation to break (again, at least momentarily) from the typical historical focus on narrating change across *decades* or *centuries* (the temporalities of eras) in order to engage the

imagination across time frames that are potentially *multimillennial*. Anchored in the relational practices of critical Indigenous studies, it is meant, as well, as an invitation to engage Dian Million's methodology of "intense dreaming": focused acts of imagination that draw from both felt knowledges and critical theory.²

More precisely, my invitation to rethink American borderlands through the lens of Indigenous earthworks is meant as a provocation to think *with* and *through* the three worlds of Indigenous mound-building and mound-stewarding peoples: the upper world, the surface world, and the lower world, *sky*, *earth*, and *water*. Intense dreaming is most often engaged as a methodology for peering beyond the horizon of the present to envision possible Indigenous futures. My provocation turns, instead, to the present's other horizon, engaging the inter-related realms of sky, earth, and water as generative archives that can assist us in more fully envisioning (and thus in more fully conceiving) the complexities and possibilities of the Indigenous past—including the deep past that extends beyond the hundreds of years of violent colonialisms in the Americas into the thousands of years of vibrant living, the thousands of years of Indigenous building, movement, and change, the thousands of years of Indigenous social interaction and gathering. In this experiment with intense dreaming, I also draw on LeAnne Howe's concept of tribalography. Howe conceives the writing of Indigenous histories as beginning from a "Native propensity for bringing things together," including "past, present, and future milieu."³ The use of *milieu* here is instructive: by applying pressure to archaeological data and to the established historical record, focused acts of imagination can help us rethink our understanding of the thousands of years of human relations across the American continents, relations that were not only geographic (connecting spaces and places) but also social (connecting peoples, knowledges, and cultures).⁴ Imagined in these ways, we can consider the potential relevance of the vibrancy, innovations, and expansive sociality of the deep Indigenous past for the present and for possible futures, including possible futures in which the enforcement of contemporary (i.e., colonial) political borders may no longer appear necessary in their current forms or, for that matter, may no longer appear rational. Why should contemporary states and nation-states forcibly divide peoples and practices that were once intimately connected—and that could be intimately connected once again?

My intense dreaming about how we might imagine the idea of American borderlands differently by engaging Indigenous perspectives and Indigenous ways of knowing begins at one of the intersections of my previous work in

Trans-Indigenous: Methodologies for Global Native Literary Studies (2012) and *Earthworks Rising: Mound Building in Native Literature and Arts* (2022).⁵ *Trans-Indigenous* records my attempts as a scholar of literature and culture to develop methodologies for purposeful juxtapositions of texts and contexts that center Indigenous aesthetics and technologies, including technologies associated with the construction of large-scale earthen structures for dwelling and gathering at particular locations (mounds, embankments, leveled plazas, raised causeways, and other earthworks) and technologies associated with the crossing of great distances in order to link multiple particular locations (canoes, other watercraft, and systems for long-range navigation and wayfinding, including detailed knowledge of the sun, moon, and stars). Building from the final chapter of *Trans-Indigenous*, *Earthworks Rising* examines not only how contemporary Indigenous writers, artists, intellectuals, and communities engage ancient mounds, embankments, plazas, and other earthworks in their contemporary productions across multiple genres and media but also, importantly, how these writers, artists, intellectuals, and communities engage *enduring* earthworks principles. These principles include the layering of diverse materials to construct durable structures. They include the creation of multiple structural patterns, within individual mounds but especially among multiple mounds arranged into earthworks complexes and cities, as well as among mounds and mound complexes constructed at multiple distinct sites. And they include the organization of multiple simultaneous alignments: for example, aligning a mound to a river or other waterway, to a significant hill or natural ridge in the landscape, to the regular movements of the sun, moon, or stars in the sky-world above, and to other constructed mounds and embankments, while also aligning the same mound to significant aspects of story, to social and political organization, to economics and trade, to ceremony, ritual, and other forms of spiritual practice. These enduring principles also include the mathematical encoding of earthworks structures. Mathematical encoding is especially evident in geometric earthworks—the large enclosures built in what is now central and southern Ohio, where thick walls of packed earth are arranged into the outlines of circles, squares, ellipses, and octagons—but the basic principle is evident in other earthworks as well. Finally, these enduring principles include the idea that earthworks can function as sites of Indigenous return and the idea that earthworks can embody story.⁶ The principle that earthworks can function as sites of Indigenous *return*, and the idea that earthworks might serve this function at multiple geographic scales and across multiple temporal frameworks, is especially salient to my intense dreaming here.

After completing the manuscript for *Earthworks Rising* in December 2020, I read two books published in 2021 that have pushed my thinking further and, in particular, have helped me consider how ancient earthworks and enduring earthworks principles might be relevant to rethinking American borderlands. The first is *Borderwaters: Amid the Archipelagic States of America*, by the American studies scholar Brian Roberts; the second is *The Dawn of Everything: A New History of Humanity*, by the archaeologists David Graeber and David Wengrow.⁷ In *Borderwaters*, Roberts argues for understanding “the archipelago” (typically defined as a group or chain of islands located within a lake, river, ocean, or sea) as “a water-land complex.”⁸ Roberts’s use of the hyphen, with its grammatical function of linking distinct concepts into compounds that produce new meaning, immediately struck me as relevant to understanding Indigenous earthworks. Earthen mounds are typically sited in relation to significant waterways, often aligned to rivers or creeks that serve as routes for transportation and exchange—that is, as routes for *connection*. (As many like to say, rivers are the superhighways of the Indigenous past.) To take what is perhaps the most recognizable example: the large earthworks city known as Cahokia, built roughly between fifteen hundred and a thousand years before the present in what is now southern Illinois, is sited along the east bank of the Mississippi River, across from what is now the city of Saint Louis, Missouri (which was itself once Cahokia’s mounded suburb), near where the Mississippi is joined by the Missouri and Illinois Rivers and just north of where it is joined by the Ohio (not to mention these major rivers’ many tributaries). It was thus not only the highly constructed landscape of central Cahokia that was aligned to major junctions for water transportation; the highly constructed landscapes of the city’s extensive network of outer precincts were similarly aligned to major intersections of moving water, creating, in effect, an archipelago of earthen structures. But rather than being arranged within a single waterway (within an individual river, lake, or sea), this archipelago of earthworks was arranged *between* and *among* the confluences of *multiple* rivers, streams, and creeks. Roberts argues, moreover, for understanding archipelagoes as more than simply “groups of islands or island-water complexes” and, instead, for understanding both “continents and temporality as crucial and in some ways interlinked components of an archipelagic frame.”⁹ This more expansive definition for an archipelagic framework that extends beyond islands per se—but especially Roberts’s incorporation of temporality—makes it possible to conceive individual earthworks, earthworks complexes, and earthworks cities as forming networked systems of *interlinked* constructed landscapes or built environments

that enabled Indigenous gathering along major routes for regional and possibly continental or even intercontinental transportation—that is, along major waterways such as rivers, creeks, and various forms of shoreline—at specific points in time, perhaps during specific *seasons*.

In *The Dawn of Everything*, as part of their sweeping account of the new archaeology that is (finally) beginning to dispel many of the old racist and anti-Indigenous ideas about the so-called rise of civilizations, Graeber and Wengrow spotlight several earthworks sites in North America, including those located in what is now central and southern Ohio that feature the remarkable geometric enclosures (earthen embankments formed into outlines of mathematically perfect circles, squares, ellipses, and octagons). Graeber and Wengrow emphasize that no evidence suggests that these sites, built roughly two thousand years before the present, were permanent locations for dwelling. Despite their considerable size, multicomponent designs, and complex sets of simultaneous terrestrial and celestial alignments, these elaborate sites were not the bases for towns or cities. Although their construction and maintenance required similar levels of creative thinking, long-term planning, and physical labor, they operated differently than Cahokia in what is now southern Illinois or the earthworks city known as Moundville in what is now central Alabama. Indeed, sites like those built around geometric enclosures in what is now central and southern Ohio appear to have been places to which people traveled for specific and perhaps special occasions. In that sense, they were seasonal sites for large-scale gathering and exchange (of material goods, but also of knowledge and skills), similar to our current understandings of spaces set aside for rituals or ceremonies that are meant to be repeated at specific intervals or on a regular cycle. While it is perhaps easiest to imagine relevant intervals and cycles based in solar phenomena (in the observable regularity of lengthening and shortening days or of the rising and setting sun incrementally traveling north and south along the eastern and western horizons, or in the reliability of the equinoxes and solstices), it seems just as likely that Indigenous peoples of the past drew on their equally detailed knowledge of lunar and stellar phenomena (the complex movements of the rising and setting moon and the stars in transit) as well as on their detailed knowledge of the growth of plants and the movements of animals, their detailed knowledge of atmospheric conditions and weather, and their detailed knowledge of other aspects of their material worlds. These constructed sites for periodic gathering may also have been similar to our current understandings of seasonal marketplaces, festival grounds, political forums, or educational centers—including universities.

Graeber and Wengrow focus attention less on the particular archaeological details of the individual sites they discuss (as fascinating and illuminating as these details can be) than on the regional or even continental *scale* of the networked connections between and among them. “Each earthwork,” they write, “was one element in a continuous ritual landscape.”¹⁰ And the archaeologists ask readers to consider all that would have been required not only to create “a continuous ritual landscape” at this kind of scale but also to maintain its active operation across space and time:

One can only imagine the kind of detailed knowledge of stars, rivers and seasons that would have been required to coordinate people from hundreds of miles away, such that they might congregate on time for rituals in centres that lasted only for periods of five or six days at a time, over the course of a year. Let alone what it would take to actually transform such a system across the length and breadth of a continent.¹¹

It is useful to focus on Graeber and Wengrow’s language here, their tripartite formulation of a detailed knowledge of “stars, rivers and seasons.” I echo their language in my title because it so provocatively condenses into a single phrase the logistical complexity of large-scale Indigenous gatherings in the deep past, gatherings that appear to have been organized not only across vast distances (impressive in its own right) but also at designated times and at regular intervals (almost impossible to fathom from our current position of dependence on computer, satellite, and wireless communication technologies). Moreover, by placing “rivers” at the productive center of their formulation, Graeber and Wengrow evoke the potential of the “archipelagic frame” to help us better conceive the possibility of this Indigenous achievement in expansive relationality.

Placing *Borderwaters* and *The Dawn of Everything* in conversation with *Earthworks Rising* led me to pose a set of related questions. First, as I have been exploring in the previous paragraphs: In what ways might diverse earthworks sites be productively considered within the terms of the “water-land complex” of archipelagic thinking? And second: As sites of return (or perhaps as *archipelagoes* of return), how might earthworks be understood as linked across the North American continent (or, potentially, across the American continents) through Indigenous peoples’ detailed knowledge of “stars, rivers and seasons”?

It is well established in the archaeological literature that Indigenous earthworks are closely aligned to waterways that serve as routes for transportation. To take a less recognizable example than the mound city known as Cahokia, which is sited at the fertile confluence of multiple major rivers and their tributaries, consider the world-renowned Serpent Mound effigy, which is sited on

a distinctive bluff in what is now rural Adams County in southern Ohio. The evocative effigy mound, whose shape can itself suggest the form of a river—tail wound in a triple-coiled spiral, undulating body marked by seven distinct convolutions or turns, delta-shaped head juxtaposed with an oval-shaped disk—is similar to the geometric enclosures built in Ohio in that it is thought to have been designed primarily for periodic gatherings for ritual or ceremony rather than as a location for permanent dwelling. The Serpent was constructed above Brush Creek, which runs along the west side of its distinctive bluff, and Brush Creek’s tributary East Creek, which runs along the north and east sides of the bluff. This confluence effectively encircles the effigy on three sides, embodying a version of a “water-land complex.” But more to the point, Brush Creek flows south to eventually join the Ohio River, with its large valley known for high concentrations of earthworks and earthworks complexes, which flows west to eventually join the massive Mississippi River, with its even larger valley similarly known for high concentrations of earthworks and earthworks complexes and cities. This connective system of rivers and creeks links the seemingly remote location of the Serpent Mound effigy in what is now rural southern Ohio to a vast network of Indigenous built environments extending from what are now Minnesota, Wisconsin, and Ontario in the north to Louisiana, the Gulf of Mexico, and places beyond in the south. The fact that the Serpent has been shown to embody multiple solar and lunar alignments in the contours of its undulating form suggests that the effigy may have been situated not only within networks that were geographic but also within networks that were *temporal*—or, perhaps more precisely, within networks that were *seasonal*.

The orthodox archaeology of the nineteenth century and much of the twentieth century typically discussed sites like Serpent Mound in relative isolation. Now that mainstream researchers better appreciate the defining role waterways played in the siting of earthworks and earthworks complexes and cities, in recent decades it has become less difficult to imagine diverse sites and their local cultures as “interlinked components” within an “archipelagic frame” of a vast “water-land complex” built and rebuilt over hundreds or even thousands of years.¹² That said, old habits of mind and old habits of discourse tend to linger, even within cutting-edge scholarship, and this more expansive vision of the centrality of navigable waterways bears restating, especially from Indigenous perspectives. To cite a recent example: In her multigenre exploration *Theory of Water: Nishnaabe Maps to the Times Ahead* (2025), Michi Saagiig Nishnaabeg writer and intellectual Leanne Betasamosake Simpson observes, “Rivers are connectors.” “Rivers are the veins of our mother, the earth,” she

writes, “they are the visual mapping of a watery network.”¹³ Echoing Graeber and Wengrow, Simpson then argues that, in order to understand this kind of network, it is essential to focus our attention not on the network’s localized “hubs” but on the vital “connections” stretching between them:

The thing about a network is that the sustaining parts are not the hubs, but the connections between the hubs. Nibi [water], the air, the land. The thing about a network is that the individual beings aren’t so important, but rather the quality and strength of the relationships between things—so much so that the hubs, or the bodies of the network, are composed of these relationships.¹⁴

In the case of Indigenous earthworks, to follow Simpson’s logic we need to shift our attention away from an exclusive focus on the “hubs” of earthen structures and the local cultures that produced and sustained them (as fascinating as these sites and the cultures of their makers are) and, instead, look toward the rivers, creeks, and other waterways that connect these sites and cultures geographically, as well as toward the knowledge of stars and seasons that may have connected them temporally.

Choctaw and Chickasaw writer and intellectual Phillip Carroll Morgan offers an extended example of this kind of intense dreaming and tribalography—a sustained vision of Indigenous earthworks as interlinked components within a vast water-land complex built, rebuilt, and maintained over multiple generations—in his historical novel *Anompolichi: The Wordmaster* (2014) and its sequel, *The Lost River: Anompolichi II* (2022).¹⁵ Across the two novels, Morgan describes a complex and changing Indigenous world in which multiple mound-building cultures coexist along the rivers, creeks, and other waterways that connect the eastern half of the North American continent into a networked system for transportation and exchange. Setting the novels in 1399, the year immediately preceding the year archaeologists typically designate as marking the “decline” or “demise” of the great mound city Cahokia (i.e., 1400), Morgan imagines a rivalry between mound-building peoples in the Southeast (the Yukpan confederacy, who stand in for Morgan’s Choctaw and Chickasaw ancestors as well as their relatives and allies) and mound-building peoples in the Midwest (the Allahashi confederacy, who stand in for the diverse Mississippian peoples under the political and cultural influence of Cahokia). Moreover, in *The Lost River*, Morgan depicts a trans-Indigenous internationalism that includes not only diverse peoples living across the North American continent and multiple shipwrecked Europeans from the British Isles but also knowledge of peoples from the African continent and encounters with peoples from

what is now Mexico and Central America. Indeed, *The Lost River* culminates in a dramatic battle fought on the waters of the Bay of Mabila, part of the Southern Ocean (which readers will recognize as the Gulf of Mexico), where members of the mound-building Yukpan confederacy and their shipwrecked Scottish allies must contend not only with warriors from the mound-building Allahashi confederacy who arrive from the north by *river* but also Mexica warriors who arrive from the south by *sea*. The front and back endpapers to *The Lost River* feature a map of eastern North America that marks both the major earthworks sites and the major rivers that are central to Morgan's narrative. As the story works toward its climactic battle, the book includes a more detailed map depicting how several of these rivers flow into the Bay of Mabila and the Southern Ocean.¹⁶ This comprehensive knowledge of how constructed land intersects moving water is crucial not only to the novel's adventure plot but also to Morgan's reimagining of Indigenous history in the Americas as deeply interconnected, including across the contemporary (colonial) borders of states and nation-states.

Beyond the importance of rivers and other waterways, including the Gulf of Mexico, how might we engage Graeber and Wengrow's archaeologically based speculations about the importance of Indigenous knowledge of the stars and seasons in relation to earthworks?¹⁷ Or, put another way: How might we understand the ideas of reckoning time and, especially, reckoning seasonality from Indigenous perspectives? In dominant Western scientific and popular cultures, seasonality is typically understood in terms of climate variations that occur at regular intervals within the solar year. Often the scale of such intervals is described as monthly or quarterly. But other scales and other calculations of seasonality are possible. For example, we might conceive the 18.6-year cycle of the moon's northernmost and southernmost rise and set points on the horizon—known in contemporary astronomy as the “lunar standstills”—in terms of a seasonality that works beyond the scale of the annual.¹⁸ In other words, rather than (or in addition to) the solar year, we might orient our human sense of temporality, our human sense of the markers of significant *duration* and *interval*, to the multiyear movements of the moon. In the 1980s, researchers looking for annual solar alignments in the massive structure of the Octagon Earthworks, built roughly two thousand years before the present in what is now central Ohio, “discovered” that the 18.6-year cycle of the lunar standstills, the moon's complex rise and set points on the horizon, are encoded into the mathematically precise figure of the Octagon Earthworks' nearly eighty-acre geometric enclosure.¹⁹ When the Octagon was first constructed and used,

this research revealed, its complex structure was aligned not only to a central waterway and to other mathematically encoded geometric enclosures located both nearby and at a considerable distance *but also* to significant observable patterns in the sky-world above. But it turns out that the moon's once-in-a-human-generation peregrinations are only part of the Octagon's encoded story. In addition to these surprisingly sophisticated lunar alignments first revealed in the 1980s, more recent research has shown that the larger complex of mounds and embankments constructed across the expanse of central Ohio's Cherry Valley—including not only the Octagon but also its companion geometric enclosures known as the Great Circle, the Wright Square, the Salisbury Square, and the Cherry Valley Ellipse—is simultaneously aligned to annual solar events, most notably, to the summer and winter solstices.²⁰ Recent research has similarly revealed that features of the massive earthworks city known as Cahokia, long recognized as aligned to solar events, are also simultaneously aligned to the 18.6-year cycle of the moon's northernmost and southernmost rise and set points.²¹

It is important to fully articulate the complexity of what I am attempting to describe here. Diverse Indigenous mound-building peoples simultaneously encoded the structures of individual earthworks, as well as the structures of multicomponent earthworks complexes and expansive earthworks cities, with significant solar alignments (most obviously, with the sunrise and sunset points for the equinoxes and solstices, but potentially with other recurring significant “dates” or “anniversaries” to which contemporary researchers may be less attuned) *and* with significant lunar alignments (most obviously, with the 18.6-cycle of the moon's northernmost and southernmost rise and set points on the horizon). These significant alignments, which operate within distinct temporalities, were encoded at multiple sites constructed across thousands of miles of the eastern half of the “water-land complex” now known as North America across a period of thousands of years. Articulating this complexity leads my intense dreaming to its primary speculation. “Archipelagoes” of earthworks located across the eastern half of the North American continent—aligned with the movements of the stars, the sun, and the moon; aligned with rivers, other waterways, and other routes for transportation, such as constructed trails and roads; and aligned with “seasons” of return calibrated at multiple scales or periodicities—may have served as sites for Indigenous gathering and exchange that crossed and recrossed the American continents' contemporary (i.e., colonial) borders. Imagine what might become possible if today's states and nation-states saw it as their responsibility to enable these kinds of seasonal border crossings in the present or in possible futures.

Earthworks Dreaming, Songlines Speculations

Thus far, I have been considering the possibility that, collectively, ancient Indigenous earthworks built across the eastern half of North America may have functioned as interrelated networks connected by Indigenous people's detailed knowledge of "stars, rivers and seasons." Now I want to push my intense dreaming further to consider the possibility that Indigenous earthworks might be understood as interrelated networks of stories, similar to how researchers understand the function of Indigenous Songlines in what is now Australia. Or, put another way, I want to consider how articulations of the functioning of Songlines in Australia may provide a useful lens through which to view the interrelational functioning of earthworks in North America. What if the thousands of mounds, embankments, and other earthworks constructed for thousands of years across nearly half of the North American continent form vast networked systems of stories encoded into the materiality of the land? And what if those encoded systems can (still) be activated through Indigenous practices in the present and future?

The enduring earthworks principles I discuss above—staging multiple simultaneous alignments, creating sites of return, and embodying story—are especially relevant for viewing North American earthworks through the lens of Australian Songlines. In *Earthworks Rising*, I describe earthworks as examples of applied Indigenous science that are staged as multiple kinds of built environments. Based on that observation, one of the arguments I make is that earthworks can be understood as forms of Indigenous writing. But I don't mean alphabetic or syllabic writing; rather, I mean more expansive understandings of encoding knowledge through multiple media, including through the medium of the land itself. In other words, I argue for understanding earthworks as a kind of "land writing" or "land encoding." I point to examples such as the Octagon Earthworks geometric enclosure in what is now central Ohio, a site that demonstrates how Indigenous astronomical knowledge can be encoded into a massive, three-dimensional ceremonial structure of precisely packed earth. Through this structural encoding, knowledge of the dynamic sky-world is mirrored in the seemingly static surface world. The encoding suggests a significant site of connection, a portal between worlds.

While I was thinking about how *Borderwaters* and *The Dawn of Everything* might intersect and enhance *Earthworks Rising*, I was also investigating how Indigenous peoples engage with petroglyphs and pictographs in various forms of rock art. I was curious whether engagements with earthworks could be

understood in similar ways, since, from Indigenous perspectives, both rock art and earthworks—perhaps especially effigy mounds formed into the mimetic shapes of animals and humans—can be understood as *sites marked by the ancestors*.²² I began by unpacking a central distinction between how Western-trained archaeologists typically engage the marked sites they research and how Indigenous communities typically engage the marked sites with which they maintain relations. Where Western-trained researchers tend to focus on identifying the ancient “makers” of rock art or earthworks and on deciphering these figures’ or structures’ original or intended “meaning,” Indigenous communities tend to focus, instead, on how contemporary members use and care for ancient rock art and earthworks in the present, and thus on how contemporary members maintain ongoing relationships with ancient sites and the ancestral forces with which they are imbued.²³ From Indigenous perspectives, therefore, an encounter with rock art or earthworks is often structured not as an investigation, as acts of deductive or inductive reasoning, but as “a deep time conversation”: an “intergenerational call and response” where ancient markings “call” and contemporary actors “respond” in culturally appropriate ways.²⁴ These “materially mediated” encounters with ancestral presence, in other words, provoke specific types of contemporary attention and action.²⁵

It was only then that I arrived at the idea of conceiving and engaging earthworks in ways similar to how Indigenous peoples in Australia conceive and engage the Songlines. I had briefly studied the Songlines when I had an opportunity to travel across Australia many years ago, but as an entry point for this project, I read more recent scholarship, including *Songlines: The Power and Promise*, co-written by Indigenous scholar and curator Margo Neale (Gumbaynggirr and Wiradjuri) and non-Indigenous scholar Lynne Kelly. Published in 2020, *Songlines* was the initial publication in the well-received and highly innovative First Knowledges series of books about Indigenous knowledges in Australia.²⁶ Neale and Kelly explain how the term *Songlines* was “coined and popularized by English writer Bruce Chatwin in 1987” (Chatwin was one of the authors I had read many years ago) and that the term “refers to a knowledge system—a way of retaining and transmitting knowledge—that is archived or held in the land. [Songlines] can be visualized as corridors or pathways of knowledge, like Dreaming tracks.”²⁷ And I should note here that what is known in English as “the Dreaming” or “the Dreamtime” is meant to evoke Indigenous Australian understandings not only of the distant past of creation but also of the considerable force of creator ancestors that continues into the present and future.

In her introduction to the First Knowledges series, Neale writes that “Songlines are foundational to our [Indigenous Australian] being—to what we know, how we know it and when we know it. They are our knowledge system, our library, our archive from which all subjects are derived.”²⁸ In the body of the book, Neale and Kelly describe the Songlines in more precise terms as “a set of complex arterial connections” that “comprise an organic network of lines crisscrossing the [Australian] continent along distributed nodes of concentrated knowledge, often referred to as sites of significance . . . and also known as story places.”²⁹ Notice the potential similarity here to North American earthworks sites, which can also be understood as “nodes of concentrated knowledge”—that is, the potential similarity here of “encoding” stories into the medium of the land—within the “organic” networks formed by rivers, creeks, and other waterways.

One of the aspects of the Songlines I find particularly fascinating is that they are not considered static but animate and interactive. Indeed, the stories encoded in the land and networked through the Songlines require regular activation *by* knowledgeable, highly trained experts and *through* a range of embodied practices, including body painting, song, and dance. Neale and Kelly elaborate this idea through the metaphor of the knowledgeable and active Aboriginal *archivist*. “While Country is an archive of ancestral actions,” they write, “the full extent of the archive can be accessed and worked only by the custodians with the knowledge and authority to do so. As with all archives, the archivist doesn’t just guard the archive: they interpret and add to it, engaging creatively with it to keep it alive, or to keep its knowledge relevant and active in the present.”³⁰ Here I am reminded of an evocative statement by the American Indian playwright and intellectual Monique Mojica (Rappahannock and Kuna), which I quote in *Earthworks Rising*: “The land *is* our archive and our embodied relationship to the land defines Indigenous identities, history, science, cosmology, literature—and our performance.”³¹ Mojica is describing her practice of “embodied improvisation” at North American earthworks sites and how that practice is multidirectional and reciprocal. As in the Australian context, in her North American earthworks research Mojica approaches sites as an Indigenous archivist understood as a responsible custodian.

Neale and Kelly note further how “Aboriginal archiving [is] an inscriptive and interpretive practice through which ‘Country’ [that is, the land in all its multidimensional complexity] becomes ‘story.’ In other words, the Aboriginal archivist—whom we often know as the artist or maker, . . . —activates the knowledge embedded in a site by carrying some part of that knowledge to the

site and carrying away an enhanced experience of that knowledge. A kind of mutual knowledge transfer occurs between place, person and history.”³² This description of “mutual knowledge transfer” resonates with Mojica’s description of embodied improvisation. Following Mojica’s lead, we can connect the way Indigenous communities in North America engage sites marked by the ancestors—whether in the form of rock art or earthworks—through specific and knowledgeable modes of attention and action.

There is more to say about the Songlines and how they might help us better understand the potential functions of Indigenous earthworks in North America or, indeed, across the Americas. To move toward conclusion of this brief essay, I want to focus on one additional idea from Neale and Kelly. They write: “Indigenous people’s use of the landscape is enhanced by the fact that a sequenced story emerges as you move through the spaces, and the story is further enhanced by the use of song and movements, including dance. This vivid knowledge space is then reproduced in art and repeated through ceremony.”³³ And thus I arrive at my Songlines speculation that “archipelagoes” of earthworks positioned across the eastern half of the North American continent—aligned with the movements of the stars, the sun, and the moon; aligned with rivers, other waterways, and other routes for transportation; and aligned with “seasons” of return calibrated at multiple scales or multiple periodicities—may have served as interconnected sites not only for Indigenous gathering and exchange, for the movement of bodies, belongings, ideas and skills, but also for the encoding of important communal knowledge, for the activation and reactivation of story across generations, and across what we know as the contemporary political borders of states and nation-states. In other words, these networked sites may have served as forms of Indigenous archiving across vast distances and over long periods that connected diverse Indigenous peoples through multiple forms of active participation. It may still be possible to reactivate those archives in our own present and future.

To conclude, I want to leave readers with an image of a twenty-first-century realization of intense dreaming about Indigenous earthworks: the spiraling “promontory” mound built as part of the high-tech, state-of-the-art First Americans Museum (FAM) located just outside what is now Oklahoma City. Completed in 2021, FAM honors the thirty-nine tribal nations that reside in contemporary Oklahoma.³⁴ Like ancient earthworks sites, this new, highly innovative “modern” mound is built on a massive scale, circling a ceremonial space with a thousand-foot diameter (reminiscent of a geometric earthen enclosure), its curving berm gradually rising to a height of ninety feet at the promontory

(reminiscent of a truncated earthen pyramid). Moreover, this modern mound is sited to align not only with major routes for transportation (a stretch of the Canadian River known by an honorific as the Oklahoma River, as well as the significant junction where Interstate 35 crosses Interstate 40), but also with major events in the sky-world above, most dramatically, with the sunset points for the winter and summer solstices. The multiracial achievement of conceiving and building this massive mound in twenty-first-century Oklahoma suggests that earthworks could once again rise across the North American continent (or across the American continents) as interconnected sites for trans-Indigenous gathering and exchange—as nodes in the ongoing reactivation of Indigenous archives of knowledge, story, and productive relations.

Notes

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1. In the introduction to their coedited collection of autobiographical essays by Indigenous archaeologists, *Working as Indigenous Archaeologists: Reckoning New Paths Between Past and Present Lives*, non-Native archaeologist George Nicholas and Native archaeologist Joe Watkins (Choctaw) note that “as the discipline [of archaeology] continues to evolve, there remain strong tensions between an objective, science-oriented, evidentiary reasoned approach to knowing the past, and a more subjective, relational, humanistic approach informed by local values, traditional knowledge, and holistic perspectives” ([Routledge, 2024], 4).
2. See Dian Million, “Intense Dreaming: Theories, Narratives, and Our Search for Home,” *American Indian Quarterly* 35.3 (2011): 313–33; and Million, “There Is a River in Me: Theory from Life,” in *Theorizing Native Studies*, ed. Audra Simpson and Andrea Smith (Duke University Press, 2014), 31–42.
3. LeAnne Howe, “The Story of America: A Tribalography” (2002), in *Choctalking on Other Realities* (Aunt Lute Books, 2013), 31.
4. In “Those Who Are Above, Those Who Are on Earth: Effigy Mounds of Southern Wisconsin,” Cherokee artist and intellectual America Meredith writes that “the earthworks speak to a deep knowledge of the land, the water, the heavens, history, and the spiritual that is the core of what it is to be Indigenous” (*First American Art Magazine* 10 [Spring 2016], 29).
5. See Chadwick Allen, *Trans-Indigenous: Methodologies for Global Native Literary Studies* (University of Minnesota Press, 2012); and Allen, *Earthworks Rising: Mound Building in Native Literature and Arts* (University of Minnesota Press, 2022).
6. Choctaw writer and intellectual LeAnne Howe makes a compelling argument for understanding earthworks as the embodiment of stories in “Embodied Tribalography: Mound Building, Ball Games, and Native Endurance in the Southeast,” *Studies in American Indian Literatures* 26.2 (2014): 75–93.
7. See Brian Roberts, *Borderwaters: Amid the Archipelagic States of America* (Duke University Press, 2021); and David Graeber and David Wengrow, *The Dawn of Everything: A New History of Humanity* (Farrar, Straus and Giroux, 2021).
8. Roberts, *Borderwaters*, 17.
9. Roberts, 17.

10. Graeber and Wengrow, *Dawn of Everything*, 463.
11. Graeber and Wengrow, 463.
12. For an example of this more expansive archaeological thinking relevant to Serpent Mound, see Bradley T. Lepper et al., "Effigy Mounds and Rock Art of Midcontinental North America: Shared Iconography, Shared Stories," *North American Archaeologist* 43.1 (2021): 3–48.
13. Leanne Betasamosake Simpson, *Theory of Water: Nishnaabe Maps to the Times Ahead* (Haymarket Books, 2025), 154.
14. Simpson, 156.
15. See Phillip Carroll Morgan, *Anompolichi: The Wordmaster* (White Dog Press, 2014); and Morgan, *The Lost River: Anompolichi II* (White Dog Press, 2022). White Dog Press is an imprint of the Chickasaw Press, based in Ada, Oklahoma, the contemporary seat of government for the Chickasaw Nation.
16. Morgan, *Lost River*, 157.
17. Meredith writes, "Many believe that the positioning of mound groups trace [*sic*] movements of the Sun, Moon, Morning Star, and Evening Star, and important events such as equinoxes. The formation of the mounds, which almost seem like writing upon the land, could also echo constellations" ("Those Who Are Above, Those Who Are on Earth," 28).
18. A useful, nonspecialist explanation of the lunar standstills is provided by the astronomer Judith Young in her press release titled "Moon Teachings for the Masses at the UMass Sunwheel & Around the World: The Major Lunar Standstills of 2006 & 2024–25," updated in 2010 and available at <https://www.umass.edu/sunwheel/pages/moon-teaching.html>.
19. See Ray Hively and Robert Horn, "Geometry and Astronomy in Prehistoric Ohio" (1982), in *Foundations of New World Cultural Astronomy: A Reader with Commentary*, ed. Anthony Aveni (University Press of Colorado, 2008), 39–60.
20. See Ray Hively and Robert Horn, "The Newark Earthworks: A Grand Unification of Earth, Sky, and Mind," in *The Newark Earthworks: Enduring Monuments, Contested Meanings*, ed. Lindsay Jones and Richard D. Shiels (University of Virginia Press, 2016), 62–93.
21. See Mike Toner, "City of the Moon," *Archaeology*, March/April 2015, 40–45.
22. In "The Story as Primary Source: Educating the Gaze," Native artists Joe Feddersen (Okanagan/Lakes) and Elizabeth Woody (Navajo/Warm Springs/Wasco/Yakama) note that "people do not often realize that some marks on rock were created not only by people, but by supernatural and divine forces, too. Rock art in the Americas is often located at sacred sites, points of emergence, crossroads, or were placed at the time of some extraordinary event" (in *Native American Art in the Twentieth Century: Makers, Meanings, Histories*, ed. W. Jackson Rushing III [Routledge, 1999], 175). The artists describe rock art as "story," "mnemonic artifact[s]," "information storage," and "a form of writing" (175, 176, 177). In "Lines of Becoming: Rock Art, Ontology, and Indigenous Knowledge Systems," non-Native anthropologist John Creese describes rock art sites in similar terms as "ancestral marks, indexes of a formerly (and therefore, potentially again) recognized spiritual presence" (in *Ontologies of Rock Art: Images, Relational Approaches, and Indigenous Knowledges*, ed. Oscar Moro Abadía and Martin Porr [Routledge, 2021], 163). Creese focuses on contemporary Anishinaabe engagements with rock art sites in what is now Canada.
23. Creese writes: "In practice, caretaking rock art sites involves taking responsibility for maintaining good relationships with these places and the spirits that inhabit them, for everyone's benefit. This can range from making prayers and tobacco offerings, to prohibitions on photography, to studious avoidance" ("Lines of Becoming," 162). "In such practices, the indexical quality of the images takes priority over the symbolic; the images' meaning is primarily structured by the recognition that they were put there for a purpose The relevance depends not on any uniquely correct reading, but on an etiology of ancestral or spiritual intent, the recognition of which is available to anyone through appropriately directed attention" (164).
24. Creese, 170.
25. Creese, 173. The celebrated Anishinaabe writer Louise Erdrich describes a similar understanding in her 2003 travel memoir *Books and Islands in Ojibwe Country: Traveling in the Land of My Ancestors* (Harper Perennial, 2014). "The rock paintings are alive," Erdrich writes: "This is more important than anything else that I can say about them" (40). And, later in the book, "Again, here are the offerings, the signs that the rock paintings are alive and still respected by the Anishinaabe" (54).

26. See Margo Neale and Lynne Kelly, *Songlines: The Power and Promise* (Thames & Hudson, 2023). Other titles in the First Knowledges series, edited by Neale, include *Design: Building on Country*; *Country: Future Fire, Future Farming*; *Astronomy: Sky Country*; and *Plants: Past, Present and Future*.
27. Neale and Kelly, *Songlines*, 52. In *The Biggest Estate on Earth: How Aborigines Made Australia*, the acclaimed non-Native historian Bill Gammage makes similar connections, noting that “a songline is also a map, compass and calendar” ([Allen & Unwin, 2011], 135).
28. Neale and Kelly, *Songlines*, 3.
29. Neale and Kelly, 52.
30. Neale and Kelly, 61.
31. Monique Mojica, “In Plain Sight: Inscripted Earth and Invisible Realities,” in *New Canadian Realisms: New Essays on Canadian Theatre*, vol. 2, ed. Roberta Barker and Kim Solga (Playwrights Canada Press, 2012), 219 (*Earthworks Rising*, 61).
32. Neale and Kelly, *Songlines*, 61–62.
33. Neale and Kelly, 89.
34. I describe First Americans Museum and its mound in more detail in “Post-Removal Mounds: Earthworks Rising in Oklahoma,” *Native American and Indigenous Studies* 11.2 (2024): 1–35. The mound at FAM is one of three large-scale Indigenous earthworks built in Oklahoma in the twenty-first century. Both the Chickasaw and Choctaw Nations built platform mounds as part of their tribally specific cultural centers, which opened near the towns of Sulphur and Durant, respectively, in 2010 and 2021. In the twentieth century, the Muscogee (Creek) Nation built the Muscogee Mound Building, part of its tribal headquarters, in the town of Okmulgee; the Mound Building was completed in 1974.