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# Wampum as Hypertext

An American Indian Intellectual Tradition of  
Multimedia Theory and Practice

ANGELA M. HAAS

We do not weave the web of life; we are merely a strand in it.  
Whatever we do to the web, we do to ourselves.

Chief Seattle of the West Coast Duwamish, 1854

We round the corner of the Many Tribes, Many Trails gallery that maps the U.S. government's forced removal of other indigenous tribes into the Cherokee Removal gallery at the Cherokee Heritage Center Trail of Tears exhibit.<sup>1</sup> The wind is howling; it's freezing cold. We walk among the ghosts of our ancestors, some clinging to each other, others with walking sticks, others pulling their coats close. We pull each other close alongside the wampum belt record. Surrounded by the white wampum honor beads that lay the path for the continuance of our culture and language, the purple wampum beads remind us of the survival of some but the genocide of thousands. We weep. As you say, Qwo-Li, "We are not the ones who forget. We remember. . . . Our bodies hold everything we are told to forget."

This essay traces a counterstory to Western claims to the origins of hypertext and multimedia by remembering how American Indian communities have employed wampum belts as hypertextual technologies—as wampum belts have extended human memories of inherited knowledges through interconnected, nonlinear designs and associative storage and retrieval methods—long before the "discovery" of Western hypertext. By forging intellectual trade routes between Tehanetorens, Wallace, Williams, and other wampum his-



Fig. 1. Raw quahog wampum shells.

torians with the work of Western hypertext theorists, such as Bush, Nelson, Bolter, and Landow, this essay positions American Indians as the first known skilled multimedia workers and intellectuals in the Americas.<sup>2</sup> Thus wampum has the potential to re-vision the intellectual history of technology, hypertext, and multimedia studies, and thereby American Indian studies—and such a re-visioning calls for a responsibility to digital and visual rhetorical sovereignty.

To begin, wampum is a small, short, tubular bead, made from the quahog clam shell. The white beads are made from the inner whorl of the shell, and the purple beads come from the dark spot or “eye” on the shell (fig. 1).

Dating back one thousand years, wampum and other material components (e.g., bark fibers, sinew, hemp fibers, string—or other weaving materials) have been used by Woodlands Indians for ceremony and as records of important civil affairs (e.g., alliances, treaties, marriage proposals, ceremonies, wars, etc.) by stringing the wampum beads together on individual strands or weaving them into belts, as pictured in contemporary contexts in figures 2 and 3.<sup>3</sup> Thus wampum serves as a sign technology that has been used to record hundreds of years of alliances within tribes, between tribes, and between the tribal governments and colonial government.

According to Tehanetorens, the coastal Indians were the first to make and use wampum, but through trade with other tribes, it trav-



Figs. 2 & 3. Wampum string (pictured top) and wampum belt (pictured bottom) as displayed by Six Nations youth Don Fadden and Roger Jock (Tehanetorens).



Fig. 4. Iroquois Chiefs from the Six Nations Reserve reading Wampum belts (ca. 1870). Copyright expired. Credit: National Archives of Canada.

eled to the interior and western regions of the continent. Postcontact, wampum was also appropriated by American colonists, who used it as their first form of currency in colonial “America.” Further, it was the wampum of the Iroquois Confederacy (Mohawks, Oneidas, Onondagas, Senecas, and Cayugas) that influenced the democratic thought that led to the Constitution of the United States (cf. Tehanetorens; Wallace; Williams).

Wampum strings and belts served to engender further diplomatic relations, and their presentation was a gesture that required reciprocity on the part of the recipient. Consequently, accepting a gift of wampum meant that the recipient accepted its implied message and responsibility. Wampum records are maintained by regularly revisiting and re-“reading” them through community memory and performance, as wampum is a living rhetoric that communicates a mutual relationship between two or more parties, despite the failure of one of those parties to live up to that promise (which we know was the result of most wampum treaties with the colonists; see fig. 4). Thus wampum embodies memory, as it extends human memories of inherited knowledges via interconnected, nonlinear designs

with associative message storage and retrieval methods. And it is this complex rhetorical functioning that first engaged my thoughts on how Indians have always been hypertextual.

#### THE HISTORY OF WESTERN HYPERTEXT

However, Western hypertext theorists mark Dr. Vannevar Bush as the “grandfather” of the concept of hypertextuality through his concept of the Memex. Interestingly enough, the Memex was described in Bush’s 1945 *Atlantic Monthly* article as an instrument designed to extend human memory by allowing us to associatively store and retrieve memories through nonlinear trails, or a webbed network, of interconnected *scientific* knowledge and data.<sup>4</sup> Distinguished professor of electrical engineering at MIT, cofounder of Raytheon Corporation (a high-tech company), and director of the Office of Scientific Research and Development for the Roosevelt administration (i.e., director of war-related research for the U.S. government during World War II), Bush credited science with providing the swiftest of communication between individuals. However, he grew increasingly concerned that the “growing mountain” of research would be too much for a researcher to manage, as Bush himself admitted that he was “staggered by the findings and conclusions of thousands of other workers—conclusions which he cannot find time to grasp, much less to remember, as they appear.” Therefore Bush calls for a technology that can provide for the “collection of data and observations, the extraction of parallel material from the existing record, and the final insertion of new material into the general body of the common record.” Further he discusses the need for technological development to allow for *compression of information*. Consequently he offers his vision for a future device to make research more efficient: the Memex. Bush describes the Memex as

a device in which an individual stores all his books, records, and communications, and which is mechanized so that it may be consulted with exceeding speed and flexibility. It is an enlarged intimate supplement to his memory. [. . .] It affords an immediate step [. . .] to associative indexing, the basic idea

of which is a provision whereby any item may be caused at will to select immediately and automatically another. This is the essential feature of the Memex. The process of tying two items together is the important thing.

Thus the Memex was imagined as a device that would allow for an *associative system for indexing, storing, retrieving, and delivering of memories*.

Although the Memex was never built, hypertext scholars credit Bush as the first to conceive of the concept of hypertext, while Ted Nelson is recognized by many as the man who coined the term “hypertext” for “non-sequential writing.” Nelson’s material vision for hypertext was as Xanadu, a global hypertext network that would “make all published information available to everyone and to enable anyone to freely recombine any and all documents and add their own textual content” (Farkas and Farkas 13). Although Nelson has not finished building Xanadu, his dream of the Xanadu “Docuverse” has been partially fulfilled vis-à-vis the World Wide Web, despite the fact that the Web does not currently make *all* published information available nor do we currently have a system for ensuring hypertext copyright holders are paid whenever their intellectual property is used. Consequently, even though Bush’s and Nelson’s visions for hypertexts never materialized, they are most often credited for the origins of hypertext theory and the general perception that hypertext is an interactive system of storing and retrieving images, texts, and other computer files that allows users to directly link to relevant images, texts, sounds, and other data types in a nonlinear environment.

Given the preceding origin story, I posit that the “history” of hypertext is a Western frontier story, a narrative that most often begins with the exploration of the land of Xanadu and the Memex and eventually leads to the trailblazing of the World Wide Web. Few stories have been told of hypertexts that existed in Native American territories long before the land of Memex and Xanadu. Consequently this essay offers a preliminary hypertextual historiographical decolonial narrative that suggests that the concept of hypertext and the rhetorical work it does are not new—nor is it unique to Western cul-

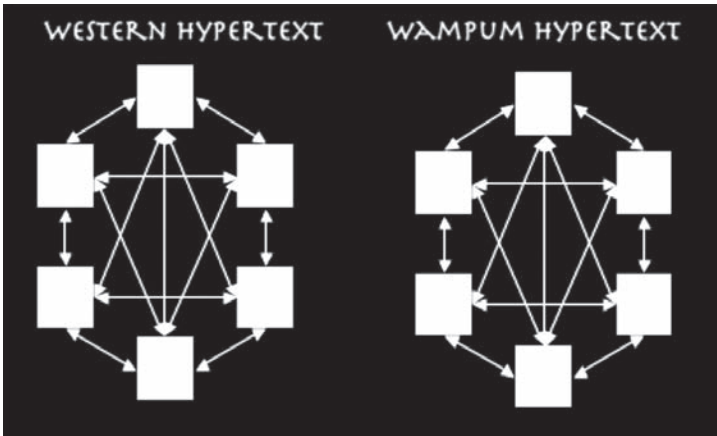


Fig. 5. Is there a difference between the hypertextual work of connecting Western scientific knowledge and American Indian cultural, material, and technological knowledge?

ture, despite the terminology's Western etymology (hyper + text; see fig. 5). To accomplish this goal, this essay demonstrates how wampum is an example of a pre-Memex, pre-Xanadu, and pre-Internet American Indian technology that was not only imagined but became a reality and that not only works like hypertext but in fact extends those capabilities beyond the current capacity of interconnected hypertexts we see on the "World Wide" Web.<sup>5</sup>

Thus I seek to make a similar move with wampum that *Damián Baca* makes with his recovery of Aztec codex rhetorics, as this essay will elucidate how wampum hypertext rhetorics, like codex rhetorics, "at once look back to the [. . .] past while critiquing the present and inventing possible shared futures" (22). To do so, this essay calls for an understanding of the theory of "discovery" (*Deloria Jr.*; *Kehoe*) and imperial naming and claiming (*King*; *Pratt*; *Spurr*; *Vizenor*)—and consequently it invites hypertext scholars to challenge the current dominant "history" of hypertext and re-vision the "history" to include non-Western intellectual traditions that existed prior to *Bush's Memex* and encourages American Indian Studies scholars to re-vision how we articulate, study, and teach technology.







Fig. 6. Cayuga Chief Jacob Thomas with Two Row Wampum Treaty Belt replica (Jake Thomas Learning Centre, 2004).

purple and the white beads and the meaning inscribed in the resulting patterns. To illustrate, pictured below is Cayuga Chief Jacob Thomas holding a replica of the Two Row Wampum Treaty Belt (fig. 6), which embodies a treaty between the Iroquois Confederacy and colonists.

Tehanetorens explains that “[t]his belt symbolizes the agreement and conditions under which the Iroquois welcomed the white peoples to this land. [. . .] This wampum belt confirms our words.” The two rows symbolize two paths or two vessels, and though the two parties will travel together side by side, they will do so in their own boat. “Neither of us will make compulsory laws or interfere in the internal affairs of the other. Neither of us will try to steer the other’s vessel” (74). Such everyday practices of digital coding result in culturally saturated visual rhetorics that signify meaning to those who revisit wampum treaties—not to mention the visual mnemonics associated with the subsequent rereading of wampum belts.

*Associative Indexing, Storing, Retrieving, and Presenting Information*

Besides encoding information, both technologies also employ systems of nodes and links that form information structures vis-à-vis associative indexing. To explain, *nodes* can be considered points of information and *links* the pathways that connect them. This centrality of nodes and links to hypertext theory can be explained in the rhetorical work that hypertexts do. As Farkas and Farkas explain,

Hypertext theory considers how various arrangements of nodes and links express meaning and how these arrangements are reflected in the user interface. Hypertext theory classifies these arrangements of nodes and links into various kinds of hierarchical and non-hierarchical structures, often called “information structures.” (123)

Similarly, in wampum belt hypertexts, wampum beads serve as nodes to topics, and the sinew, hemp, tree bark twine, or other stringing devices serve as links or pathways to associated information. To explain further, architectural mnemonic associations are employed as wampum belts and strings are encoded with information. Thus a wampum hypertext constructs an architectural mnemonic system of knowledge making and memory recollection through bead placement, proximity, balance, and color. Like colors are employed in Western visual design to signify certain moods for readers, the color usage of wampum reminds its “reader” how to organize and read the story woven into the material rhetoric (fig. 7).<sup>6</sup>

In order to retrieve the encoded communication, an individual must be a part of the community with the cultural context for accurate retrieval of that information. The messages are spoken and woven into the wampum, and those messages are repeated each time an individual (re)presents the material rhetoric, or wampum hypertext, to the community. Thus, in this way, wampum hypertext is more similar to Bush’s vision for hypertext, one that is culturally situated among a community. As such, the wampum community can be seen as a community of heritage and cultural knowledge workers. Thus the hypertext is seen more as a cross-community hypertext than as a global or mass communication, like Nelson’s vision of hypertext.

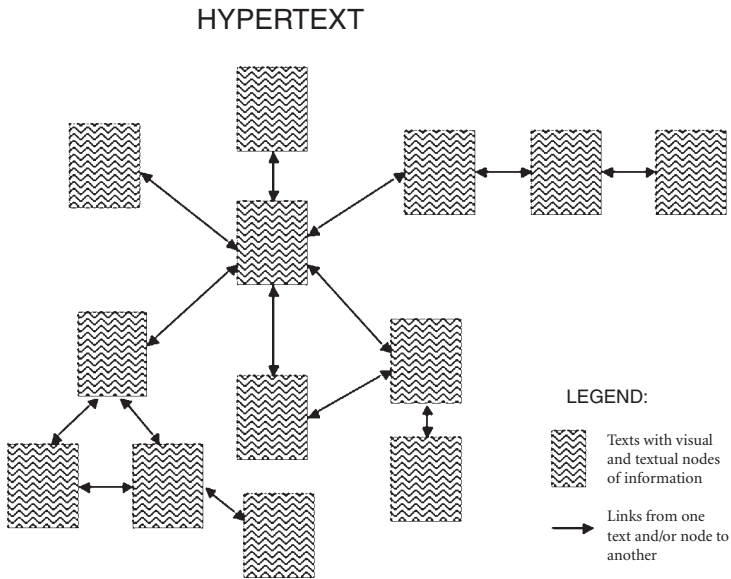


Fig. 7. Note that each text may house several nodes of visual and/or alphabetic/syllabic nodes—information that can be linked to each other independently from the whole text.

### *Nonlinear, Webbed Networks of Knowledge*

The organization of nodes and links forms a nonlinear, or webbed, network of information in both wampum and Western rhetorics. From Myron Tuman's work, we can trace some of the key features of hypertext—from a "web of relations" (60), to "a connected system of documents" (61), to "a system without end or center" (63). Further, hypertext theorist Jay David Bolter describes hypertext as a "layered writing and reading" environment, where "[a]ll the individual pages may be of equal importance in the whole text, which becomes a network of interconnected writings" (*Writing Space: The Computer, Hypertext, and the Remediation of Print* 27). Thus Bolter conveys the value of *nonhierarchical content* linked in a hypertext and the capacity for hypertexts to have *multiple layers of meaning*. Moreover he notes how this layering of information subverts the traditional hier-

archy of information in print and the focus on the associative relationships among and across content.

Wampum similarly offers a layered writing and reading experience, as wampum can communicate more than one story, as meaning is layered in the materials with the technology and digital rhetoric. To illustrate the layers of purpose and meaning, Robert Williams demonstrates how the Guswentah wampum, otherwise known as the Two Row Treaty Wampum, has the capacity to secure trade, alliances, and goodwill and to offer “tribal approaches to the problems of achieving law and peace in a multicultural world” (5) (see fig. 8). This layering is also evident in Williams’s account of how reading and listening to the wampum requires an understanding of the layered messages embodied by the wampum. He writes about the

telling of stories spoken by the [condolence ceremony] wampum: stories of rekindling the fire “to bind us close”; of grave sorrow for the dead chief; of wiping away any bad blood between the two sides; of sharing the same bowl to eat together; of dispelling the clouds and restoring the sun that shines truth on all peoples. (55–56)

Thus these layers of stories are woven together and can be pulled apart by members of that community for a layered “reading” or presentation of the wampum as well, thereby facilitating a hypertext of data representation and interpretation.

### *Supplemental Memory*

As demonstrated in the aforementioned wampum introduction and the Two Row belt example, stories are encoded with digital rhetoric and the technologies of shells and sinew (or other stringing devices) and subsequently stored in the material rhetoric. Thus both wampum and Western hypertexts supplement memory. Vannevar Bush envisioned his Memex as an intimate extension of a man’s memory, while hypertext allows designers to input their memorized knowledge, and wampum strings and belts serve as communal, cultural, and civic memory. According to Tehanetorens, for the Iroquois, every

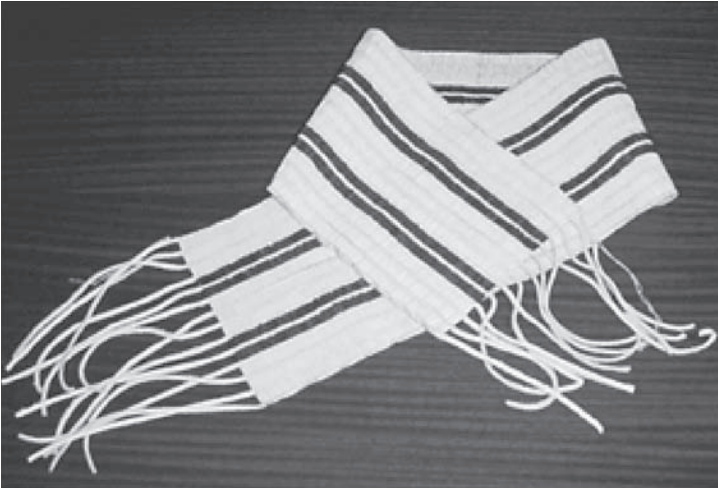


Fig. 8. The Guswentah (Two-Row Wampum) is a seventeenth-century treaty between the Haudenosaunee and Dutch colonists defining the terms of peaceful relations (Center for Indigenous Law, Governance, and Citizenship).

treaty or law passed by the council was recorded with a particular string or belt of wampum and memorized by certain trained individuals (12). In order to memorize the belt and its story, the trained individual would impress in the mind the visual representation of the belt and subsequently forge mnemonic associations between the visual representation of the belt and the accompanying story. Thus the wampum “reader” or presenter can trace the nodes of information and can link their associated inherited knowledge by tracing the embedded stories “told” by wampum and sinew hypertext.

As discussed briefly earlier in this essay, wampum beads serve as nodes to topics, and the sinew, hemp, tree bark twine, or other stringing devices serve as links or pathways to associated information. Architectural mnemonic associations are employed as wampum belts, and strings are encoded with information. As with classical Roman *memoria* exercises promoted by Cicero and Quintilian, where mental images (*imagines*) were placed in an architectural background (*loci*), purple and white wampum beads are likewise

woven into a meaningful pattern dictated by memoria and purpose onto a background of a stringing material technology.

### *Interactive Design*

Farkas and Farkas define “hypertext” as

the original term for interactive content. For this reason, we find it in the phrases “hyperlinks,” “hypertext jumps,” and HTML (Hypertext Markup Language). Because most of the interactive systems of the 1960s, ’70s, and early-to-mid ’80s displayed only text and *static* graphics, they were referred to as hypertext systems. (10; emphasis added)

According to Bolter, “the key qualities of hypertext are still the creation of a structure of elements and their presentation in interaction with the reader” (*Writing Space: The Computer, Hypertext, and the History of Writing* 98). On the other hand, Hypermedia, then, is presented as the linguistic successor to hypertext, as it “includes interactive videodiscs and other technologies that were designed primarily to present *dynamic* content” (10; emphasis added), where “words, graphics, animation, sound, and video can all be disposed as units in a hypertext” (98). Thus, while hypertext was first seen as an interaction between static content, and hypermedia is now seen as the interaction between dynamic content, the feature of *interactiveness* has remained consistent.

With wampum hypertexts interactiveness is achieved both between and across the content and media types and between the “designers” and “presenters” of wampum, the audience for the wampum hypertext, and the material rhetoric itself. Although wampum preserves and communicates the memories of treaties, peace, and alliances, it not only embodies this communication but also presents the memories. Wampum presents a hypertext visually and aurally via an accompanying oral story. Whether it is treaty belt, peace pact, a welcome belt, condolence string, or adoption belt, it is presented to all affected parties, and most are revisited on a regular basis and re-“read.” Thus, not only is the wampum belt crafted with memories, but it is also “read” by memory.

The Oneida Indian Nation explains that wampum was connected to the spoken word. Wampum testified to the truth and importance of the message “read into” the object itself (qtd. in Cousins 158). Thus the act of speaking into the wampum both presents meaning to the material object itself and impresses the experience into the individual’s mind, not to mention for any onlookers as well. For example, the Iroquois women are charged with the task of nominating the chiefs, and they speak and weave their decisions about who to nominate and their recommended tasks and rules for the chieftainship into the “Women’s Nominating Belt” (Tehanetorens 31). Consequently we can assess that there are two layers of interactiveness between the women who speak and weave meaning into the wampum, between those who present the wampum and those who listen, and between all these interactors and the wampum hypertext itself. This interactiveness is also a requirement for negotiating the different technologies and communication modes necessary for the wampum to continue to be rhetorical.

### *Multimodal Web of Meaning*

As can be inferred from the section above, wampum is multimodal in its meaning making. After all, in order for wampum to be communicative, a hybridization of the oral tradition and symbolism is woven into the material rhetoric. Furthermore the technologies woven into the belt have communicative agency, as with the colors of the shells and the design patterns. The cultural context and community where the wampum resides is yet another source of meaning that gets encoded into the wampum. Thus wampum is a hypertext of communicative modes—all of which contribute to cultural knowledge production and preservation.

#### EXTENDING THE CAPABILITY OF WESTERN HYPERTEXTS

The study of wampum as hypertext demonstrates that wampum does not communicate exactly like Western hypertext; however, it works similarly. Consequently hypertext theory could learn more about



“traditional” hypertexts via discussions of wampum hypertextuality. As Bolter explains, “We use the computer as hypertext to write with symbols that have both intrinsic and extrinsic significance” (*Writing Space: The Computer, Hypertext, and the Remediation of Print* 27), but the same could be said of wampum—as it has been used for centuries to communicate cultural, communal, and civic information of both intrinsic and extrinsic value. However, Bolter restricts hypertext to a phenomenon that only occurs on a computer through electronic writing (*Writing Space: The Computer, Hypertext, and the History of Writing* 99). Thus further discussions about where hypertextuality can take place are needed for future hypertext theory and revisionist history.<sup>7</sup>

Wampum belts signify a surviving intellectual tradition that communicates living stories of a living culture. The treaties (and other messages woven into the wampum) are renewed by regularly revisiting and re-“reading” wampum vis-à-vis community memory and performance. Although both need to be involved to update the message therein, the message communicated by particular wampum belts do not change; rather, they are remembered and recited. Consequently they are used to remind us of our commitments, and we renew those commitments through reading and performing the wampum hypertext. The same is not true of Western hypertexts, where changes can be made in a moment—or no changes are ever made, and the links therein are broken. Thus while all affected parties need to tend to the links to ensure the alliances survive, tribal memory keeps the wampum rhetoric alive while individuals need to continuously update hypertexts and their content to keep them relevant. Unless the author notes the latest revision date, we cannot be certain when the hypertext is “dead”—until we use it. On the contrary, using the wampum belt in the way it is intended keeps it alive.

Furthermore, as mentioned earlier in this essay, the promise of contemporary hypertexts often rests in their ability to reflect an interactive design in order to encourage interactiveness. With wampum, interactiveness is achieved both between and across the content and media types and between the “designers” and “presenters”

of wampum, the audience for the wampum hypertext, and the material rhetoric itself. Although wampum preserves and communicates the memories of treaties, peace, and alliances, it not only embodies this communication but also presents the memories. Consequently one could argue that wampum is limited in relation to contemporary Western hypertexts in that it requires human intervention to remember the intent and content of the original message; however, one could also posit that such interaction encourages continuous civic involvement instead of an overreliance on technology. Wampum reminds us that *duyuktv* (a Cherokee concept of judicious balance) between technology and humans is necessary—and that the body's interaction is also necessary to achieve this balance.

The body remembers the weaving and the performance of wampum. Regular performances of wampum hypertexts suggest that Western hypertexts are relegated to dormancy until the moment we need to recall them. Both conceptions of hypertext require human interaction, but Western hypertext does not require a conscious effort to remember the message encoded in the technology. Thus human memory (physiological, emotional, mental, and bodily) and material memories are connected—in an alliance to foster hypertextual memory.

Finally the study of wampum as hypertext has the potential to reimagine the future of hypertext as more civically responsible. Although the World Wide Web is touted for its democratizing effects on communication, there is still a digital divide between the haves and have-nots, whereas shared responsibility is what links wampum beads. This shared responsibility is lacking in contemporary renditions of Western hypertexts, where some of us are concerned that the Internet is like the “open” frontier, where individual rights take precedent over community benefit and alliance building. Where dead end hyperlinks are plenty. Where messages of violence and racism abound. Where child predators lurk. Unlike Western hypertexts, wampum remembers civic responsibility; in fact, wampum requires it. In contrast, contemporary hypertext does not require responsibility, and the enforcement of it is one of hypertext's most pressing critiques.

## IMPLICATIONS OF WAMPUM AS HYPERTEXT

While there are certainly more implications for the study of wampum as hypertext within hypertext and multimedia studies, what are the implications for this research for American Indian studies? For one, it situates American Indians as techno-savvy, as it demonstrates how American Indians have a long-standing intellectual tradition of multimediated, digital rhetoric theories and practices—or theories and practices of communicating via the encoding of information with our fingers and toes using a variety of media. Thus we must be critical of the stories we tell ourselves about being “technologically advanced.” Whose definition of technologically advanced are you using when evaluating your technological proficiency? (See fig. 9.)

To explain, wampum beads are technologies, just as sinew, hemp, and tree bark twine are—all of the technologies needed to craft wampum belt multimediated stories. Such an argument can be extended to the other sign technologies we build via an assemblage of other technologies, all which come along with their own set of “literacies,” from birch bark scrolls and canoes, winter counts, petroglyphs, star quilts, songs, drums, double-wall and double-woven rivercane baskets, and more to Web sites, blogs, and instant messaging.

Such research also answers Osage literary scholar Robert Warrior’s call to examine “how we can make American Indian discourse more inclusive of contemporary American Indian experiences” (*Tribal Secrets* 87). And though access to some contemporary Western technologies remains a contentious issue among American Indians, contemporary American Indian experiences include the daily interaction with and shaping of a variety of both indigenous and Western technologies. Thus, while Western society has determined what it means to be technologically advanced, it does not mean we have to buy into that fiction.

After all, as several American Indian scholars have stressed, American Indians have a right to claim our own intellectual sovereignty and to shape what that means. As Warrior contends, we must critically engage with and reflect on struggles for and discussions of intellectual sovereignty (*Tribal Secrets* 98). Leech Lake Ojibwe Scott



Fig. 9. “American Progress” by John Gast, 1872.

Lyons articulates what that might mean for the rhetoric studies community. He discusses the legacy of colonization based on rhetorical modes of naming and claiming (which have ties to identity and literacy) to promote the importance of rhetorical sovereignty, or the claiming of “the inherent right and ability of peoples to determine their own communicative needs and desires in this pursuit [of agency, power, and community renewal], to decide for themselves the goals, modes, styles, and languages of public discourse” (449–50). Further, Cherokee scholar Daniel Wildcat reminds us of the relationship of intellectual sovereignty to self-determination. He states, “It is essentially a tribal intellectual and moral mandate requiring action, unless we want our current educational system to be like our contemporary political structures and practices, which all too often merely reflect the dominant society’s institutions” (7). Consequently, building on the work of these scholars, I call that we resist the dominant notions of what it means to be technologically “literate” or “advanced” (with roots in manifest destiny) and that we critically reflect on struggles for and engage with discussions about digital and visual rhetori-

cal sovereignty, or the inherent right for indigenous communities to claim and shape their own communication needs (as well as the rhetoric of their identities) in digital and visual spaces.

#### AN OPENING

Although there are certainly some potential benefits hypertext theory can reap from the study of wampum as hypertext, to be clear, I am not asserting that wampum is the origins of hypertext. After all, if I am suggesting that there are other stories that tell tales of hypertextuality that have gone untold, adding the story of wampum alone will not remedy this absence. But it does make one absent story present in our discussions of hypertext. And the addition of this story may lead us to better understand the theory of discovery. Just as Alice Beck Kehoe admits, “[a] perennial problem in archaeology is to distinguish between local inventions and those imported from other societies—‘independent invention’ versus ‘diffusion’” (62), I venture to say the same is true of *information archaeology* and hypertext theory, or any other theory dependent on the proliferation of technology.

Just because an individual names a theory, it does not make it an “independent invention.” As Anishnaabe theorist Gerald Vizenor elucidates, “The English language has been the linear tongue of the colonial discoveries, racial cruelties, invented names, the simulation of tribal cultures, manifest manners, and the unheard literature of dominance in tribal communities” (105). This same language is what was used by Ted Nelson, who named hypertext and claimed to have “discovered” it.

Perhaps if we allow ourselves to listen to this story of wampum as hypertext in accord with the other existing stories about hypertext, we might enjoy what Indiana Miami scholar Malea Powell describes as an emergence of a “new story about ourselves, not a ‘prime’ narrative held together by the sameness of our beliefs, but a gathering of narratives designed to help us adapt and change as is necessary for our survival” (57–58). Thus, let’s treat the history of hypertext as hypertext, recognizing the fruitful relationships between stories, the

benefit of resisting an imposed hierarchy of those stories, and the dynamic nature of hypertext that allows for endless and centerless stories. Such a hypertext will facilitate a dynamic discussion between these stories on hypertext that will destabilize the current hierarchical information structure in place that insists on stabilizing the origins of hypertext. As Mvskoke writer Joy Harjo reminds us in her poem “there’s no such thing as a one-way land bridge,” “The story depends on who’s telling it” (5).

#### NOTES

I would like to thank Dr. Malea Powell for her assistance throughout the creative process in writing this essay, from conception to revision, to permission to photograph her wampum materials. I also appreciate the permissions from Tehanetorens (via Book Publishing Company), the Jake Thomas Learning Centre, and the Center for Indigenous Law, Governance, and Citizenship to use their visuals where cited.

1. For photos and more information on the Cherokee Nation’s Trail of Tears exhibit, go to <http://www.cherokeeheritage.org/Default.aspx?tabid=272>.

2. My use of this term is based on Osage writer Robert Warrior’s concept of intellectual trade routes, or loci that allow for the reciprocal exchange of intellectual goods and where “intellectuals participate in going out from and coming back to the places from which they came, learning along the way new ideas that inform the creation of new knowledge” (xxx–xxxi).

3. Wampum has also served as personal adornment in headbands, arm and leg bands, bracelets, earrings, and so forth.

4. Ted Nelson (1974) is recognized by many as the man who coined the term “hypertext” for “non-sequential writing,” yet he credits Vannevar Bush as his main influence and the “grandfather” of hypertext theory.

5. There are other indigenous sign technologies that function similarly to Western hypertexts and that have the potential to expand its current limitations, such as winter counts, birch bark scrolls, and the Aztec codices, but for the sake of fully demonstrating a pre-Memex technology that works like hypertext, I thought it more effective to provide thicker description through the use of a consistent example for my hypertextual counterstory. For more on the Aztec codices as rhetorics of resistance, see Damián Baca’s work. Parallels between wampum and codex rhetorics are plentiful when considering Baca’s work: entry into the codices can vary from reader to reader and

requires a “complex visual dance”; the codex is an amalgam of typography, typeface, and lettering that weaves between pictographs, bloodstains, and American cultural icons; the codex serves as a hypertextual cultural memory; designers employ various and multiple rhetorics (e.g., visual and alphabetic, different languages, etc.); both serve as annals and rituals; and the reading of the codices as a communal ritualistic and ceremonial event also parallels the “reading” of wampum. And the three principal types of codices could also be used to understand wampum: time-oriented, place-oriented, and event-oriented.

6. As Dubin summarizes, “Beads are tools by which people convey information to other people [. . . and] organize and symbolize their world” (19).

7. Further, Farkas and Farkas claim that what makes hypermedia distinct from physical space is the capability to “jump” from one node to the next instantly (11). Although this may be true for print texts, this does not prove to be the case for wampum hypertexts, where the physicality and corporality are required to jump from one node of information to the next. Perhaps we can learn more about the hypertextuality of non-computer-based hypertexts, then, from the study of wampum.

#### WORKS CITED

- Baca, Damián. “Border Insurrections: How IndoHispano Rhetorics Revise Dominant Narratives of Globalization.” Diss. Syracuse University, 2005.
- Bolter, Jay David. *Writing Space: The Computer, Hypertext, and the History of Writing*. Mahwah, NJ: Lawrence Erlbaum Associates, 1991.
- . *Writing Space: The Computer, Hypertext, and the Remediation of Print*. 2nd ed. Mahwah, NJ: Lawrence Erlbaum Associates, 2001.
- Bush, Vannevar. “As We May Think.” *The Atlantic Monthly* 176.1 (1991). 10 Dec. 2005 <http://www.theatlantic.com/doc/194507/bush>.
- Center for Indigenous Law, Governance, and Citizenship. Law School, Syracuse University. 3 July 2007 <http://www.law.syr.edu/academics/centers/ilgc/>.
- Cousins, Michael. “Aboriginal Justice: A Haudenosaunee Approach.” *Justice as Healing: Indigenous Ways*. Ed. Wanda D. McCaslin. St. Paul, MN: Living Justice Press, 2005. 141–59.
- Deloria, Vine, Jr. *Red Earth, White Lies: Native Americans and the Myth of Scientific Fact*. Golden, CO: Fulcrum, 1997.
- Driskoll, Qwo-Li. Personal communication. 3 Aug. 2005.

- Dubin, Lois Sherr. *The History of Beads: From 30,000 B.C. to the Present*. New York: Harry N. Abrams, 1987.
- Farkas, David K., and Jean B. Farkas. *Principles of Web Design*. New York: Longman, 2002.
- Harjo, Joy. "There's No Such Thing as a One-way Land Bridge." *A Map to the Next World: Poems and Tales*. New York: Norton, 2000. 38–39.
- Illustrations & Descriptions of Wampum Belts*. 15 Sept. 2004. Jake Thomas Learning Centre. 1 June 2005 [http://www.tuscaroras.com/jtlc/Wampum/Wampum\\_index.html](http://www.tuscaroras.com/jtlc/Wampum/Wampum_index.html).
- Kehoe, Alice Beck. *America: Before the European Invasions*. London: Longman, 2002.
- King, Thomas. *The Truth about Stories: A Native Narrative*. Minneapolis: University of Minnesota Press, 2005.
- Landow, George P. *Hypertext 2.0: The Convergence of Contemporary Critical Theory and Technology*. Baltimore: Johns Hopkins University Press, 1997.
- Lyons, Scott Richard. "Rhetorical Sovereignty: What Do American Indians Want from Writing?" *College Composition and Communication* 51.3 (2000): 447–68.
- Nelson, Theodore H. *Dream Machines*. N.p.: Theodore H. Nelson (self-published), 1974.
- Powell, Malea. "Down by the River, or How Susan La Flesche Picotte Can Teach Us about Alliance as a Practice of Survivance." *College English* 67.1 (Sept. 2004): 38–60.
- Pratt, Mary Louise. *Imperial Eyes: Travel Writing and Transculturation*. New York: Routledge, 1992.
- Spurr, David. *The Rhetoric of Empire: Colonial Discourse in Journalism, Travel Writing, and Imperial Administration*. Durham, NC: Duke University Press, 1993.
- Tehanetorens. *Wampum Belts of the Iroquois*. Summertown, TN: Book Publishing, 1999.
- Tuman, Myron. *Word Perfect: Literacy in the Computer Age*. Pittsburgh, PA: University of Pittsburgh Press, 1992.
- Vizenor, Gerald. *Manifest Manners: Narratives on Postindian Survivance*. Lincoln: University of Nebraska Press, 1994.
- Wallace, Paul A. *White Roots of Peace: Iroquois Book of Life*. Santa Fe, NM: Clear Light Publishers, 1994.
- Warrior, Robert. *Tribal Secrets: Recovering American Indian Intellectual Traditions*. Minneapolis: University of Minnesota Press, 1994.



Wildcat, Daniel R. Indigenizing Education: Playing to Our Strengths.” *Power and Place: Indian Education in America*. Ed. Vine Deloria Jr. and Daniel R. Wildcat. Golden, CO: Fulcrum, 2001. 7–19.

Williams, Robert A., Jr. *Linking Arms Together: American Indian Treaty Visions of Law and Peace, 1600–1800*. New York: Routledge, 1997.