

**CODED TERRITORIES:
TRACING INDIGENOUS PATHWAYS
IN NEW MEDIA ART**
Edited by Steven Loft and Kerry Swanson

ISBN 978-1-55238-788-7

THIS BOOK IS AN OPEN ACCESS E-BOOK. It is an electronic version of a book that can be purchased in physical form through any bookseller or on-line retailer, or from our distributors. Please support this open access publication by requesting that your university purchase a print copy of this book, or by purchasing a copy yourself. If you have any questions, please contact us at ucpress@ucalgary.ca

Cover Art: The artwork on the cover of this book is not open access and falls under traditional copyright provisions; it cannot be reproduced in any way without written permission of the artists and their agents. The cover can be displayed as a complete cover image for the purposes of publicizing this work, but the artwork cannot be extracted from the context of the cover of this specific work without breaching the artist's copyright.

COPYRIGHT NOTICE: This open-access work is published under a Creative Commons licence. This means that you are free to copy, distribute, display or perform the work as long as you clearly attribute the work to its authors and publisher, that you do not use this work for any commercial gain in any form, and that you in no way alter, transform, or build on the work outside of its use in normal academic scholarship without our express permission. If you want to reuse or distribute the work, you must inform its new audience of the licence terms of this work. For more information, see details of the Creative Commons licence at: <http://creativecommons.org/licenses/by-nc-nd/3.0/>

UNDER THE CREATIVE COMMONS LICENCE YOU MAY:

- read and store this document free of charge;
- distribute it for personal use free of charge;
- print sections of the work for personal use;
- read or perform parts of the work in a context where no financial transactions take place.

UNDER THE CREATIVE COMMONS LICENCE YOU MAY NOT:

- gain financially from the work in any way;
- sell the work or seek monies in relation to the distribution of the work;
- use the work in any commercial activity of any kind;
- profit a third party indirectly via use or distribution of the work;
- distribute in or through a commercial body (with the exception of academic usage within educational institutions such as schools and universities);
- reproduce, distribute, or store the cover image outside of its function as a cover of this work;
- alter or build on the work outside of normal academic scholarship.





jason edward lewis

I am interested in the material qualities of the digital,
how that materiality instrumentalizes a particular
(narrow) world-view, and what we as Native people can
do to subvert, revert, and convert that materiality to
better reflect our ways of being.

Jason Edward Lewis is a digital media artist, poet, and software designer. He founded Obx Laboratory for Experimental Media (www.obxlabs.net), where he directs research/creation projects devising new means of creating and reading digital texts, developing systems for creative use of mobile technology, and using virtual environments to assist Aboriginal communities in preserving, interpreting, and communicating cultural histories. Lewis is committed to developing intriguing new forms of expression by working on conceptual, creative, and technical levels simultaneously. His creative work has been featured at the Ars Electronica Center, ISEA, SIGGRAPH, Urban Screens, and Mobilefest, among other venues; his writing about new media has been presented at conferences, festivals, and exhibitions on four continents; and he has won awards from the Electronic Literature Organization (ELO), Ars Electronica, and the imagineNATIVE Film + Media Arts Festival. He is currently an associate professor of computation arts at Concordia University in Montreal.



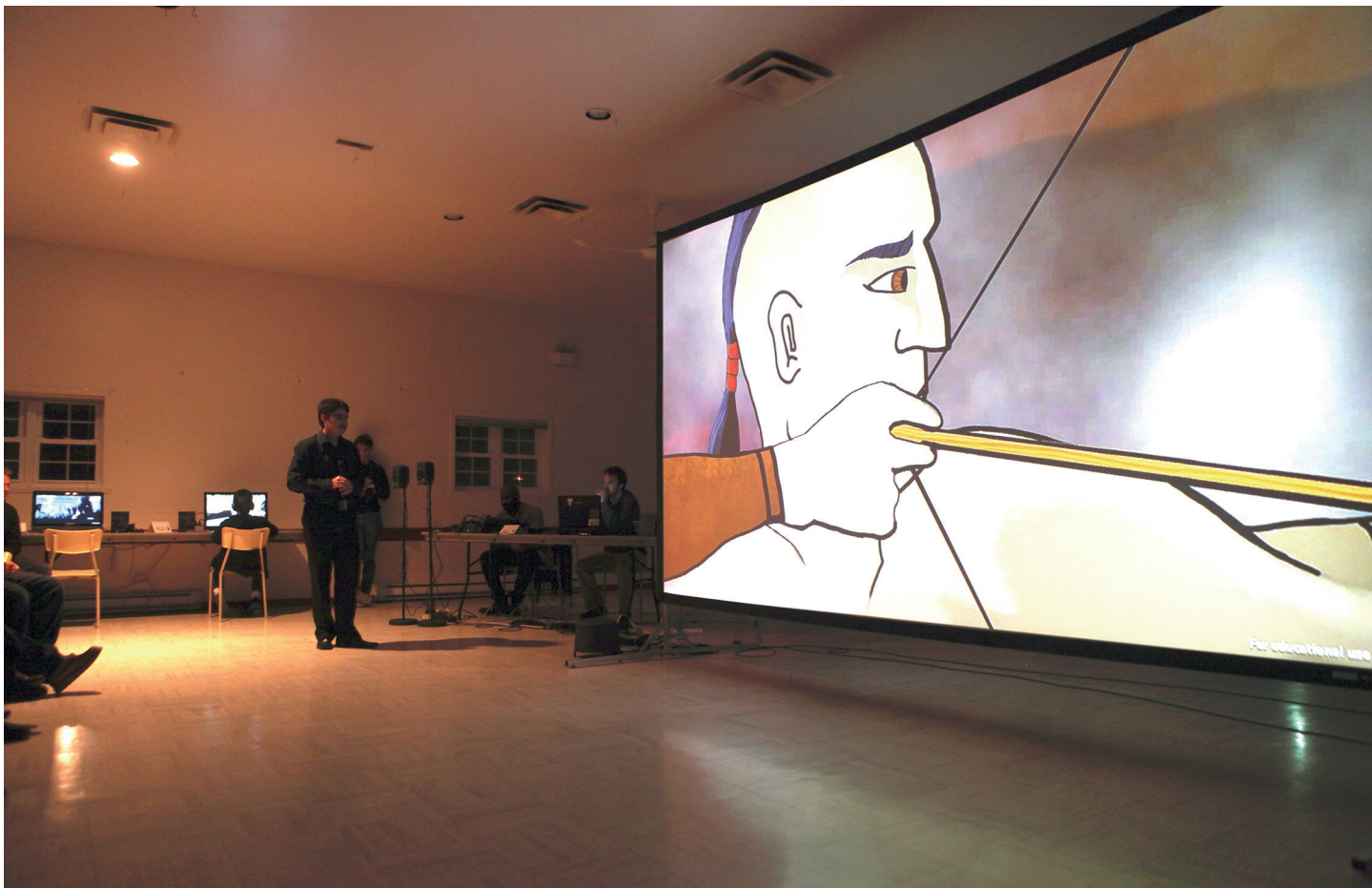
TimeTraveller Episode 1 Hunter, production still showing Hunter outside of his apartment in the year 2112. Creator: Skawennati Fragnito.



TimeTraveller Episode 2 Dakotas Raise Weapons, production still showing Sioux warriors confronting a settler in 1862. Creator: Skawennati Fragnito.



(left) Skins 1.0 – Clay model of the Otsi-Rise of the Kanien'keha-ka Legends videogame level. Photo credit: Jason Edward Lewis;
 (right) Skins 1.0 – Otsi-! Rise of the Kanien'keha-ka Legends videogame poster. Creator: Aboriginal Territories in Cyberspace.



Skins 3.0 – Launch of Skahìòn:hati | Rise of the Kanien'kehá:ka Legends, the video game made in the 2012 workshop.
Photo credit: Scott Benesiinabaandan



Skins 3.0 – Skahìon:hati: vs. the Stone Giant, from Skahìon:hati: | Rise of the Kanien'kehá:ka Legends videogame.

3

A Better Dance and Better Prayers: Systems, Structures, and the Future Imaginary in Aboriginal New Media

JASON EDWARD LEWIS

BEGINNINGS AND ENDINGS

He taught her that all dreams reach down to a common sea, and he showed her the way in which hers were different and the same. "You alone sail the old sea and the new," he said.—*William Gibson*

Gibson wrote the science fiction novel *Mona Lisa Overdrive* in 1988, when the new sea of cyberspace was so new that most of the world did not even realize it was forming. In *Neuromancer*, the first book of the *Sprawl* trilogy, Gibson coined the term "cyberspace," and then, over the course of the three books, proceeded to envision a number of other technologies that we now take as commonplace. *Mona Lisa Overdrive* is the third book, and the one in which Gibson proposes that any true artificial intelligence would be much more than a linear extension of man. It would be of another order than humanity entirely, fundamentally unknowable and ineffable, and the only way we might understand such an entity would be through metaphor. The humans in the book struggle to come up with terms for describing their interactions with it; the artificial intelligence,

in turn, employs the equivalent of the burning bush to act as an intermediary between itself and its creators.

Twenty-five years later, the idea of sailing “the old sea and the new” serves as a lens through which we can consider Aboriginal peoples’ relationship to, and agency in, the vast archipelago of websites, social media services, shared virtual environments, corporate data stores, and multiplayer video games we call cyberspace. We strive to keep the old dreams of our ancestors with us but must make our way through this new dream. The new dream has been conjured into being by the settler culture, yet we also partake of it. The new dream is made manifest in myriad ways, and what follows is a discussion of but one of them.

THE IMPORTANCE OF A FUTURE IMAGINARY

How did Fontaine
get the apology?
He told a story
and then he said,
come, follow me.
—Wab Kinew¹

Aboriginal communities have many ways of talking about the past. We retell the stories of our ancestors, we celebrate the heritage of our people, and we argue with everybody — ourselves, academics, settler culture in general — about our history. We do all of this, often, which is necessary and good. What we do not do much is talk about our future. We make plans to keep everybody alive for the next few years, and we strive to stay mindful of the seventh generation, but we do not tend to spend much time imagining what our communities will be like in one hundred, five hundred, or a thousand years.

The title of the essay comes from “After the Dance,” a short story by Cree scholar Richard Hill. It is set in a post-Ghost Dance future,

where the Thunder has cleansed the white people from Turtle Island. The story's main character, Two Bears, is talking about the cleansing with his adopted son — the last remaining white person — saved from the apocalypse by Two Bears himself:

I'm very sad about your Auntie and those girls. And I'm also sad about the other white children I did not meet and could not save. When I think about it long and hard like today, I am even sorry for some of the white men. The anger of the Thunder on behalf of the people had been very great. But that's only part of it. I have to be honest. It was our own anger too. When it went into motion that initial power was so strong there was no pulling it back. I'm not sorry the way things are now, but I wish things could have worked out some other way. I wish we could have come up with a better dance and better prayers.²

This passage articulates a dilemma faced by almost any Aboriginal person caught between the desire to see our cultures ascendant once more and the reality of finding ourselves profoundly embedded within a larger multicultural society. We rue the day the colonists arrived and began methodically destroying our ancestors and our ways of life. We wonder “what if . . . ?” Some of us dream of vengeance and yearn for the Thunder. Some of us dream of a Native-only utopia, somehow somewhere out of time and out of place. Some of us retreat to the land of the lotus-eaters and seek merely to forget that which has become part of us.

Yet we are also the spouses of white people, the sons and daughters of mixed-ethnicity parents, the parents of hybrid children, the friends of non-Natives. Pursuing dreams of a Ghost Dance to their extreme conclusions means erasing essential parts of ourselves — and those we love and who loved and nurtured and supported us — from existence. This is madness. Mad in its recapitulation of the siren song of purity, mad in its impracticality, and mad in its consequences. To imagine a different future, a future that does not

require us to countenance committing genocide ourselves — whether by commission or omission — we had best get to imagining what Two Bears' better dance and better prayers might have been.

I tell a story in what follows. The story is a reflection on how we might sail the sea of cyberspace as a means of dreaming forth a future; it is also a discussion of how Aboriginal Territories in Cyberspace (AbTeC), the research/creation project that I co-direct, can be used as an example of how future imaginaries of our choosing may be developed and supported. The AbTeC effort is a material argument for the fundamental importance — culturally and intellectually — of striving to consciously imagine ourselves in and into the far future.

Come, follow me.

PRESENT IN THE FUTURE

We are what we imagine. Our very existence consists in our imagination of ourselves. Our best destiny is to imagine, at least, completely, who and what, and that we are. The greatest tragedy that can befall us is to go unimagined.

—N. Scott Momaday³

For five hundred years, Aboriginal people have shared a past with the settler culture, we share the present, and most likely we will share a future. That culture is busy dreaming of the future, imagining what it might look like through science fiction, and building it with science fact. Yet Indigenous people rarely appear in those imaginaries.

Our absence from the future imaginaries of the settler culture should worry us. Absence implies non-existence, or, at the very least, non-importance. A people that are absent in the future need not be consulted in the present about how that future comes about. A culture that is assumed not to be important one hundred years from now can be discounted now, for what are the consequences?

Anishinaabe scholar Grace Dillon, in her introduction to *Walking the Clouds: An Anthology of Indigenous Science Fiction*, articulates the need for Native people to use science fiction as a means of making themselves visible in the future. We should do this as a way of positioning ourselves in a genre associated almost exclusively with “the increasing significance of the future to Western techno-cultural consciousness.”⁴

The texts collected by Dillon show that Indigenous people have indeed been involved with science fiction for some time. Except for almost singular characters such as Chakotay in television’s *Star Trek: The Next Generation* — and mystic earth-people stereotyping such as that seen in the movie *Avatar* — few if any of those engagements with the genre have created a lasting impression on the popular consciousness. Yet it is there — in the collective dreams about where technology will take us — that are found basic assumptions about who we will be when we get there.

Momaday imagines his people through poetry, the contributors to Dillon’s anthology through science fiction. It is worth considering how we who work in new media might do the same, but in an even more material sense by engaging deeply with the technologies that are giving form to the future.

ABORIGINAL TERRITORIES IN CYBERSPACE

So, Owisokon, at the very beginning . . . of the *Skins* process . . . she was asking these questions: what is this project, what are you going to do, what are you going to be teaching them? Finally, she says, “and what do you want anyway? Why are you doing this?” And because it was Owisokon, who I have known for many years, I felt free enough to say, “well, we want to change the world.”
—*Skawennati Fragnito*⁵

Mohawk artist Skawennati Fragnito and I (Cherokee/Hawaiian/Samoan) formed Aboriginal Territories in Cyberspace (AbTeC) as a vehicle for staking out Aboriginally determined territories within

cyberspace. AbTeC grew out of CyberPowWow, the pioneering on-line art gallery and chat space co-created by Fragnito, as well as our common experiences as Aboriginal artists working within new media.⁶

In 2005, we published what, in hindsight, is the AbTeC manifesto.⁷ We laid out a vision for Aboriginal engagement with new media that had three main goals:

1. the creation of original artwork that addresses the future of Native people on this continent;
2. educating Aboriginal youth in new media production, emphasizing the integration of Aboriginal stories and storytelling techniques into the process;
3. developing a trajectory whereby young Aboriginal people can move from new media consumption to media production to technology development, and bring that production and development activity back to the reserve.

Our discussions around these issues set the ground for pulling together a group of artists, academics, community activists, and technologists to discuss research and creation strategies.⁸ The group met in a series of workshops in 2006 and 2007 to strategize different methods for attaining AbTeC's goals. One major consequence of these initial discussions and experiments was the Skins Workshops on Aboriginal Storytelling and Video Game Design. The other was the *TimeTraveller™* machinima project. I will return to them in a moment.

STRUCTURES AND SYSTEMS I

It is not so odd, then, at this stage of late capitalism in the project called Western culture, that cyberspace is "under construction." It has in fact been under construction for at least the past two thousand years in Western cultures. – *Loretta Todd*⁹

We may wish to resist the “Western techno-cultural consciousness” (Dillon, above) in favour of maintaining our own Indigenous consciousness. Yet the fact will remain that the Western world view is busy constructing the structures and systems within which we find ourselves increasingly enmeshed. These structures and systems will shape the future of the majority culture, and by subsumption through even the most mundane actions such as paying a bill or making a phone call, they will shape our Indigenous cultures.

Critical technology studies have long made the point that technology designers and developers design much more than mere functionality. Rather, they design the epistemological protocols through which culture operates. As computer scientist Terry Winograd and philosopher Fernando Flores wrote in *Computers and Cognition*:

All new technologies develop within the background of a tacit understanding of human nature and human work. The use of technology in turn leads to fundamental changes in what we do, and ultimately what it is to be human. We encounter the deep questions of design when we recognize that in designing tools we are designing ways of being.¹⁰

Through countless design decisions large — “What counts as valid input data?” or “Who counts as a ‘friend’?” — and small — “Do we have the avatars default to a white skin color or brown?” or “Does the user have to opt-in or opt-out?” — designers and developers of media technology choose what counts as knowledge, what sorts of operations we can perform on that knowledge, and how that knowledge becomes manifest in the world. The fact that they are often doing so without being conscious or deliberative about how they are re-enacting a matrix of fundamental assumptions about human nature and human work in no way lessens the impact of those decisions.

The great mid-twentieth-century effort to create artificial intelligence — in which Winograd was one of the pioneers — foundered on a number of obstacles, with one of the greatest being the demands that binary systems place on how the data on which they operate must be structured.¹¹ D. Fox Harrel, one of the present-day generations of computer scientists trying to tease out the socio-political-cultural consequences of cognition for computation, observes that “a world of binaries is concrete and actionable. Humans have a need to classify, yet when it comes to identity politics binary and discrete classification reinforce systems of social oppression.”¹² Furthermore, he writes:

Computing technologies such as games, social networking sites, and virtual environments often reproduce forms of social stigma encountered in everyday real life, as well as introducing new forms of stigma. When users represent themselves via avatars, characters, and profiles, norms for behavior and group affiliations are established that may introduce prejudices, stereotypes, and associated social ills found in the real world.¹³

The explosive growth of social media in the Facebook era means that many of us — youth, aunties, and elders alike — are enmeshed in a virtual network of personal relationships that interpenetrate our material world relationships like a pixellated shadow. In a world where 800 million people use Facebook weekly, how Facebook chooses to encode those relationships via the computational protocols it inscribes to mediate those relationships becomes an important cultural question.¹⁴ The structures and systems that instantiate that virtual network reify particular notions about what it means to be a social actor, what sorts of relationships one has, and how one communicates with one’s friends. No matter how one might choose to define Indigeneity, it is a safe bet that a designer working within an Indigenous world view would define some of

those notions differently than a peer working solely from within a Western frame of reference.

By engaging in the conversation that is shaping new media systems and structures, Native people can claim an agency in how that shaping carries forward. And, by acting as agents, not only can we help to expand the epistemological assumptions upon which those systems and structures are based but we can stake out our own territory in a common future.

Skins, Storytellers, and Flying Heads

What inspired me to base the [Skins workshop] game on the stories of the Flying Head is . . . that I didn't really see any games out there that had our culture in it.—*Tehoniehtáthe Delisle*¹⁵

The Skins Workshop on Aboriginal Storytelling and Video Game Design was born out of a conversation in 2003 between AbTeC co-founder Fragnito and Celia Pearce (at that time the assistant director) of the Games, Culture & Technology Lab at the University of California, Irvine. The two were attending the Skinning Our Tools: Designing for Context and Culture symposium at the Banff New Media Institute, which examined how cultural factors shape our technology and how we might imagine alternatives to the technological infrastructure we have based on Western modes of instrumental thought.¹⁶

The two found common ground between Fragnito's history of creating and sustaining Aboriginally determined spaces in an ever-more ubiquitous network culture and Pearce's engagement with developing alternative modes for the design and production of virtual world and video games.¹⁷ Their conversation together focused on how one might encourage the creation of more and better representations of Native characters in digital media, with a particular concern for video games.

Representations of Indigenous characters in video games are rare, and, in the few instances where such characters appear, are based on stereotypical caricatures flowing from deep ignorance about both the history and present reality of Indigenous people.¹⁸ The video game industry seems intent on going down the same road as Hollywood, promoting to the popular consciousness the notion that all Indians dress like they're from the Plains, speak in broken English, and live like they did in the 1800s. Such misrepresentations parallel those that many minority cultures experience in media designed by and for the majority culture. Pearce's research and production activities around gender issues in video games and virtual environments suggested a template AbTeC might follow in addressing how Aboriginal people could assert influence — if not downright take control over — the way the industry handles characters based on our cultures and history.

The Skins Workshops integrate Aboriginal stories and storytelling techniques into the video game production process. The project is designed to encourage First Nations youth to be producers of media, not just consumers of it. We want participants to experiment with ways they and their communities might leverage digital media as a tool for preserving and advancing culture and languages, and for projecting a self-determined image out into a mediasphere awash in stereotypical portrayals of Native characters.

To date, we have completed three major Skins workshops, either over the course of an entire academic year or as intensive workshops. The participants in all three workshops come from the Kahnawake Mohawk Territory, Fragnito's home community. The workshops completed to date resulted in the production of two video game prototypes, *Otsi: Rise of the Kanien'keha:ka Legends* and *The Adventure of Skahion:ati: Legend of the Stone Giants*.¹⁹

The *Otsi:* narrative centres on an Iroquois hunter on a mission to stop the Flying Head, a monster terrorizing the territory in which he lives. The participants designed an entire multilevel game that took players from the Flying Head's origin story through to his

confrontation with the hunter. In each level the player would meet a creature or creatures from a different Kahnawake legend, such as the Tree People, the Monkey Dog, and the Hoof Lady. Given time constraints, they decided to focus production on the final level. That level begins with an elder recounting how the Flying Head was born out of a village's refusal to listen to its elders; the hunter then has to fight his way through a horde of Tree People to get back to his own village. There, he must defeat the Flying Head in order to save his people.

The Adventure of Skahion:ati: Legend of the Stone Giants relates the story of an arrogant young man who is known for his boasting. The village elder wants to teach Skahion:ati: a lesson in humility, and so the elder sends him to fight the Stone Giant responsible for making all of the fish in the river disappear. Aware that he cannot win a contest of strength, Skahion:ati: goads the Stone Giant into chasing him back and forth across a river. At one point, he drops his axe, which the Stone Giant picks up and licks to test for sharpness. Skahion:ati: is elated at this, as the elder had hinted to him that the saliva of a Stone Giant makes weapons invincible. The Stone Giant tosses the axe aside and sees that it splits a boulder in two. Skahion:ati: then recovers the axe, and the Stone Giant realizes that if the axe can split a boulder then maybe this little guy can actually harm him with it. The giant asks for mercy, and Skahion:ati: promises not to harm him if he will go away and leave his village alone.

Both Otsi: and Skahion:ati: are characters that appear in legends told within the Kahnawake community. Typically, Otsi: is seen as representative of the dire consequences that result from not listening to the elders in the community, while Skahion:ati: plays something of a trickster role, constantly getting himself — and his people — into deep trouble only to conjure up a way out through some combination of cleverness and craziness. Like many such stories, they serve to illustrate the values of the community and provide a structure for understanding and interacting with the world. The Skins participants held extensive discussions about

exactly what stories were both appropriate and amenable to remediating into a game form. This led them to recasting the Flying Head and Stone Giant as “bosses,” the powerful enemies that wait at that end of a game level; using the convention of “hints” to assist the player in discovering hidden abilities or weapons; and transforming items of lore into material objects in the landscape.

The curriculum we developed for the Skins Workshops focused on three modules: 1) Aboriginal storytelling, 2) design, and 3) development.²⁰ While workshops dealing with design and development are plentiful, our workshops distinguished themselves through the first element, that of Aboriginal storytelling. This element incorporated two components, one of which is the telling of stories by community members and the other a critical level where we discuss Aboriginal storytelling techniques and the role these stories play in the community.

Our goal with the storytelling module is to immerse students in the rhythms, texture, and performance of the stories while simultaneously showing them how those stories are structured. An understanding of that structure is central to the ability to transform it, to remediate it from an oral form into a playable form. This, in turn, lays the groundwork for embracing networked technology as potential sites of cultural expression. It is important that participants learn that the storytelling techniques in their community lie on a continuum with those of digital media, and that they do not lie on either side of some insurmountable cultural or epistemological divide.

STRUCTURES AND SYSTEMS II

“Maybe you can run that one by me again,” Bobby said, around a mouthful of rice and eggs. “I thought you already said it’s not a religion.”

Beauvoir removed his eyeglass frames and sighted down one of the earpieces. “That wasn’t what I said. I said you didn’t have to worry about it, is all, whether it’s a religion or not. It’s just a structure. Let’s you an’ me discuss some things that are happening, otherwise we might not have words for it, concepts. . . . If you want, we’re concerned with systems.” —*William Gibson*

Cree/French Métis artist and critic Ahasiw Maskegon-Iskwew wrote about how language can help us make a connection between the known, the unknown, and the unknowable:

In Cree Language, Nehiyawewin, metaphor and metonymy are not simply pointers to similarity. They describe the threshold of transformation and shifting states of being... In Cree culture, language and any creative act of communication are reflections of our awareness that, despite its depth, we have a meagre, perhaps minuscule and certainly contingent understanding of the complex net of forces and beings that surround, shape and extend beyond human knowing.²¹

We can read Gibson, imagining the emergence of a self-aware entity in cyberspace, as operating in the same mode as Maskegon-Iskwew as he grapples with the necessity of metaphor in illustrating the “complex net of forces and beings” that surround us. In Gibson’s world of the near-future, the first flickers of artificial consciousness would be “beyond human knowing.” The artificial intelligence forming in the matrix is of such complexity as to be beyond the grasp of thought patterns limited to logical rationalism; it understands the epistemological challenge its existence poses and so reaches deep into the human dreaming to root around until it finds forms that could serve as boundary objects between it and human intelligence. Gibson’s artificial intelligence uses Haitian voodoo avatars as its form templates, and thus a group of Haitian characters, already steeped in the necessary cultural knowledge, are best able to communicate with it.

If we take Maskegon-Iskwew’s use of metaphor to bridge the supernatural and the natural and extend it with Gibson’s use of a culturally specific system of knowing as a metaphor for interfacing between the human and the artificial, we find a way to traverse a terrain stretching from the spirit to the human to the machine worlds. Consider, in the same vein, Na-Cho Nyak Dun storyteller Louise Profeit-Leblanc, in her essay “Stories Have Their Way with

Us.” Reflecting on a story told by Old Jenny, an elder in her village, Profeit-Leblanc writes:

It would have been interesting had Jenny been able to see, today, what satellite communications have done for the world, and how things have changed since the Internet was introduced. I am not certain that this would have intrigued her — it might simply have been interpreted as a tool for aiding travel in unknown environments.²²

In other words, Native people have been employing such systems and structures for millennia; there is no reason why we cannot grasp the structures and systems of cyberspace just as well, and make them our own.

We might explore going even further down this conceptual path. As Cheryl L'Hirondelle articulated in early discussions for this book, to use the Unix traceroute utility to map the path of a message packet through the Internet is to reanimate layers of the network that reach back to the first peoples of this continent. One can imagine the spirits of our ancestors inhabiting those networks, whispering to each far below the error correction and noise suppression, continuing their commerce with one another, speaking forward into the future — the spirits in the tree and the stone and the stream becoming the ghosts in the machine.

GO AHEAD, CALL IT A VISION QUEST

A little visiting with my ancestors, a little recon with my role models . . . —*Hunter*

TimeTraveller™ is the major artistic project undertaken by Aboriginal Territories in Cyberspace. Created, written, and directed by Fragnito, it is the story of Hunter, a young Mohawk man in the twenty-second century, lost and adrift in a high-tech society that has cut him off from his ancestors. He uses an emerging tech-

nology called TimeTraveller™ to revisit events of importance to the First Nations people of Turtle Island. As he travels through his past, Hunter participates in historical events in order to better understand how he can best integrate his heritage with his hyper-modern life and build a personally meaningful vision of the future.

We share some of the past with Hunter — the past that exists prior to this moment. We get to experience that past first-hand, through the eyes of the Native people involved rather than through the eyes of the colonists. This provides an alternative reading of historical events that compensates somewhat for the biases of conqueror history.

But a portion of Hunter's past, which runs from this moment to his present in 2112, is our future. This allows Fragnito to trace out the development of a future where the Native community, aided by the highest birth rate on the continent, has reasserted itself as the majority culture. The consequences of this change are many, and Fragnito explores several of the more interesting ones, but it is also important to note that the return to Native majority happens through procreation rather than through the destruction wrought in Hill's "After the Dance."

Fragnito thoroughly researches the events, location, eras, and individuals represented in each *TimeTraveller™* episode — Mohawks in Kahnawake and elsewhere, other nations in the Haudenosaunee Confederacy, the Aztecs, the Dakota Sioux, the American Indian Movement, and so on. Over ten episodes, Hunter crisscrosses Turtle Island, visiting events such as an Aztec festival in pre-contact Tenochtitlan in 1490, the Minnesota Massacre in 1862, the occupation of Alcatraz in 1969, the Oka Crisis in 1990, and the Manitouahbee Intergalactic Pow Wow of 2112. Fragnito uses the history as a launch point both for reimagining the historical accounts from a Native viewpoint and for tracing lines forward from the actual present into a fantastical future. In so doing, Fragnito is creating a new mythology and an original set of stories to illustrate the values of an imagined future Native culture.

The content of the series engages science fiction; so does the form. Hunter's story is told via machinima, a medium that began emerging in the early 2000s. Machinima relies on real-time engines from video games and virtual worlds to create cinematic computer animations that are captured to video. The artist then takes the output from these processes and creates the artwork, which can be as varied as linear video clips, recorded game sessions, or live performances. Its emergence is as an offshoot of the explosive growth of digital gaming and virtual environments.²³ Fragnito believes the metaverse — the post-Gibsonian virtual space imagined by Neal Stephenson in his novel *Snow Crash* — is a fast-approaching reality. She uses Second Life for making her machinima in large part because she sees the massively multiplayer online virtual environment as embodying an early version of the Stephenson's metaverse.

Machinima is also an approach that materialized an ethos of, as Métis/Tlingit curator Candice Hopkins has written, "making things our own."²⁴ Machinima repurposes commercial technology to allow gamers to turn the characters, settings, and props of their favourite games into ingredients for stories of the gamers' own choosing. Such repurposing resonates with Fragnito's long-standing interest in how modern technology can be repurposed by Native people to tell our stories. Second Life's low-res textures and low-polygon count characters and objects also create a sense of future-retro, a visual feel that serves as subtextual commentary on the relationship between actual and imagined futures.

NEW GRAMMARS, NEW CONVERSATIONS, NEW TECHNOLOGIES

My gifts are meagre and stingy little things.—Ahasiw Maskegon-Iskwew

In this essay, I have sought to motivate a deep engagement by Native people in both the media and technologies of cyberspace.

We live in a complex world where the stories we tell ourselves and others are both metaphor and material, and by involving ourselves in the structures and systems that construct cyberspace we have an opportunity to bring our magic into the matrix. The Aboriginal Territories in Cyberspace effort is but one possible path forward to such a goal, one that centralizes our traditions in our own artwork and promotes the participation of a wide range of Native creators in shaping the construction efforts.

Much more work needs to be done. AbTeC itself has not started on the third goal mapped out in our manifesto, “whereby young Aboriginal people . . . move from new media technology consumption to production to development, and bring that production and development activity back to the reserve.” The Skins Workshops focus on creative production, but an understanding of and participation in technology development will be necessary before we can really hope to help shape the future of cyberspace in its fundamental, ontologically consequential foundations. That work should be done as much as possible from within the community, to keep it grounded in the stories — the metaphors, the systems, and the structures — of the community.

Both the Skins and *TimeTraveller*TM projects are still using tools developed by and for non-Native cultures. What happens when we seriously approach the problem of designing and building computational paradigms based on different epistemological structures — Mohawk or Cherokee, for example? Would such systems even be recognizable as “computational”? What happens when we expand the Skins’ focus on Aboriginal narrative and representation to include ideas about Aboriginal gameplay, mechanics, and structure? The critical success of efforts such as *Braid*²⁵ and *Passages*,²⁶ with their innovative and unexpected approaches to time and teleology, suggest that the grammar for video games remains up for grabs. What is true in the video game domain is true for digital media in general. The more designers — Native and non-Native — push on that grammar, the more likely we are to end up with tools that are

better able to accommodate substantially new systems and structures for computationally based approaches to communicating our stories.

ENDINGS AND BEGINNINGS

The best way to predict the future is to invent it.—*Alan C. Kay*

We cannot predict the future through sheer mental effort. Yet we do know that a great building project is underway, and, as Kay observes, the only way to predict where it is going is to participate directly in it. I have argued elsewhere for Native people to grasp the unprecedented opportunities that digital networked media have for telling our stories our way and, in the process, ameliorate the pernicious effects of five hundred years of being objectified by Western media technologies. Now it is time to look forward, to continue that work by teaching ourselves not only how to use these technologies but also how to make these technologies. We have the opportunity and the obligation to involve ourselves intimately in the shaping of the structures and systems in which we will be living for the next five hundred years. We can and should sail the old sea and the new. In so doing, we Aboriginal new media creators can contribute to developing a better dance, and better prayers.

ACKNOWLEDGMENTS

I would like to thank Skawennati Fragnito, without whom AbTeC would have never been dreamed into existence. I would also like to thank Beth A. Dillon for her assistance researching aspects of this paper, and Kerry Swanson and Steve Loft for arranging the contributors' workshop that helped clarify a number of the themes. I am deeply grateful for the talented artists, academics, and students at Obx Labs and AbTeC who have enriched my thinking on all these topics. The research/creation effort underlying this essay

was supported by the Hexagram Research Institute at Concordia University, the Social Sciences and Humanities Research Council, Fonds de recherche sur la société et la culture, the Canada Council for the Arts, and the McConnell Foundation.

WORKS CITED

- Avatar. Directed by James Cameron. Twentieth Century Fox Film Corporation, 2009.
- Dillon, Grace. *Walking the Clouds: An Anthology of Indigenous Science Fiction*. Tucson: University of Arizona Press, 2012.
- Dillon, Beth A. "Native Representation in Video Games." <http://vimeo.com/25991603> (accessed April 22, 2012).
- Facebook Fact Sheet. Facebook. <http://newsroom.fb.com/content/default.aspx?NewsAreaId=22> (accessed April 22, 2012).
- Fragnito, Skawennati. *CyberPowWow*. Nation 2 Nation, 1998–2002. Web.
- . *TimeTraveller™ Episode 1*. Montreal: Aboriginal Territories in Cyberspace, 2009.
- Hill, Richard. "After the Dance." In *Close Encounters: The Next 500 Years*, edited by Candice Hopkins, Steve Loft, Lee-Ann Martin, and Jenny Western, 54–61. Winnipeg: Plug In Editions, 2012.
- Kinew, Wab. "Heroes." *Mide Sun Mixtape*. MP3. Self-published, 2010.
- Gibson, William. *Mona Lisa Overdrive*. New York: Victor Gollancz, 1988.
- . *Neuromancer*. New York: Ace, 1984.
- Harrel, D. Fox. "Algebra of Identity: Skin of Wind, Skin of Streams, Skin of Shadows, Skin of Vapor." *CTheory*, October 12, 2005. Reprinted in *Critical Digital Studies*, edited by Arthur Kroker and Marilouise Kroker, 158–74. Toronto: University of Toronto Press, 2008.
- . "Computational and Cognitive Infrastructures of Stigma: Empowering Identity in Social Computing and Gaming." *Proceedings of the 7th Association for Computing Machinery (ACM) Conference on Cognition and Creativity*, 49–58. New York: ACM Press, 2009.
- Hopkins, Candice. "Making Things Our Own." *Horizon Zero* 17 (2004), *Aboriginal Story in Digital Media*. Banff: Banff New Media Institute. <http://www.horizonzero.ca/textsite/tell.php?is=17&file=4&tlang=0> (accessed April 22, 2012).
- jcr13. "Exclusive Preview: Braid." *Arthouse Games*. February 5, 2007. <http://www.northcountrynotes.org/jason-rohrer/arthouseGames/>

- seedBlogs.php?action=display_post&post_id=jcr13_1170707395_O&show_author=1&show_date=1 (accessed April 10, 2012).
- Kassan, Peter. "A.I. Gone Awry: The Futile Quest for Artificial Intelligence." *Skeptic* 12, no. 2 (2006): 30–39.
- Kay, Alan C. "Predicting the Future." *Palo Alto: Stanford Engineering* 1, no. 1 (1989): 1–6.
- Lameman, Elizabeth Aileen, and Jason Edward Lewis. "Skins: Designing Games with First Nations Youth." *Journal of Game Design and Development Education* 1, no. 1 (2011): 63–75.
- . "Call It a Vision Quest: Machinima in a First Nations Context." *Understanding Machinima: Essays in Film-making in Virtual Worlds*, edited by Jenna Ng. New York: Continuum, 2012.
- . "TimeTraveller™: A Case Study in Nonverbal Communication in Second Life." In *Nonverbal Communications in Virtual Worlds*, edited by Joshua Tanenbaum, Magy Seif el-Nasr, and Michael Nixon. Pittsburgh: ETC Press, 2012. In press.
- Lewis, Jason Edward, and Skawennati Fragnito. "Aboriginal Territories in Cyberspace." *Cultural Survival Quarterly* 29, no. 2 (2005): 29–31.
- . *Skins 1.0: Rise of the Kanien'keha:ka Legends*. Documentary video. Montreal: Aboriginal Territories in Cyberspace, 2010.
- Maskegon-Iskwew, Ahasiw. "Nehiyawein & Virtual Reality: Talk Indian to Me (Part Two)." <http://www.reg.trlabs.ca/artists/ahasiw/cree1.htm> (accessed April 22, 2012).
- Otsi:!
Rise of the Kanien'keha:ka Legends. Montreal: Aboriginal Territories in Cyberspace, 2009. <http://otsi.abtec.org>.
- Pearce, Celia. *Communities at Play: Emergent Cultures in Multiplayer Games and Virtual Worlds*. Cambridge, MA: MIT Press, 2009.
- Profeit-Leblanc, Louise. "Stories Have Their Way with Us." *Horizon Zero* 17 (2004), Aboriginal Story in Digital Media. Banff: Banff New Media Institute. <http://www.horizonzero.ca/textsite/tell.php?tlang=0&is=17&file=8> (accessed April 22, 2012).
- Rutkoff, Aaron. "The Game of Life: Players Get Married, Age in Five-Minute Indie Game." *Wall Street Journal*, January 25, 2008. <http://online.wsj.com/article/SB120034796455789469.html>. Accessed June 13, 2012.
- Second Life. San Francisco: Linden Labs, 2003. Accessed February 18, 2012.
- "Skinning Our Tools: Designing for Context and Culture." Workshop convened by Sarah Diamond. Banff: Banff New Media Institute, 2003. http://www.banffcentre.ca/bnmi/programs/archives/2003/skinning_our_tools/default.aspx (accessed March 18, 2012).
- Star Trek: The Next Generation*. Created by Gene Roddenberry. Television series. Paramount Television, 1987–94.

- Stephenson, Neal. *Snow Crash*. New York: Bantam Spectra, 1992.
- The Adventure of Skahion:ati: Legend of the Stone Giants*. Montreal: Aboriginal Territories in Cyberspace, 2010. <http://skins.abtec.org/skins2.0/executables>.
- Todd, Loretta. "Polemics, Philosophies, and a Story: Aboriginal Aesthetics in the Media of this Land." *Transference, Tradition, Technology: Native New Media Exploring Visual and Digital Culture*, edited by Melanie Townsend, Dana Claxton, and Steve Loft, 104–24. Banff: Walter Phillips Gallery, 2005.
- . "Aboriginal Narratives in Cyberspace." *Transference, Tradition, Technology: Native New Media Exploring Visual and Digital Culture*, edited by Melanie Townsend, Dana Claxton, and Steve Loft, 152–63. Banff: Walter Phillips Gallery, 2005.
- Winograd, Terry, and Fernando Flores. *Understanding Computers and Cognition: A New Foundation for Design*. Norwood, NJ: Ablex, 1986.

NOTES

- 1 Wab Kinew, "Heroes," *Mide Sun Mixtape*. Self-published, 2010. mp3.
- 2 Richard Hill, "After the Dance," in *Close Encounters: The Next 500 Years*, ed. Candice Hopkins, Steve Loft, Lee-Ann Martin, and Jenny Western (Winnipeg: Plug In Editions, 2012), 60.
- 3 N. Scott Momaday, "The Man Made of Words," in *The Remembered Earth: An Anthology of Contemporary Native American Literature*, ed. Gary Hobson (Albuquerque: University of New Mexico Press, 1979), 167.
- 4 Grace Dillon, *Walking the Clouds: An Anthology of Indigenous Science Fiction* (Tucson: University of Arizona Press, 2012), 10.
- 5 Jason Edward Lewis and Skawennati Fragnito, *Skins 1.0: Rise of the Kanien keha:ka Legends* (Montreal: Aboriginal Territories in Cyberspace, 2010). Documentary video. 05mm30ss.
- 6 Skawennati Fragnito, *CyberPowWow*, Nation 2 Nation, 1998–2002. Web <http://www.cyberpowwow.net/nation2nation/> (accessed April 22, 2012).
- 7 Jason Edward Lewis and Skawennati Fragnito, "Aboriginal Territories in Cyberspace," *Cultural Survival Quarterly* 29, no. 2 (2005): 29–31.
- 8 Participants: Mohannad Al-Khatib, Yannick Assogba, Christian Beauclair, Lysanne Bellemare, Hugues Bruyère, Shira Chess, Beth A. Dillon, Shanly Dixon, Thibaut Duverneix, Ken Finney, Skawennati Tricia Fragnito, Thierry Giles, Heather Igolliorte, Katherine Isbister, Morgan Kennedy, David Krouse, Myron A. Lameman, Maroussia Lévesque, Jason Lewis, Alison Reiko Loader, Steven Loft, Raed Mousa, Bea Parsons, Celia Pearce, Cindy Poremba, Louise

- Profeit-LeBlanc, Bonnie Quaite, Steven Keewatin Sanderson, Bart Simon, Miao Song, Richard Van Camp, and Elie Zananiri.
- 9 Loretta Todd, "Aboriginal Narratives in Cyberspace," *Transference, Tradition, Technology: Native New Media Exploring Visual & Digital Culture*, ed. Melanie Townsend, Dana Claxton, and Steve Loft (Banff: Walter Phillips Gallery Editions, 2005), 155.
- 10 Terry Winograd and Fernando Flores, *Understanding Computers and Cognitions: A New Foundation for Design* (Norwood, NJ: Ablex Publishing, 1986): xi.
- 11 Peter Kassan, "A.I. Gone Awry: The Futile Quest for Artificial Intelligence," *Skeptic* 12, no. 2 (2006): Web http://www.skeptic.com/reading_room/artificial-intelligence-gone-awry/ (accessed April, 22 2012).
- 12 D. Fox Harrell, "Algebra of Identity: Skin of Wind, Skin of Streams, Skin of Shadows, Skin of Vapor," *CTheory*, 12 October 2005. Reprinted in *Critical Digital Studies*, ed. Arthur Kroker and Marilouise Kroker (Toronto: University of Toronto Press, 2008), 160.
- 13 D. Fox Harrel, "Computational and Cognitive Infrastructures of Stigma: Empowering Identity in Social Computing and Gaming," *Proceedings of the 7th Association for Computing Machinery (ACM) Conference on Cognition and Creativity* (New York: ACM Press, 2009), 49.
- 14 Facebook Fact Sheet. Facebook. <http://newsroom.fb.com/content/default.aspx?NewsAreaId=22> (accessed April 22, 2012).
- 15 *Skins 1.0: Kahnawake Survival School*. directed by Jason Lewis and Skawennati Fragnito. Video documentary: 00mm20ss. <https://vimeo.com/6908429> (accessed April 22, 2012).
- 16 "Skinning Our Tools: Designing for Context and Culture," Workshop convened by Sarah Diamond (Banff, AB: Banff New Media Institute, 2003). http://www.banffcentre.ca/bnmi/programs/archives/2003/skinning_our_tools/default.aspx (accessed April 1, 2012).
- 17 Celia Pearce, *Communities at Play: Emergent Cultures in Multiplayer Games and Virtual Worlds* (Boston: MIT Press, 2009).
- 18 *Native Representation in Video Games*, directed by Beth A. Dillon. <http://vimeo.com/25991603> (accessed April 22, 2012).
- 19 *Otsi: Rise of the Kanien'keha:ka Legends* (Montreal: Aboriginal Territories in Cyberspace, 2009). <http://otsi.abtec.org>, video game, and *The Adventure of Skahion:ati: Legend of the Stone Giants* (Montreal: Aboriginal Territories in Cyberspace, 2010). <http://skins.abtec.org/skins2.0/executables>, video game (accessed April 18, 2012).
- 20 Beth Aileen Lameman and Jason Edward Lewis, "Skins: Designing Games with First Nations Youth," *Journal of Game Design and Development Education* 1, no. 1 (2011): 63–75.

- 21 Ahasiw Maskegon-Iskwew. "Nehiyawein and Virtual Reality: Talk Indian to Me (Part Two)." <http://www.reg.trilabs.ca/artists/ahasiw/cree1.htm> (accessed April 22, 2012).
- 22 Louise Profeit-Leblanc, "Stories Have Their Way with Us," *Horizon Zero, Issue 17 Aboriginal Story in Digital Media* (Banff, AB: Banff New Media Institute, 2004). <http://www.horizonzero.ca/textsite/tell.php?tlang=0&is=17&file=8> (accessed April 15, 2012).
- 23 Elizabeth LaPensée and Jason Edward Lewis, "TimeTraveller™: A Case Study in Nonverbal Communication in Second Life," in *Nonverbal Communications in Virtual Worlds*. ed. Joshua Tanenbaum, Magy Seif el-Nasr, and Michael Nixon (Pittsburgh, PA: ETC Press, 2012), 94.
- 24 Candice Hopkins, "Making Things Our Own," *Horizon Zero, Issue 17 Aboriginal Story in Digital Media*. (Banff, AB: Banff New Media Institute, 2004). <http://www.horizonzero.ca/textsite/tell.php?is=17&file=4&tlang=0> (accessed April 22, 2012).
- 25 jcr13, "Exclusive Preview: Braid." Arthouse Games, February 5, 2007 http://www.northcountrynotes.org/jason-rohrer/arthouseGames/seedBlogs.php?action=display_post&post_id=jcr13_1170707395_0&show_author=1&show_date=1 (accessed April 10, 2012).
- 26 Aaron Rutkoff, "The Game of Life: Players Get Married, Age in Five-Minute Indie Game," *Wall Street Journal*, January 25, 2008 <http://online.wsj.com/article/SB120034796455789469.html> (accessed April 10, 2012).