Electric Beads: On Indigenous Digital Formalism

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It begins as a small point of light in a dark room. A second glowing square quickly materializes, then a third, and in rhythmic succession at the rate of four a second a chain of thousands coils around the first and forms a spiral. Early on you wonder if the pixel colours are arbitrary or intend to picture. It takes several dozen silent beats of light before what might be a face emerges. Then yes, it is a face, a mature woman, she smiles. Fifteen minutes and 3,600 pixels later, her portrait fills the center of the black screen. Jon Corbett's "Four Generations" (2015) is a single-channel video featuring members of his family. The steady, leisurely development of each likeness is mesmerizing. Intellectually, we know that raster images are made up of little pixels that blend in the eye to produce a picture. But there is an almost tactile pleasure in seeing the pixels enlarged and their pace sedate. Like the frustration and delayed gratification of assembling a jigsaw puzzle, witnessing the image plod into resolution builds anticipation and promises release. You may also feel a sense of creative participation, of co-producing the picture. Slow attention renders the known magical.

If you are of a certain vintage, you may have experienced this haptically. Lite Brite (1967) is a light box toy with a pegboard screen covered by a black paper template printed with a paint-by-number like grid of letters corresponding to the colours of plastic pegs. Puncture the paper with a peg and it glows red, green, or one of six other colours. As a kid, this is quite a thrill. The next fun comes as the bits slowly generate a clown face. It gets boring, fast. Once you run out of templates, and you get bored of some pointillist free styling on blank black construction paper, the box ends up on a closet shelf. Pioneering video game graphics are similarly blocky and flat, yet more engaging. They were like an animated Lite Brite, but with a mind of its own. You forgave Pac Man its crudeness because interactive pictures were novel. But the action, while absorbing, could not be mistaken for the real world. Eventually, the novelty wears off and new thrills must be produced. Contemporary games are so refined as to appear real, even hyperreal. They have evolved into interactive films that play you as you play them. High-resolution digital graphics are a medium, a thing we pass through to get to something interesting. The better the graphics the easier their artifice is to ignore. You look at paintings, but you enter a video game.

While many artists work this trompe l'oeil aspect to create portals for viewers to fall through and into content, other artists want participants to be aware of the medium and enjoy it for its own sake. Those in this latter camp typically have a fondness for archaic tech. They revisit the overlooked, abandoned and glitchy to savour their sticky charms. While digital illusionists are about speed, digital formalists slow things down. They take things apart and repurpose them, often emphasizing tech's tactility. They want to understand what these things are and what they can be made to do beyond their designer's intentions. Electric tech takes great pains to conceal itself behind design. High praise for an engineer is to not notice their work. This sort of tool is at its best when it

disappears from public awareness and only its function is engaged. Formalist electronic art desires the opposite. It is about rolling design around in your mouth. The form is its function. While much of this work is non-representational, some artists, such as Corbett, strive for the sweet spot when, like late Chuck Close paintings, an image is as readable as the abstract formal elements that go into its making. Bistable pictures cause our minds to oscillate between enjoying the form and recognizing the image.

Eadweard Muybridge's stop-motion photography decelerated the visual world so we could contemplate its workings. Similarly, Corbett's "Four Generations: digitally generated spiral-beaded portraits" decelerates computer imaging to reveal its tactile origins. His title refigures pixels as "beads" to draw an association between digital imaging and its ancient precursors in beading, but also quilling, mosaics, weaving, and embroidery. And, as a Métis,[i] he coaxes viewers into recognizing that Indigneous people have practiced digital imaging since time immemorial. Corbett also wants to show that Indigenous people and creativity persist in the computer era. He does this by bringing likenesses of his Cree-Saulteaux grandmother, his father, himself, and his son into digital space in a way that honours their customary material culture. Just as the four generations embody the continuance and evolution of an Indigenous people, so do Corbett's electric beads continue and adapt Métis culture.

A beaded Métis vest can be enjoyed as a visual object by anyone. But makers have more complex and intimate relationships with these articles. They need to touch them to release their full knowledge. Stitching styles and backing are examined, spacing and thread tension evaluated. Running fingers over the surface tells you about care, attention and skill level. Are there innovations to the familiar design tropes, hints of an individual personality? Smell the garment for wood or tobacco smoke, for sweat; contemplate the maker's living conditions, her relation to the wearer. This is all part of participating in the work. Even ordinary examples of the hand-made condense time, display labour and knowledge. Art historian Sherry Farrell Racette (Timiskaming/Métis) describes beading as a form of prayer.[ii] It is a repetitive meditative act that requires attention, but it also produces introspection, wistfulness, and other thoughts, images, feelings, and sensations—resulting in threads that are too tight and bulging beads that must be cracked off.[iii] Historically, Métis were Roman Catholics. They prayed with a loop called a rosary. Some were simple knotted cords; most were a string of wooden beads. You hold an individual bead between thumb and forefinger, recite a prayer and move to the next, and so on until the circuit is complete. In each section (decade) you are to reflect on specific aspects of the life of Mary and Christ, but typically the rote repetition leads to a free flow of thoughts. Quipu is a form of Incan record keeping using knotted strings. Depending on the cord's colour, the type and spacing of the knots *khipu kamayuq*, a professional quipu reader, could recite anything form accounting information and census data to the royal lineage. They were also mnemonic devices that enabled historians, storytellers, and poets to remember narrative elements.[iv] Indigenous beading participates in this lineage, softly. While each bead does not encode such specific information, as do rosaries and quipu, their patterns record and announce the maker and wearer's affiliations, sections do remind the beader what they were thinking during that passage, what was going on in their lives.

Phenotyping is an unreliable way to determine if someone is Métis or not. We appear European or First Nations depending as much on blood quantum as observer expectations. In any case, of members of the nation tend to identify more as a People than a race. Even so, I find myself scanning Prairie faces for signs of kinship, and family photo albums for varieties of visual Indigeneity. The visual narratives of interconnectedness, loss, and the desire for recovery are written into every "Four Generations" face and are legible to any similarly positioned Métis. Corbett beads these people to record, remember and keep them together, not only as a family but also as Métis. It is an act of will fueled by an ancient need. He enlarges the pixels and retards the imaging processing so viewers can see how digital pictures are made, and also to make them more like beads. He wants to make an almost handmade thing of digital imaging. That the work remains virtual despite his efforts only increases the poignant melancholy of photographic portraiture, our wish to preserve those who will inevitably pass. Perhaps in acknowledgement of the sensory limitations of the virtual beading, Corbett also makes real beaded portraits of his family. Learning this skill was a way to physically reconnect with his Métis heritage and to bring his family along on his journey. He describes this inter-generation both literally and figuratively: "As each generation completes, the beading is 'undone' from the center to make room for the next generation. As the beads continue to undo, a new portrait is started at the same point as the previous. Then the cycle continues."[v]

To be Indigenous in northern Turtle Island is not only about preserving and embodying First Nations, Inuit, Métis ways of knowing, being and doing. It also means adapting. We[vi] would not have survived if we did not respond creatively to changing environments. Indigenization is the appropriation and repurposing of non-customary things and ways. Many shells found in powwow regalia, for example, come from the Gulf of Mexico. Customary material culture was not static. Trade shaped it. Métis are known as "the flower bead people" for our elaborately beaded clothes. Those beads came from Venice and Bohemia. Glass beads displaced Indigenous hand-cut shells beads, and also caused a decline in quillwork. New technology can damage traditional culture and people if taken in too quickly and uncritically. They can also improve and help societies adapt if they are absorbed on that culture's own terms and timetable. Outliers—artists, two-spirited folk, the young, and so on—are often the first to experiment with novelties, and find ways to make them compatible and useful, or not.

Corbett indigenizes the digital medium first by using it to display Aboriginal content. This may seem a minor achievement, but the representation of Indigenous people by Indigenous people in a colonial state is always an act of sovereignty. This is particularly true of Métis. We are barely part of the Canadian imaginary and are incompletely known to even ourselves. Next, Corbett, a computer programmer for over three decades, re-engineered the digital format to express his content in a more Indigenous way. The colonial imaginary is ruled by analytic perspective. This Renaissance invention did not just allow paintings to more convincingly depict space, but also enabled a new kind of visualization and environmental planning that reshaped the world. Analytic perspective allowed people to design spaces and buildings for sites they never saw. They could picture a garden, a farm, and even whole towns at their desks, and then send the plans to engineers and builders who could adapt the terrain to suit the designs. Hills were leveled,

lakes filled and populations displaced to better suit the graphic imagination. Perspective allowed the natural world to be pictured, surveyed, tamed and restructured. Before perspective, European cities were circular, expansive, and grew organically. Once applied to urban planning, sections of old cites were destroyed to make way for the grid; and new cities—such as New York under John Randel, Jr.—were designed in advance. By the nineteenth century, particularly on the Great Plains of Turtle Island, surveyors preceded invasion and settlement. The Métis Resistances of 1869 (Red River) and Batoche (1885) were both sparked by resistance to the application of the colonizing grid over existing designs.[vii]

Digital space retains this colonial heritage. Screens are grids and their illuminating pixels occur in horizontal rows. The word 'raster', as in raster image, is from the Latin 'rastum' or rake, a mechanical tool that makes regular parallel lines for agriculture. It could have been otherwise. Pixels could, for example, be hexagons inhabit a honeycomb plane. Squares are more efficient. The results of favouring efficiency and virtual over organic reality is where the Indigenous and non-Indigenous continue to clash. Conscious of the imperialist history of the grid, Corbett felt the need to re-tool his digital environment, to Indigenize it. His did not by filling the old container with Métis content, he refiguring the container to better suit his purpose. He designed software that allows his dots/beads to flow in a spiral instead of a grid. Spirals are more in tune with a Native sense of time. This redesign announces Indigenous difference and has those in the grid rethink their options.

What does it mean to be an Indigenous settler in cyber space? Cyberspace is often described as a tabula rasa, a blank slate. From an Indigenous point of view, this metaphor is reminiscent of European claims that Turtle Island was terra nullius waiting to be filled and developed (by pale people). From a colonial mentality, cyberspace is empty. For Natives, it is already filled, by concepts. Even before the first pixel was launched into the void, particular histories, race, class, gender and temperamental preferences already haunted and determined the territory. Indigenous peoples, too, enter this space carrying their prior formation. Some try to assimilate, to pass. Others refuse to reproduce patriarchal, racist, hetero-normative and capitalist old world in this new one—or try to. Resistance is stressful. I apologize for not deepening this thread with a discussion of Jason Lewis and Skawennati's[viii] important work, but I have little space and other fish to fry.

At a recent gathering of Indigenous artists, curators, thinkers and activists who were in Vancouver to consider Indigenous public art,[ix] composer, Raven Chacon announced that he was going to play a recording he made of a desert, a site considered among the quietist places on earth. Many giggled. It seemed a John Cage-like conceptual art project. I was intrigued. A few months earlier, I was berry picking with artists Bo Yeung and Dylan Miner about an hours drive west of Dawson City, near the Yukon/Alaska border. Nothing human-made in sight. No traffic, no birds or other animals either. Not even wind. I was overwhelmed by the lack, especially of sound. I felt the atmosphere as pressure. I can ignore my tinnitus when there are competing sounds; but there, nowhere, my malfunctioning head was an oppression I could not have bourn for long. I read that in an

anechoic chamber sound is so completely absorbed that you can hear your blood circulate and joints creak.[x] Despite the nearby company, I experienced a surge of existential anxiety, a feeling of being alone in a silent universe. I was curious if a recording could capture that feeling and dreaded the possibility. Chacon turned on his track, nothing. He then slowly increased the volume until the roar threatened to push us from the room.

As the noise increased, I wondered if the sound was an artefact of the equipment, recording its own mechanisms rather than offering a true account of the site. Perhaps Raven was making us aware that our sense perceptions and the tools that amplify them limit and distort our apprehension of the real world. Because he is Navajo, I considered the possibility that there was an Indigenous teaching here. Perhaps the recorder worked fine and represented the desert's audioscape accurately. Were we listening to the sound of everything we could not hear unaided? My feeling in either case was of the relatively feebleness of human beings when compared with machines and nature. For me, Raven Chacon offered an opening not only to the tangible realm beyond our unaided senses but also a hint of the spiritual realm that infuses that territory.

I have heard versions of the following story by several First Nations storytellers, most recently from Syilx knowledge keeper, Richard Armstrong. In short, the Creator presents his most recent creation to the other animals and plants. They are surprised by the poor workmanship. The new beings seem ill suited to the environment. People have thin, hairless and sensitive skin, only two legs, weak fingernails instead of claws and so will be hopeless hunters, and they are subject to many illnesses. The animals find people pitiful. But rather than reject them, they conspire to protect and nourish them. The buffalo and deer offer their hide for clothing and shelter, and meat for food; the plants offer themselves as medicine; and so on. The story's meanings increase with time and repetition. We can make rational and associative sense of it in many ways, but its affective resonance exceeds language. I heard the story most recently with a small group of Indigenous and non-Indigenous students, artists, and professors at the University of British Columbia Okanagan campus on the edge of Kelowna. We sat in a circle under pine trees, seeking shade from the July heat. A squirrel and birds visited while we listened. The ground was rocky and uneven; pine needles penetrated my pants. The longer I sat the more I noticed, smelled, heard, and felt what was around us beyond and entwining the storytelling. All these elements became part of that iteration of the story.

This story comes to mind when considering Corbett, Chacon and the possibilities for Indigenous uses of new media. Both artists find in electric technology a forest of possibilities analogous to nature. That is, like the plants and animals in the Syilx story, new media can make up for our pitiful shortcomings. Technology can expand our senses and increase our capabilities. Problems come, in the case of our relationship with our environment, when we lack humility, when we mistake interdependence for dominion. With new technology, problems come when we lack humility and mistake ourselves for our tools, when we accept the virtual for the real or think that there is a territory that we can possibility enter in which we are not already there.

Indigenous pedagogy centers on listening and doing in relation with the land. What does this mean for Indigenous artists working in cities and with new media? Are we Native no longer when entering cyberspace? Although there are numerous profound and contrary examples, it remains the case that cyberspace, especially interactive gaming, was founded and developed by men as a male lodge. And, because they continue to dominate that territory, men find the air a clean and clear medium and the space infinite. But for others the atmosphere can be stale and the space oppressive. It is easier to breathe if you set up your own settlement, or if you pass for neutral (male and white). There are Natives who repress their Indigeneity in order to exist in cyberspace, just as there are Native artists who do not express and extend their culture in the hopes of signifying in the dominant art world. In this sense, cyberspace continues the colonial project of Indigenous erasure.

I will close with two risky observations and await correction: on the maleness of Indigenous electronic new media, and the impossibility of non-objective Indigenous art. The artists I chose to discuss here are male. I could not find Indigenous women working in a similar way. While not a tech guy, not a lodge member, I am a man interested in what men are doing, how we are evolving, or not. This might have blinkered my curatorial gaze. All the Indigenous women whose work I know do not deconstruct their hardware and software, are not digital formalists, but use new media to tell stories of the real world. This might be an Indigenous thing more than a gender thing. As mentioned earlier, Corbett and Chacon are not pure digital formalists. I do not know any Native people who are. Unlike their numerous non-Indigenous counterparts in digital imaging and sound art, they do not make non-objective work. Strictly formalist Indigenous art seems nearly impossible to me. Even seemingly non-objective, customary geometric art represents something in the real world. These forms and patterns abstract the environment. And in all Native cultures, colours have sacred meanings and proscribed uses. Finally, simply a matter of logic, to make Métis, Cree, or, for example, Taltan art, or art as an Indigenous person, is already to claim that you and your work are in-formed by your Native culture. Even if a seemingly non-objective Indigenous painter, for example, appears to break from their tradition, if they call themselves Cree, and mean it, their art is available to have Creeness read into it. Non-objective art is a space that only seems available to people who perceive themselves to be unburdened by the need to represent.

David Garneau, July 21, 2017

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[i] Métis are one of three Peoples recognized as Indigenous in Canada's Constitution (1982). The other two are First Nations and Inuit. While the Métis have their origin in the biological mixing of European fathers and Native mothers, since the 1800s Métis communities, primarily but not exclusively on the great Plains, have been recognized by First Nations and Canada as a separate and Indigenous People existing prior to the formation of Canada. See: Andersen, Chris. *Race, Recognition, and the Struggle for Indigenous Peoplehood*. Vancouver: University of British Columbia Press. 2014.

[ii] In numerous conversations.

[iii] Jon Corbett describes his sense of beading time: "Though my mind was quite content at focusing on nothing in particular my perception of passing time would often slow and cease altogether, therefore each

bead marked the passing of time while simultaneously not being associated with time passed." Corbett, John. *Indigitalized: traditional Métis artistic expression in contemporary media art. Masters thesis.* https://www.researchgate.net/publication/288839868_INDIGITALIZED_traditional_Metis_artistic_expression_in_contemporary_media_art [accessed Jul 21, 2017].p. 28.

[iv] Cartwright, Mark. "Quipu." http://www.ancient.eu/Quipu/. Accessed July 19, 2017. Knotted memory aids were also used in ancient China and Hawaii.
[v] Ibid. Corbett, p. 8.

[vi] I am Métis, originally from Edmonton, Alberta, Canada, in Treaty Six territory. I currently live in Regina, Saskatchewan, in Treaty Four.
[vii] Soon after the Canadian nation was formed in 1867, surveyors set out to reorganize settlements following the grid system. This disrupted the Métis system of long "river lots." The imposition of the grid lots led directly to the 1869 Red River Métis Resistance and the 1885 Batoche Resistance. "Manitoba Land Survey Systems," Turtle Mountain–Souris Plains Heritage Association. http://vantagepoints.ca/stories/manitoba-land-survey-systems/. Accessed May 4, 2017,
[viiiviii] See http://www.timetravellertm.com and http://abtec.org/iif/. Both accessed July 20, 2017.
[ix] Indigenous Acts: Art & Public Space Workshop was a workshop organized by Dylan Robinson (Stó:lō) and Candice Hopkins (Carcross/Tagish First Nation), Aug. 4 – 8, 2014 at the Sty-Wet-Tan Longhouse at the University of British Columbia in Vancouver, BC.
[x] McLean, JG. "Acoustics: What does it feel like to be in an entirely soundproof room?" https://www.quora.com/Acoustics-What-does-it-feel-like-to-be-in-an-entirely-soundproof-room accessed, July 18, 2017.