CREE TECHNOLOGY
ceremony with the machine

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Sébastien Aubin

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This is to certify that the thesis prepared

By: <u>Sébastien Aubin</u>

Entitled: <u>CREE TECHNOLOGY: ceremony with the machine</u>

and submitted in partial fulfillment of the requirements for the degree of

<u>Department of Design and Computation Arts Faculty of Fine Arts</u>

complies with the regulations of the University and meets the accepted standards with respect to originality and quality.

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ABSTRACT

CREE TECHNOLOGY ceremony with the machine
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 Sébastien Aubin

I have written in a way to be inclusive of my Cree community. This has allowed me, as a graphic designer and type designer, to basically show how an Indigenous person can allow themselves to use Cree methodologies to explain 'how' and 'why'. The 'how' being the 'process' part of the thesis using figures, explanations and the 'why' using experiential knowledge, narratives and real life.

You will notice that the thesis is arranged in two columns, allowing the reader to either read the 'process' or the 'narrative' or both. Like two rivers diverging yet connected by larger body of water such as a lake. It is very important to distinguish these two aspects of my thesis so that one informs the other.

But at the same time you will notice a gradient of colour (see LEGEND) between the 'process' and the 'narrative' that at moments will allow for the 'process' and the 'narrative' to have a conversation with one another to replicate the fluidity of Cree cosmology so that the information is not binary or seperate.

Also, to diverge from the standard western knowledge sharing of a so-called beginning and end.

Fortunately, there is no beginning and there is no end, just continuity. Hopefully, this will inspire other Cree people to tackle on academic endeavours and allow the floodgates of Cree knowledge to open.

LEGEND
Gradient of colour placed on the middle line between the 'process' and the 'narrative'.

DEDICATION

I dedicate this thesis to my mom, June Spence.

Thank you, I am grateful to you

Kinanâskomitin

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CONTENTS

INTRODUCTION

In the Cree culture, each generation continues the legacy of our ancestors and our relations. This continuity represents the resilience of our culture and our responsibility to the larger community in regard to the work that has been done and that continues to be done. We need to move forward in a positive and inclusive way, allowing a better, more productive dialogue between us.

In this thesis, I hope to elaborate on how I use my culture as the framework for my own understanding, situating myself as an active participant in Cree epistemology and knowledge gathering.

I am hoping that this research, as a graphic designer and type designer, will help push my knowledge of Cree syllabics, and as a Cree, to learn more about traditional and ceremonial knowledge.

What guides my process is perhaps what guided my ancestors—the opportunity to share and perpetuate knowledge, to expand our minds, and to reflect and ask questions, increasing our capacity to avoid and overcome stagnation and dogmatism. We have a tendency to share long periods of silence even when gathering in groups so that we reflect on the energy that surrounds us.

The paper is written like a story in the same way that we tell stories around a fire or at a table sharing time over some freshly steeped tea and eating bannock.

CREE ETHICS INFORM METHODOLOGY
Narrative 1

At the age of six, I was a pow-wow dancer and often the youngest dancer in attendance. Traditional pow-wows foster positive cultural practices, encourage sharing, inspire cultural continuity, and champion the genuine joy of Cree culture. When we take part in a pow-wow, we share our stories and traditions, but a pow-wow is primarily a place where Cree people can continue to practice Cree epistemology. We continue the creation of knowledge and the understanding of our traditions on the basis that we are all here as a community, so that is knowledge shared and passed onto others. This method of creating and sharing knowledge allows knowledge itself to be a living entity. When knowledge is shared, it becomes a part of us, and we become a part of it.

When I write "community," I mean Elders, youth, and everyone in between—the animals, the earth, and all that can be seen and not seen. This form of relationality enables connectivity to everything that surrounds us. It is a state in which we acknowledge that our actions will forever be reflected in the energy that surrounds us, which makes us responsible for our methods and our actions.

At one point during a pow-wow, when I was very young, an eagle feather fell to the ground. It was a feather from a traditional dancer. All the dancers had to clear the space so the dancer who the feather had dropped from could carry out ceremony. It was the first time I had witnessed an event of this kind. When the dancer picked up the eagle feather,

TYPE DESIGN PROCESS

My design process for this Cree syllabic monospace font project thoughtfully considered the impact of design on my community. Placing an emphasis on collaboration with the community and in so creating Cree epistemology.

I am still in conversation with my community and Elders of my community. One of them being my 104-year-old grandmother where she acknowledges my presence but also"puts me in my place". I have a responsibility towards her and what she represents. She is not only wise, but has the honorable responsibility to pass on the values that have made her an integral part of the community. Since she is one of the oldest Cree Elders in Canada, I can safely say that she is Cree epistemology.

Here is a video of me and Granny exchanging: https://vimeo.com/379630781

everything was silent—not even the birds sang, nor wind in the leaves—everyone ... everything, came to a halt.

The man that lost the feather appeared to be murmuring under his breath in Cree. I could not make out what he was saying, but the moment was profound and shared by all who watched and listened. The Elders then stood up and sang in a very low tone, as if the surrounding vibrancy became one with us. As quickly as all this began, it ended suddenly with a strong gust of wind, which brought dust and a deafening sound.

The event I have just described was one of my first experiences of ceremony. It altered my perspective on my surroundings. From that moment onward, I knew that I was not alone. It was a perspective that made me wonder and want to ask questions, to formulate my own questions to help me understand my surroundings. It was my first existential crisis, though not my last. I still ask myself such questions—that's the Cree way of things.

As Cree, we understand and undertake responsibility of and for our surroundings. We acknowledge that everything has a counter-effect on everything else. Each time we share a moment, it is forever. Knowledge is also forever. They can be both interpreted and passed on from generation to generation. This sense of responsibility informs an ethics that is an integral aspect of any methodology undertaken to work on a Cree project.

At the same pow-wow, after we had danced all day over the dynamic sounds of the drummers and singers, I was sitting silently

I encountered problems during the process in making the Cree monospace syllabic font. There was no other Cree monospace syllabic font that I could reference since none were in existence. I based the making of the font on other monospace fonts using the code and methods that had I researched extensively. The sketching of the initial font (that you will find at the end of the reflection) show that I have started the same way I always make a font. First, I sketch the font by hand and then when I am satisfied with a certain direction, I then start drawing them in a vector-based software such as Adobe illustrator.

Secondly, when all the characters have been vectorized I import them in a font producing software such named glyphs. Glyphs is the only software available that can help in fabrication of the syllabic font. Other font software does not permit for you to make or export syllabic fonts. The Cree monospace syllabic font was new to me and even if I had done Cree syllabics fonts in the past using the same method, it did not seem to work in coding software.

with my grandmother in the middle of a field just outside the grounds. She was sitting in a chair, and I was sitting on the soft grass. I picked at the grass with my hands, and she asked me to get some birchbark. She wanted to show me something. At that time, I could not recognize birchbark, so I brought her all the bark I could find. When I dumped it on her lap she simply smiled. She isolated the birchbark and commenced to separate it into very fine layers. She took a thin piece and began folding it into a little bundle until she was able to put a small piece in her mouth. I thought she was going to eat it but she did not, she simply bit down on it for a duration. When she was finished, she removed it from her mouth, unfolded the small bundle, and showed me the outcome.

At that moment my jaw dropped, not only because I had just seen an old lady chew on bark, but because she created a pattern on the bark from biting down on it. In that brief few moments, I learned what birchbark and birchbark-biting was. It is a memory that has stayed with me all this time, and I will always remember it as a very important moment.

Making a Cree monospace font that is usable for coding will build relation with the machine/computer or object. We are going into ceremony with an inanimate object so that we can pass on knowledge to a larger audience, yet at the same time we are establishing a relation towards the inanimate.

The Cree syllabic font is necessary because it enables a conversation with the machine, even if the machine does not understand the language. We speak to and program the

While creating the Cree monospace font, I had the opportunity to work with and for the community. I made the font for coding computers so that we, as Cree, can potentially make kin with the machine. I encountered a few problems along the way but those were fixed. There was a similarity in my learning process of observing the use of birch bark with my process of designing the font through observation and persistence. Maybe the Cree syllabic will introduce itself as a voice for the machine. Creating Cree syllabics may possibly last longer than our own time on earth. Cree monospace syllabics will help in developing, creating and maintaining old and new knowledge.

computer with monospace fonts. Hopefully, by using a Cree monospace font, we can develop a deeper and more complex dialogue than we might expect.

RESEARCH IS CEREMONY
narrative 2

It was a Sunday like any other Sunday. I had no idea that, fortunately, I was about to have an experience that would possibly change my life forever. This was an experience I shared with my father. For a while, we had been looking at wampum belts, trying to decode a hidden message, to see if there were other communicative purposes to the belts beyond their use as tools of reconciliation, storytelling, and treaty. We felt that these objects could have been activated for another purpose, yet we did not know how we could do it. We considered the possibility that, if we entered into ceremony like we would for a ceremonial pipe to activate it, we might further our intuition of the possible knowledge contained in the wampum belt.

In ceremony, the burning of sage and smoking of tobacco allows you to explore the subconscious mind. As smoke fills the room and lungs with carbon dioxide, oxygen becomes limited. By limiting oxygen to the brain, this reveals pathways of the subconscious. At the level of spirituality, you offer the ceremony to all your relations and ask the spirits to enter into ceremony, to go into you and to be one with you. Thus, it is a process of becoming whole.

We inhaled, gave thanks, and let our conscious minds drift away as we connected

RESEARCH ON MY GRANDFATHER AHAB SPENCE PERTAINING TO CREE FONTS

Dr. Ahab Spence, was an Anglican priest, educator and oral historian born in Split Lake, Manitoba in 1911. My grandfather was President of the Manitoba Indian Brotherhood from 1974 until 1976 and was appointed to the Order of Canada in 1982. He taught at both Brandon University and the Saskatchewan Federated Indian College (SIFC), University of Regina (known since 2005 as First Nations University of Canada), where he was head of the Indian Languages Department. Working closely with noted German-born Cree linguist and translator, H.C. Wolfart, he translated one of the oldest Bibles into Cree.

Dr. Spence was instrumental in the conceptualization and making of Cree syllabics as we understand them today.

with our surroundings. We took a moment, allowing our body and spirit to connect. The synchronicity of our individual body and spirit allowed us to lock away our interpretations. Like a newborn child, we entered into a new experience. We experience ourselves diving into something new and living to our fullest.

This particular ceremony, we undertook it in front of a mirror. We believed the mirror would help us travel to another dimension.

We embarked. The synchronicity of our individual minds and spirits occurred. As well, my dad's mind and spirit connected with my mind and spirit. The occurrence led to our interpretation since we had nothing to based ourselves on. The wampum became the catalyst of this experience. For some nations the wampum is a tool to help in remembering or treaty but for my father and I we had an intuition that it did more than that.

Wampum belts are made with white and purple parts of a clam rounded and made into beads that are woven together with a string.

Graphic designer Jolene Rickard, PhD, says the following about wampum belts: For the Haudenosaunee, wampum goes back as far as the story of the formation of the *Kayanerenhtserakó: wa*, the Great Law of Peace, which we think of as happening over a thousand years ago. In it, there's a mention of stringing beads together as an act of condolence or easing the sorrow of Hiawatha. So, at its root, the process of stringing beads has a connection to lifting the spirit and lifting the mind out of darkness to create a consciousness of peace. Since the contact
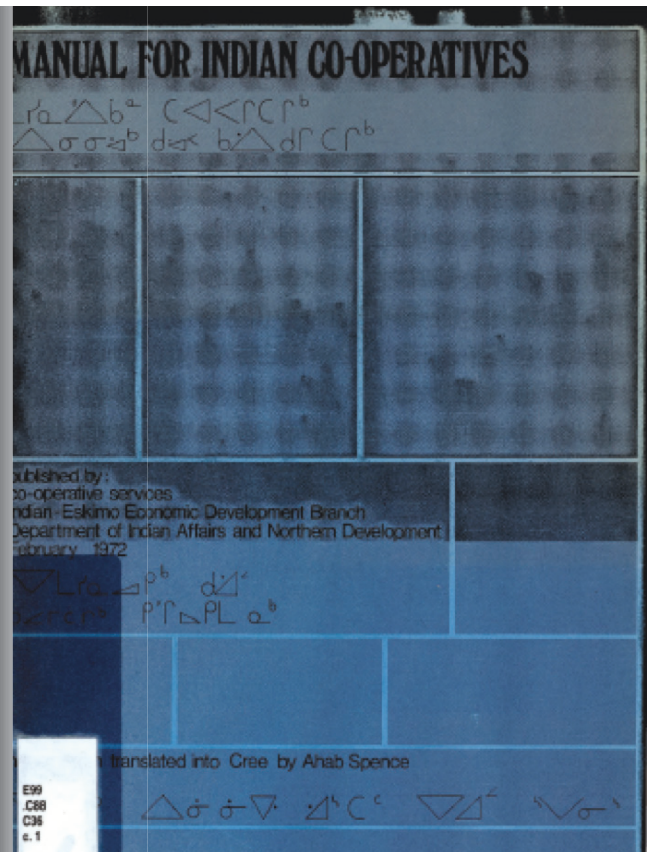

IMAGE 1
Manual for Indian co-operatives / translated into Cree by Ahab Spence. February 1972. Canada. Department of Indian Affairs and Northern Development, Indian-Eskimo Economic Development Branch, Co-operative Services, 1972.

period, white and purple wampum beads have been made from whelk and quahog shells. The beads are then strung together in individual strands and belts in a very labor-intensive process.

The signification is very complex. Wam¬pum is used to call meetings of the leadership of the Six Nations or Haudenosaunee; each title holder's authority is signified through a personal wampum string. The belts embody treaties or agreements between Indigenous nations or with settler states—but they are a 'living record'. There are spiritual or medicinal things one has to do in order to care for these materials. For us, wampum belts are so important because they are like that transitional space between the sacred and the profane, the sacred and the political.[1]

After awakening from this ceremonial experience my father and I discussed on what happened. We talked about how this experience affected us for many months after the actual experience happened. Basically time flew by, since it felt like it lasted 10 minutes but it was more like 3hours. We made sure to look at the time before we commenced the experiment which was right after our favorite tv show, which ended at 9pm on a Sunday and when looking at the clock it was now midnight. We guessed that the wampum belts and the coding that they might have as a 'living record' connected with and transformed us in inexplicable way.

RESEARCH ON CREE SYLLABIC FONTS

Cree Syllabics are an invention of the Methodist priest James Evans. Cree Syllabics were a way for religious figures to create and communicate with potential converts. This process was a great success, in both ways. Priests were able to translate scripture for the consumption of Indigenous people. In 2022, syllabics are still in use but are slowly becoming an anomaly within most Cree nations, however, there is a resurgence of interest, especially with contemporary Indigenous individuals who are reclaiming lost identities and cultural identifiers.

My process of creating a new Cree syllabic font and Cree syllabic coding language echoes the origins of Cree syllabics, except in this case, it is done entirely from an Indigenous perspective.

As a Cree graphic and type designer my language is a vital component of strengthening my community and individuals identifying within my community. I am using a tool that was used to convert and control and now reclaiming my language and the Cree writing system for the betterment of community. Where now that communities who have lost their language can rework the language as a vehicle for the expression of culture.

IMAGE 2
James Evans. Teaching Indigenous Canadians his system.
https://en.wikipedia.org/wiki/James_Evans_ (linguist)

1 https://www.documenta14.de/en/south/460_fair_trade_heads_a_conversation_on_repatriation_and_Indigenous_peoples_with_maria_thereza_alves_candice_hopkins_and_jolene_rickard

IDEATION OF CREE SYLLABIC FONTS

1. I started with these hand sketches.
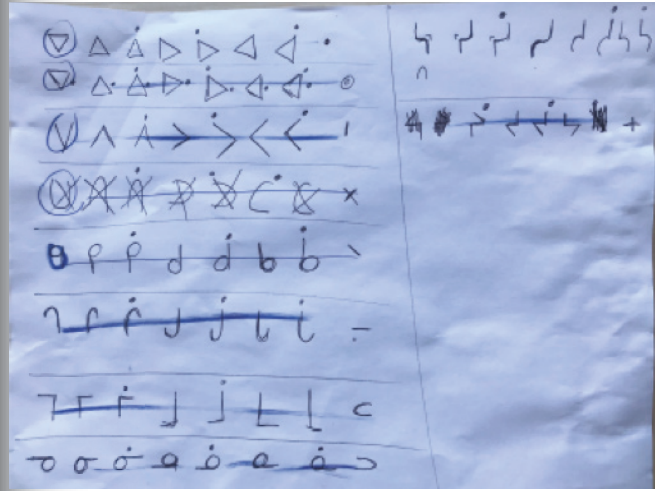
2. Then I vectorized the skeches.
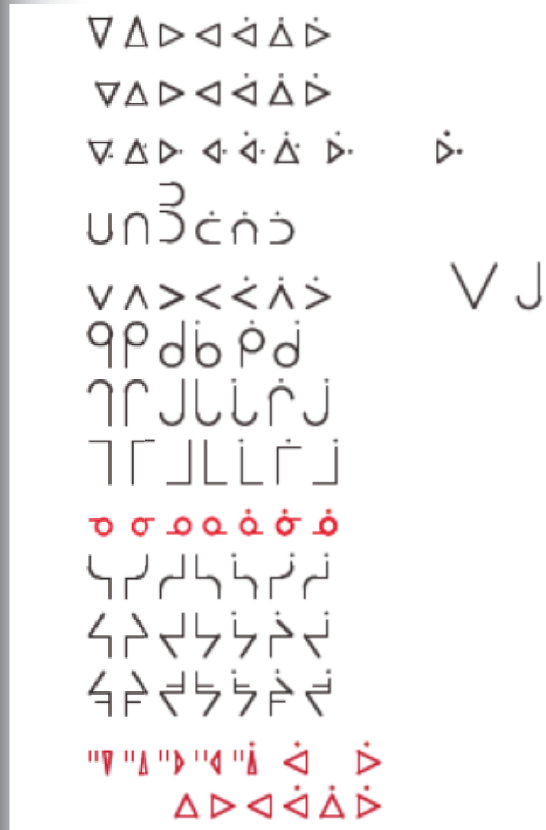
FIGURE 1
Cover page of *Mitakuye Oyasin "We are all related"* by Dr. A.C Ross. Photograph, Sébastien Aubin, 2022.

3. Then I brought them into font creation software, and made the first glyphs there.

6. Here's the final result.
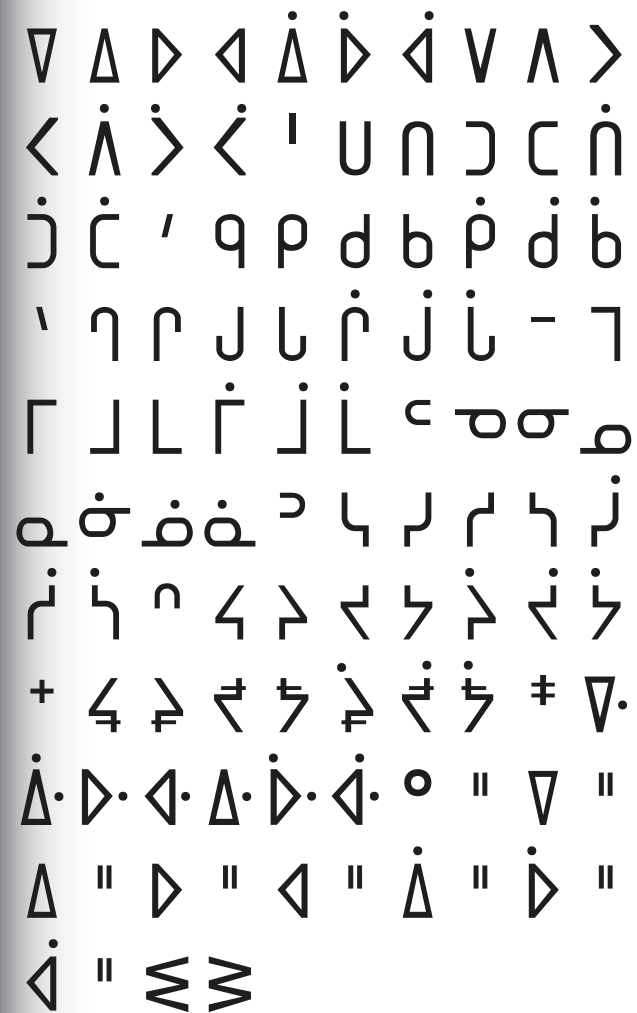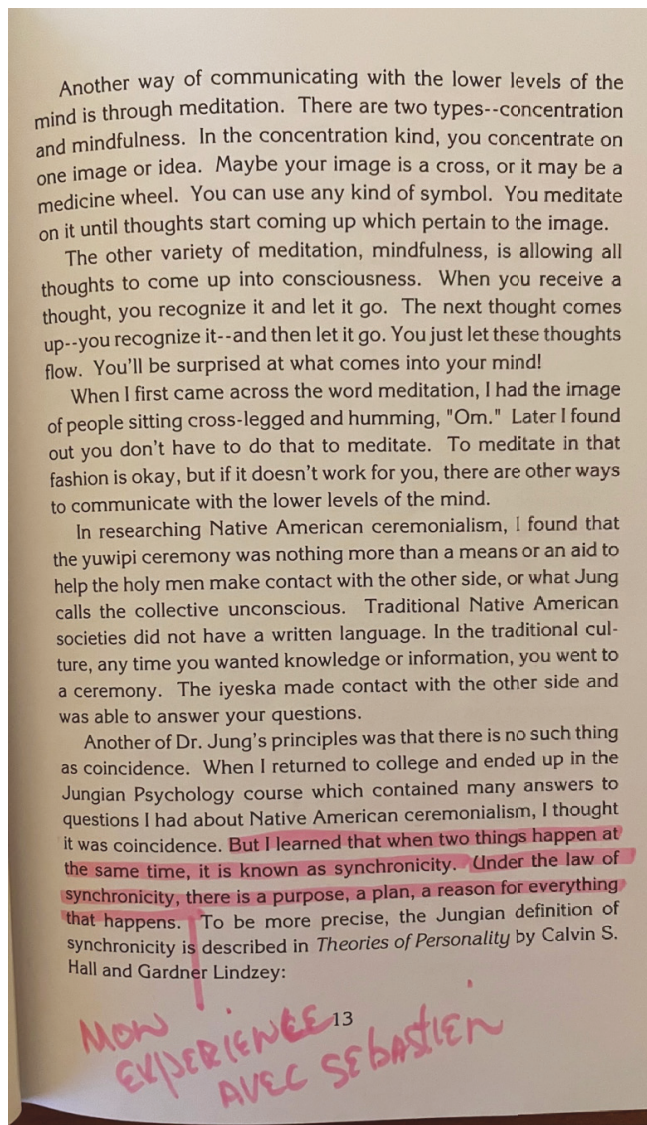
Figure 2
Page 13 of *Mitakuye Oyasin "We are all related"* by Dr. A.C Ross.
Photograph, Sébastien Aubin, 2022

RESEARCH ON MONOSPACE FONTS.

"Font in which all characters have the same breadth."[1]

A Monospace or "fixed-width" font is a font in which each character takes the exact amount of horizontal spacing. It has more a practical look and feel that emphasizes the character more than the word.[2] They are notable from typewriters that display an aesthetic type-set that looks like each character fits in the same-size box.

As you can see in Figures 1 and 2, even when it is the same phrase, the spacing is different dependent upon the type-set.

Figure 3 provides an example of the visual clarity of the monospace. Because the spacing is all the same, there is a heightened sense of visual clarity.

Figure 1

example of a monospace font

Figure 2

example of a proportional font

Figure 3

1 https://www.collinsdictionary.com/dictionary/english/
monospaced
2 https://www.typography.com/blog/introducing-operator
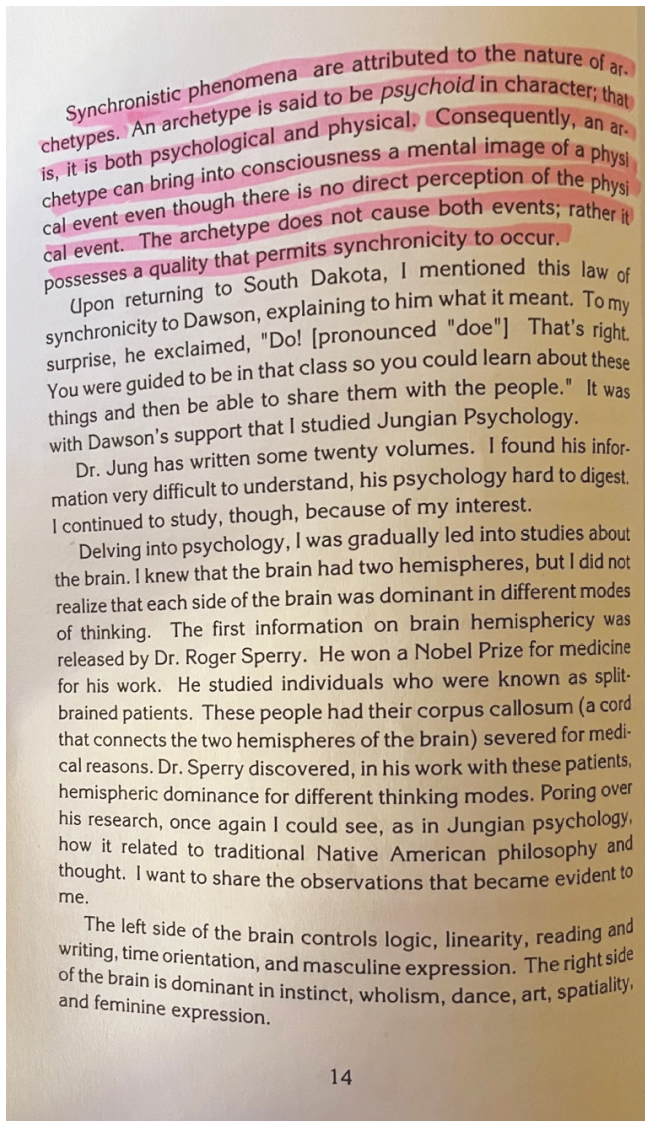
FIGURE 3
Page 13 of *Mitakuye Oyasin "We are all related"* by Dr. A.C Ross.
Photograph, Sébastien Aubin, 2022.

This excerpt of the book, seen above, seemed to us as very important since we started to look at things as binary. Opposites in need of each other.

And then and epiphany happened, what uses binary or binary code, 1's and 0's. COMPUTERS!!!

WHY ARE MONOSPACE FONTS USED IN COMPUTER CODING?

While coding, computer programmers generally use monospace fonts because they are easier to read and the on-screen information can be scanned. The web-page thus become a character grid, which gives the coder the ability to review many lines of code at once. They must make sense of what they are looking at quickly. Thus a typographical choice enhances their ability to see a more complex structure. This is not the case with proportional fonts, because this makes the code appear congested and much more difficult to read and scan.[3]

figure 4

Operator Mono Screen Smart From Hoefler & Co.
https://www.typography.com/blog/introducing-operator

3 https://input.djr.com/info/

We started to think that wampum belts as living code. A living message given to us by our ancestors. A living computer. We interpreted the wampum belt beads as binary code. And then all beads as code. From past conversation with knowledge keepers I was told that regalia tells a story of where it comes from based on the pattern the beaders used on the regalia. Beads telling a story.

Is a computer a possible tool for ceremony since like beads, it is now binary? What if we activated as a tool for traditional ceremonial ways? Conversation is also seen as ceremony, the conversation between object and mind.

When discussing or exchanging in conversation, this is the foundation to the amelioration of a given situation or problem. So I took the time to discuss and a have a conversation with a member of my community.

A TRIP I DECIDED TO MAKE BUT FROM WHICH I ALMOST DID NOT COME BACK
Narrative 3

In late February of 2020 I made the decision to go to see my community in The Pas, Manitoba, Opaskwayak Cree Nation. This was to be in direct contact with my community.

Please know that my first stop to Winnipeg from Montreal was a visit to my granny who had turned 103. My aunt, my uncles sat around my granny's table where my aunt gave us chocolate cake where they had held the birthday party for my granny weeks before. I felt very honoured for them to share my granny's belated birthday party.

CREE SYLLABIC TYPEWRITER USED MONOSPACE FONT
The first Cree syllabic typewriter was produced in 1878 in London England. It was soon shipped to Manitoba. It soon spread across the land and was used to create printed matter entirely in Cree Syllabics. (Carlson, 2008, p. 125)

The Cree typewriter provided Cree with the capacity to easily produce local print material. Prior to this, printed matter arrived from London, created using large equipment not available to Cree themselves.

During the 1970s the Cree typewriter was readily fabricated. This gave Cree the capacity

After the cake was gone and the tea was cold, I said my goodbyes and made my way back to the hotel I was staying at. I had an early night since I had a very long trip ahead of me. I was nervous to drive up all by myself for 7 hours in the dead of winter since it was a trip I did mostly in the company of my family. I kept a mental note that I would fill up the car every time I saw a gas station since 'you never know' as my mom would say.

That night at the hotel was a hard sleepless night since the hotel fire alarm went off, on top of me being nervous, and it was -40 Celsius and all the patrons had to go out of the hotel and await the firefighters. It was not a great night other that the tea and the cake that I had a few hours before with my family.

After tossing and turning all night I made my way to brush my teeth, take a shower and put on some comfortable clothes to be ready for my 8-hour car trek. I rented an SUV since it was the dead of winter and in Manitoba you are always best to be safe than sorry. Winters in Manitoba are harsh. Something you live not something that can be easily explained.

I started the car and waited for the motor to get warm and made my way up 8 hours north of Winnipeg. Before making my way to Winnipeg from Montreal, I had planned visits with people of my community and to make connections. But when I got to Opaskyawak, everyone that I had contacted and made plans to meet were not there. It's very common in my community for things like that to happen, since people do what they need to do when they need to do it. Agendas are a new concept for my people anyways. Maybe 150 years old, max.

to create documents that were reflective of their needs. They distributed these typed documents, which was easier than distributing handwritten documents.

Also during the 1970s, most Cree typewriters were used by the department of Indian and Northern Affairs and the Catholic clergy to indoctrinate Cree people.

Murdoch points out that not only do most modern printing techniques not rely on typesetting, but that Olivetti-Underwood has been manufacturing affordable Cree syllabic typewriters since 1970, and that IBM had produced a Cree syllabics typeball. [4]

The initial creation of this a tool which was once used by colonialists to erase Cree cultural existence, my culture, now provides ongoing resistance and ensures the continuation of Cree culture.

4 Murdoch, J., S. (1981). *Syllabics: A successful educational innovation*. 61

I had a hotel room reserved at the Kikiwak Inn, a place I went many times before, and so I had a meal there and decided that since no one was there I was just going to stay in my room and do nothing and leave the next day. But when I made my way to the hotel restaurant, I saw a close friend of mine, not a family relative but very close, in the hotel lobby.

We teased each other back and forth for a little bit then he invited me to go out with him and his wife for supper, and we did. We had a nice meal consisting of good food but with even better laughs. We had soup du jour if you need to know.

After that he drove me back to Kikiwak, and made my way to my room, and not even fifteen minutes after I was dropped off, I received a phone call. The voice at the end of the receiver asked me to make my way to the front desk. It was my close friend with his wife inviting me to head out for a small pool game, so I did. That night was cold but was filled with warm laughter and good times.

After that night, the next morning, I woke up and made my way to the hotel lobby and had breakfast but this time the hotel lobby and restaurant was completely empty other than the hotel staff. I had 2 cups of coffee and some toast and went to check out. The hotel clerk told me that I had to leave and I told her that's what I was doing but they meant I had to leave the reservation. So I got a bit impatient and promptly asked why and she responded as impatiently as me and said "you need to leave since the Covid is coming and they are closing the reservation to all and if you don't leave now you will be stuck here".

figure 5

Cree Syllabic Typewriter. Sam Waller Museum

This artifact (figure 5) is a standard Remington typewriter with Cree Syllabics as opposed to English letters. The keys are secured in the case by two clamps, which can be removed. The case has a black handle at the front as well as a clasp on either side of it. It was used by the clergy of the Archdiocese of Keewatin in The Pas, MB in the early part of the last century.

figure 6

Cree font used in Olivetti typewriters. Source: Zorzi, R. and Saphira, N.H. Design Process: Olivetti, 1908–1978. California: University of California, 1979, 226.

I did not hesitate and packed the car, stopped for gas and tobacco then I went to go see my mom's grave, put some tobacco down, made a little prayer and left. The trip was a bit harsh since I was between two eighteen-wheeler trucks making snow swells and my vision was limited and the only thing that came to mind is that I needed to concentrate so that I do not become another statistic represented by a cross on the side of the road.

That being said, I had a safe opportunity to pass the truck in front of me and then it was smooth sailing after that. I knew I was going to be OK since I saw a bald eagle fly by me and then I decided to stop the car to put some more tobacco down and talk to the creator and what came to mind is that I had to make my way by myself and to push through on my own to make my projects happen. The only reason why, I thought, I made my way to my community was to share my project and to get recognition but maybe for once it was OK to go on my own. Since the pandemic had hit my community, I needed to move forward not just for my thesis but for my community. We need to move forward even if left alone unless we stagnate as a community. I do not want to let myself and my community stagnate.

CREE RESEARCH
CREATION METHODOLOGY
Narrative 4

I would like to start this section with this quote:

> "The proposition of integrating spiritual knowings and process, like ceremonies, dreams, or

WHY I DECIDED TO MAKE A CREE SYLLABIC MONOSPACE FONT

Initially when I had the idea of making a Cree syllabic monospace font, I had no idea that Cree ethics and epistemology would come into play. I did not approach the Cree syllabic monospace font thinking it would help imbue Cree coding with Cree ethics, or

synchronicities, which act as portals for gaining knowledge, makes mainstream academia uncomfortable, especially when brought into the discussion of research. This is because of the outward knowing versus the inward knowing dichotomy. It also has much to do with western science's uneasy relationship with the metaphysical. Yet, all ways of knowing are needed, and the Cree ancestors knew this. They know about inward knowing and valued it highly. In fact, this inward knowing, was a central integral component to how they approached the buffalo hunt and their most deeply sacred ceremonies. They were able to share teachings through stories about their experiences, passed on using the oral tradition, and it was respected as legitimate. Why would research be different?''
- Margaret Kovach – p. 68 Kovach, M., n.d. Indigenous methodologies.

When creating, as Cree, we are basing our connections to something metaphysical. As Cree we see tobacco as sacred and when we hold it in our hands and ask for guidance, we are in connection with our spirit and all our relations. The connectivity, through the ceremony, is a portal where we integrate what? with that which we cannot see. It is a feeling, a good feeling, because when we are connected, we are in connection with positive energies, and we can only do good. We do good for our community.

We have opened the portal, to be able to receive knowledge and put it into practice or

for that matter enhance the development of Cree epistemology.

On reflection, my research is to gather information as we move forward, experimenting with the Cree monospace and the computer. I wish to see how they react to each other. Can we use the Cree syllabic monospace and maintain a ceremonial relationship with the computer, using language?

We communicate with computers by using the language of code. Code translates human intent into logical action which the computer can interpret. This allows us to enter into conversation with the computer. Using a Cree monospace syllabic to write code will allow a Cree person to enter into a ceremonial relationship with the computer as it is an enhanced form of Cree knowledge, a participant in Cree epistemology.

Cree syllabics facilitate the reading, writing, dissemination and communication of the Cree language. When trying to teach syllabics to traditionally oral-based Algonquian tribes, which had been translated to Roman orthography, there was much difficulty. As a primary objective, I intend to begin a conversation with a computer as if they are a Cree person, because I believe it requires a new language, Cree, in order to have the capacity to communicate with them and this Cree monospace font can be seen as a traditional interaction with the computer. My inspiration comes from my Cree ancestors and their development of the Cree Syllabary. I am inspired by the potential of spiritual and technological overlap, and how when paired with Cree tradition and Cree syllabics, new

pass it on to others. This has been passed on by Cree ancestors that are in constant relation with what we can call the unified world. Vine Deloria says:

> "In this sense the Indian knowledge of the natural world, of the human world, and of whatever realities exist beyond our senses has a consistency that far surpasses anything devised by Western civilization. The best description of Indian metaphysics was the realization that the world, and all its possible experiences, constituted a social reality, a fabric of life in which everything had the possibility of intimate knowing relationships because, ultimately, everything was related."
> – Vine deloria, Jr., & Daniel Wildcat - p. 2 ,Power and place: Indian education in America

Our connectivity is not simply the outcome, in ceremony we connect with something that is helpful. All our relations are aware of our intentions. They guide us in the right direction. This inward knowing has a direct result on the creation.

When knowledge is passed down orally this signifies that an act was committed by someone or somebody. As Kovach notes, we obtain the information from a source. The source is the one who experienced trials and tribulations or to a certain extent a vision. Someone who really knows that the knowledge is important.

We receive teachings by different means. All these different ways of knowing are needed. We

potentialities for interpretation and knowledge generation arise.

While making the Cree syllabary, I interviewed type designers, Cree Elders, and Knowledge Keepers. I then sought out a Cree computer programmer or coder, who would be able to fix any implementation. (See Figure 12 and 13). I also wished to include these issues as a part of the process and compile them. By cataloguing every aspect of the research, whether it with video, recorded audio or sketches, this spoke to the act of implementation as an ongoing and fluid process of research.

FIGURE 12
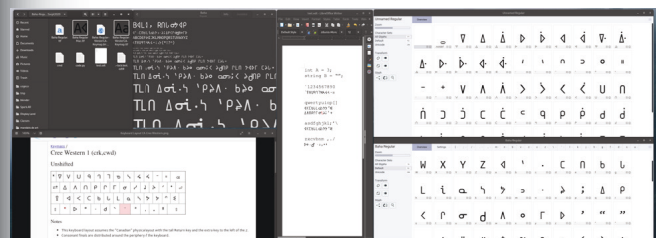
implemented into programmatic language

FIGURE 13

coding in python
https://vimeo.com/713600641
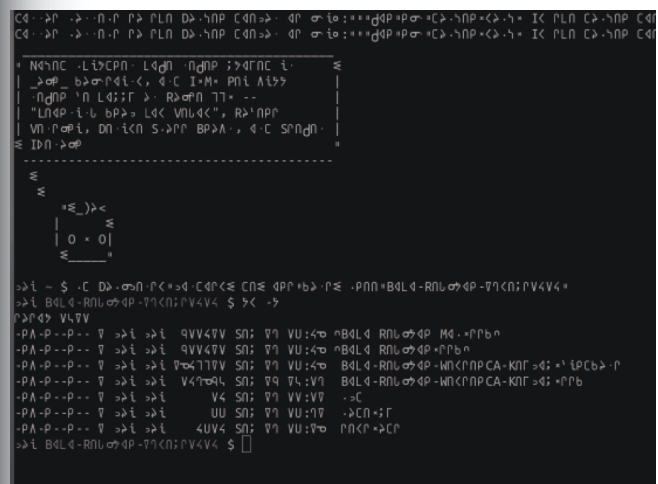
Navigating in terminal
https://vimeo.com/713601704

cannot neglect any teachings from any teacher. Please note, teachers can be a bird, bear, wind or the trees. A medicine man has said to me, when I was an apprentice, that my thoughts and prayers can be heard by all and that the wind will bring it up to the creator and that the trees will hear my thoughts and prayer as well. They (trees) love to hear us since they are our grandparents and we share the ceremony with them. We have used them to build our house, make tools and to cook our food. Without our grandparents, may that be trees, birds or wind, we are nothing. We are naked and alone. We don't always get the answers to our thoughts and prayers but at least they are listening.

We are all students to our research. Yet by making or doing research, we create not only a methodology but an epistemology, both of which are interconnected. If in Cree culture everything is connected or related perhaps research, creation and knowledge are connected as well. One cannot be without the other. As Deloria mentions:

> "Indian knowledge is designed to relate to other kinds of experience and knowledge, Western science does not necessarily form a unity. In the reduction of knowledge of phenomena to a sterile, abstract concept, much is lost that cannot be retrieved. By maintaining the personal involvement typical of wise Indian Elders, the students should be able to maintain themselves as practical and competent metaphysicians."
> – Vine deloria, Jr., & Daniel Wildcat -
> p. 6 ,Power and place: Indian education in America

Once the font was implemented into programmatic language, there was more data to analyze. The Cree syllabic mono space font that is used for coding implies that we can make objects a part of our relations since we are talking to them in Cree

As a result, perhaps this research and creation project will improve our relations to objects, to the Indigenous community young and old, to the machine, to new unknown relations, all my relations and the seen and unseen.

CONVERSATION WITH MY COMMUNITY
Narrative 5

I was without my community for about 2 years because of Covid, researching, creating and writing, until I had a chat with Stan Wilson an elder from my community and his daughter Alex Wilson. I talked to Stan on Zoom and Alex on the phone.

This is where I will let the conversation happen. This is where a conversation between two Cree becomes experiential knowledge sharing that leads to epistemology.

The following essay is not easy so please bear with me here. I really enjoyed talking to community members about my project but what came out of it absolutely blew my mind.

It was hard to answer the questions that were asked but is the answer important or is it the process of trying to answer the question more important. Obviously, it put me in a thought process that has challenged me yet at the same time has comforted me to know that there is still work to be done with the creation of the font and that these community members are involved.

So ... here we go...

PART 1
Here is a question based on a short conversation with Dr. Alex Wilson who is Neyonawak Inniniwak from the Opaskwayak Cree Nation. She is a professor with the Department of Educational Foundations and the Academic Director of the Aboriginal Education Research Centre at the University of Saskatchewan.

DEVELOPING A CREE DESIGN METHODOLOGY

Using the preceding lessons on relationality and responsibility, I have developed a Cree design methodology rooted in Cree ethics and a Cree worldview. Most of these have been heavily based on Dr. Margaret Kovach's notions of Indigenous methodology.

Features of Cree design Methods
1. Consultation with Elders
2. Legibility for entire community
3. Prioritize Cree voices
4. Maintain relations with non-human beings
5. Reciprocal research
6. Minimize harm

Just to put you in context, Alex is from Opaskwayak Cree Nation which is the same community as me. I needed to talk to someone from my community so that my intentions were heard outside of this thesis. She was in Hawaii when we had our conversation.

I gave Alex a small description of my thesis just to put her in context and she understood what I was saying and that was appeasing since one of my major intentions is to be understood by members of my community.

Our conversation was very short, maybe 10 minutes, since it consisted of hello's and how are you's but she for sure left me with things to think about and the conversation is still going on in my head. It left me a lot to reflect on.

The following is an excerpt of questions that Alex asked that helped me to make better sense of what my intentions are with this research since the questions are not easy ones for me since she refers to binary code, animate vs inanimate, Cree cosmology, gender etc.

> **Alex Wilson:** Is there a way to be fluid or represent the dialect in true intentions in the way its heard and not read?
>
> Cree is not a binary language. A branch is inanimate, but the tree is animate.
>
> Our cosmology is not binary. Our fluidity and energy are fluid. Even gender fluidity is built in our cosmology.

You talk about binary code but how
to use binary code to be more fluid
in essence.

The core of what it is."

The questions she asked and I have made
them into sections.

**Is there a way to be fluid or represent
the dialect in true intentions in the
way its heard and not read?**

I think that when using Cree syllabics, since
it is a phonetic writing system, it is the best
way to give it its true intentions. The syllabics
are made so that when writing them it is
representing the specific consonant sound.
Here is a chart (curtesy of Creeliteracy.org)
that better explains it.

ᒋᑊᗃᐯᑊᐃᑲᐊ / *cahkipēhikana*
Plains Cree Syllabics

English sounds	bait	bit	beat	put	boat	but	fa	
Cree Vowels	ē	i	ī	o	ō	a	ā	Finals
Syllabics	▽	△	∆̇	▷	▷̇	◁	◁̇	
w	▽·	△·	∆̇·	▷·	▷̇·	◁·	◁̇·	°
p	V	∧	∧̇	>	>̇	<	<̇	'
t	U	∩	∩̇	⊃	⊃̇	C	Ċ	´
k	ᐟ	P	Ṗ	ᑯ	ᑯ̇	ᑫ	ᑫ̇	`
c	ᒡ	ᒥ	ᒦ	J	J̇	L	L̇	-
m	ᒡ	ᒦ	ᒦ̇	⌐	⌐̇	L	L̇	ᒼ
n	ᓄ	ᓂ	ᓃ	ᓄ	ᓄ̇	ᓇ	ᓇ̇	ᐤ
s	ᔾ	ᔾ	ᔾ̇	ᔐ	ᔐ̇	ᔕ	ᔕ̇	ᐢ
y	ᐊ	ᐊ	ᐊ̇	ᐁ	ᐁ̇	ᐃ	ᐃ̇	ᐟ

| l | ᐨ | | r | ᕗ | | kwē | ᖴ· | | h | " | | hk | × |

FIGURE 4
This chart was designed by Linguist Arok Wolvengrey.

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Yet the computer is reading the Cree monospace and does this make the computer Cree or is it learning Cree? This is just adds more confusion. Yet in metaphysical sense are we maybe making the computer kin since it is talking our language? Note that this is not necessarily an answer by any means, but the thought process has given more things to think about.

One thing that comes to mind is how we can encounter the computer as a ceremonial entity where we can share knowledge and have a spiritual outcome. If we see a conversation with the computer as ceremonial.

Another thing that comes to mind since the most common programming language is English, is that we are establishing Cree presence in the computer. Maybe in a sense we are decolonizing or decentring since now the computer has to capacity to maintain a relation to Cree rationality. Establishing or maintaining Cree voice in the computer.

You talk about binary code but how to use binary code to be more fluid in essence?

Binary code the way I think she is talking about is to see it as 2 opposites or extremes, Light and dark, black and white, good or bad. Since Alex mentions that Cree energy is fluid and that we are not tied to binary but maybe the in-between, the 2 opposites or extremes, is where the fluidity can be found. We are not bound but fluid and this allows us to see the language

when transcribed in a computer to be of fluid origin since now the binary code or programming of the computer is done in Cree. Allowing the computer to be animate and yet allowing it to define itself. Humans created the computer but how to we give it life or does it already have a life of its own. Would artificial intelligence now be simply intelligence. If we can consider that the computer also has an intelligence.

The core of what it is?

Since Alex mentions that Cree cosmology and Cree language is not binary, and that we are fluid people - I think that this allows us, as Cree people, to move around in a way that can be felt and or be seen. If we suggest that we can possibly code the computer to be fluid as to be able to manipulate its own environment. Making the computer something more than just an object. When we activate traditional ceremonial objects with Cree language and the burning of sage to make it an animate.

As humans, when coding, we are only helping the computer to be its own maker? If code the computer with Cree syllabics and we make the computer know that these are phonetic languages and that we can now build a relationship with the computer since it can communicate back to us. Making the computer a fluid member of our community. Ok, these are just thoughts that come to mind but yet thoughts are as compelling as answer or actions. If we have thoughts and that computer have thoughts as well, are we not building a rapport to the computer. Ok, again, I mean these are just thoughts.

PART 2
For the next part of the essay you will be able to read the integral conversation I had with Stan Wilson. I have put in orange my afterthoughts interspersed within the conversation. Note that these thoughts were reflections after the conversation.

Dr. Stan Wilson, B.A. (U of Saskatchewan) M.A., Ph.D. (University of California, Santa Barbara). Stan is a member of the Opaskwayak Cree Nation. Stan is bilingual in Cree and English and has extensive knowledge of First Nations Communities across Canada, particularly in the Prairie Provinces. Dr. Wilson was Dean of Education at the University College of the North for two years following his retirement from U of A.

Stan Wilson: By the way there is a controversy about how syllabics started. The Christian version was created by James Evans that started the system. A woman researcher from the University of Mexico suggested that the syllabics where there already and that James Evans just organized it the way it is now. She was using as a parallel example the stuff that's written on the pyramids, I wish that I could remember her name because it was intriguing to me that she was asserting the system of syllabics was there before the Christian came. I really wish I could remember her name.

> This proves or suggests that Cree Syllabics where alive before Christians came and that we had a writing system. Did we just pass on our knowledge orally, as suggested by our Elders? How did we use the Cree writing system? This makes me think of a passage in Calling Badger and the Symbols

CONSULTATION WITH ELDERS
Involve the Elders in my community by asking and sharing and making time to get to know the ways of our ancestors. In doing so, the results are shared and understood and those ways are reflected not only in the outcome but also in how the process is approached and carried out.

I am still in conversation with my community, especially the Elders, one of whom is my one-hundred-and-one-year-old grandmother, who acknowledges my presence but also, "puts me in my place." I have a responsibility towards her and what she represents. She is not only wise but has the honourable responsibility of passing on the values that have made her an integral part of our community. As one of the oldest Cree Elders in Canada, I can safely say that she is Cree epistemology!

of the Spirit Language: The Cree Origins of the Syllabic System by Winona Steveizsoiz who mentions: Anthropologist Verne Dunsenbery is one of the few scholars who challenged the Evans' version in favor of the Cree. Before completely disregarding the Cree account, he implores, two factors should be considered: In the first place, the writing does not look like anything a white man, and especially an Englishman, would invent. In the second place, an interesting speculation arises concerning the possibility that the Cree might have developed their own written form -much as Sequoia did for the Cherokee -by what Kroeber calls 'stimulus diffusion.' Dusenbury, The Montana Cree, 271.

SW: OK so ... so what's next?

Sébastien Aubin: I have heard that the Cree syllabics where already a written form of our language and that we used to write syllabics on birch bark or that we wrote syllabics in the sand and that is why we have no record of them. They were not meant to last. There is a thesis that was done in 1989 by a person from the University of Manitoba that goes by John Murdoch. Since I have been researching syllabics for 6 years. And in his thesis my grandfather was acknowledged by Murdoch and that has allowed me to learn about my family outside of family context.

SW: Ya

SA: Basically, what is next is that I am curious about what it makes you think about when I say I want to program computers with Cree syllabics. What does that make you think?

LEGIBILITY FOR ENTIRE COMMUNITY
We need to make our theory user-friendly so that people can understand what is being said, and it can be applied to the community.

SW: I am not very up to speed on computer programming. It's just a word to me (chuckle).

SA: I am print designer so really, I don't know much about programming. I am learning about it as I am moving forward with my research. So, I guess it's just a word for me as well said like that.

I will try to rephrase the question differently.

Do you think speaking to an object in Cree gives it a different intention?

SW: Well first of all, do you speak Cree?

> This one hit me hard. Almost as if he was saying that I have to learn Cree and what am I doing making a Cree font but don't speak Cree. How can I even talk about what I am doing if I am not talking about it in Cree? Next project, learn Cree, nevermind. Howah!

SA: My grandparents spoke but they did not teach it to their children. I know very basic words, unfortunately. I am trying to learn.

SW: When I write Cree, I use phonetics. There is a system by using the Roman alphabet called SRO that means Standard Roman orthography. But my view is that it basically was developed by anthropological linguists. So, I see it as part of colonization. So that is why I use phonetics. There is a computer program that can understand your voice and it will print it out in English so that's what I was wondering if that is what you were doing that when you talked to the computer in Cree in came out in syllabics.

PRIORITIZE CREE VOICES

Above all, we have a responsibility to the community or nation we represent. In a nutshell, Cree or First Nation methodology can be both messy and fruitful because it presents the opportunity for an outcome that is beneficial to the people involved.

MAINTAIN RELATIONS WITH NON-HUMAN BEINGS

In Janet Bennett's book, *Vibrant Matter: A Political Ecology of Things*, she recognizes the non-human forces in events the same way that Cree people recognize the seen and the unseen in events where knowledge is acquired. We share a moment and understand that we are connected to the objects around us. In Cree culture, we give agency to nature. We see nature as an entity and a living being for which we have responsibilities. We gather as a community to garner the understanding of these responsibilities and by this method we are bound to be truthful to our surroundings. This practice allows the continuity of Cree knowledge for generations to come.

Would really like to explore this but this will be for another time

SA: That's interesting. But that would be another thesis.

(both chuckle)

SW: So, I don't know what is meant by coding.

SA: All coding is done mostly English, our colonizers language. So even if you were Korean-speaking people you would have to code in English. I am thinking that if we can code in Cree syllabics and not in English. Obviously, you would know how to write with Cree syllabics and what that does. I was told by my Elders that if you do a ceremony in your language your ceremony is stronger. If we speak to the computer in our native language do, we have a better comprehension of each other. That's where I am at right now.

SW: Two issues that I see is that for young people their first language is English and what they are trying to do is re-learn the language I guess to bring it out of them. There is a theory that the language is embedded in your DNA or in your biological self and that your body needs to get back into tune with it and that you can learn it faster. There is also another Idea that people that are wanting to learn the language that is best that it starts in the fetus so when one does ceremony the child is born already knows the music and they can insert the words. But their rhythm and accidence are already there, and they just need to learn the words. So, in that way a Cree word for the Cree word

of the day is that they are teaching Cree in English so the English corrupts the Cree.

A lot of things are going on here. So, a Cree person can learn Cree quicker since it is in our DNA. It simply needs a boost, I guess. Also, if we can code the computer as soon as we built it and only code in Cree form the beginning are we not suggesting that we can insert the Cree language fir it to always be part of the computer. And when information goes from one computer to another computer will that DNA be transmitted?

People on the board want the children to learn Cree and I am suggesting that we learn the Cree word first and then translate it into English, not the other way around because there are a lot of concepts and lots of words that need to be explained in English. That's what happening here at OCN and I am guessing it's happening in other places as well.

I am in the process of writing a Cree language text in English. My approach is that Cree words are families, clusters and that they are all related in a way or another. I am trying to get my family members to contribute to the text. They are reluctant to do so but I want them to share their own experience about learning their language.

The research I am doing is helping me learn about my language. I speak, read and write in English and In French, the two main Canadian colonizer language, but yet I don't read, write or speak in Cree. There is something to be said there. But

yet I am glad that Stan sees this as a learning stage and that we need to learn and not to be reluctant.

I will send you the text as a work in progress if you want.

SA: Yes, please send it over. I would be glad to read it.

SW: Alright, so I don't know how much help I can be

(smiles)

SA: This is great. My mind is blown.

SW: By the way there are about half a dozen people here at OCN (Opaskwayak Cree Nation) that read and write in syllabics. And if you are interested, I can put you in contact with them.

SA: Yes, I am very interested in meeting them.

SA: How did you meet my grandparents.

SW: As you know your grandfather's family moved from Split Lake to OCN sometime in the thirties. When he grew up around here, he went to the McKay residential school and so did my mother. I hear of him through my mother but I did not get to meet him until I went to SIFC when your grandparents were Elders there.

I heard a story of when your grandfather went with some other people looking for some funds in Ottawa, INAC I guess. He was asked to say grace by the MC at a meal where

he delivered their proposal to get funding for SIFC. So, he told grace in Cree and the minister that was sitting beside him said that he did not understand a word you said and your grandfather turned to him and said that's because I was not talking to you.

SA: I can imagine that. He was very witty at times.

SW: I do use that line a number of times. What did you say? I was not talking to you.

SA: This is my last question. So, what would call the computer in Cree?

SW: The one that comes to mind immediately kosâpahcikan. That's the shaking tent. So, the person that is doing the ceremony. The story is that the person could do remote viewing. The computer is the similar idea, they are doing remote viewing. I was never asked that question before but I have heard of a people suggesting words but I can remember any of them.

By saying that the computer is a kosâpahcikan does this mean we can say that the computer is a ceremony. Can it be viewed and expressed as a middle ground between the spirit world and the real world? If we talk/code to the computer in Cree will we activate the ceremonial aspect of it? Are we are all shakers but we just don't know? When I was an adolescent a medicine man told me, I was going to be a shaker, one that does the shake tent ceremony, either by doing politics, music, academia or doing it the traditional way. It's always weird how

things can turn full circle that things call me back to ceremony.

SA: I worked as a helper with a medicine man that was a shaker. That's how he called himself since they did the shake tent. I used to go to his place and grind medicine man for 6 to 8 hours a day. He was from Long in Manitoba and his name was Don Daniels. Tough but fair man. You would have never known he was a medicine just by looking at him, I guess that made him humble in my view. It was very interesting times.

SW: You would be welcome to come over. We have a guest house. If it's not being used, you can come. It depends on when you come as well. If there are no mosquitoes, you can set up a tent.

SA: Thank you, Stan. I would love to come by. You have really helped me. Thank you very much.

When we meet, I will bring the tobacco that I was supposed to bring when I went to OCN last time. I have loads of it.

SW: That protocol (he is referring to the protocol to bring tobacco to Elders when we ask a question), actually, when we went to spend time at the small boy's camp in Alberta, sure we presented a little bit of tobacco but the other older people that came with us they said that these people are living in the plains in tents and so on. They said that it makes sense that we bring something that they can use.

SA: Yes.

RECIPROCAL RESEARCH

Something else that is very important in Cree protocol is that one cannot simply come and go from Elders lives without establishing bonds, familiarities, and reciprocal relationships with them. The Old People are living resources and their ways of knowing and teaching must be appreciated, respected, and considered. The Elders need to be made a reciprocal resource and valued in their roles as keepers and sharers of community knowledge since they are a living archive.

SW: So, we brought bags of potatoes and we brought stacks of flour and lard and bacon, uncooked beans. One elder said they are not sure about this protocol about giving tobacco since I have about 50 pounds of it at home and I don't know what to do with it.

(laughing hard)

SA: I have heard that before. When I go to see a medicine man, they say to me that they can't eat tobacco so I bring them money or gifts that they can use since they help with life or death situations sometimes.

SW: Anyway, nice chatting with you and we will keep in contact. Alright.

SA: alright.

SW: take it easy and the best of luck with your thesis. Send me your thesis when you are done.

SA: I will.

SW: Bye

SA: Bye

MINIMIZE HARM
My design process for this Cree syllabic project thoughtfully considered the impact of design on society and the earth. It places an emphasis on collaboration with the community, rather than serving a capitalist end. An example of this can be found in *Designs for the Pluriverse: Radical Interdependence, Autonomy, and the Making of Worlds*. The author, Arturo Escobar, maps autonomous design principles and the history of decolonial efforts of Indigenous and Afro-descended people in Latin America, to show how refiguring current design practices leads to the creation of a more just and sustainable social order.

CONCLUSION
The Cree community has debated large and wide on who actually invented the Cree syllabary. The writing system has been developed to pass on information for some and for others to be a control mechanism to be able to suppress a whole nation.[1]

As a Cree I have to say that it is contentious, yet it has had a variety of positive outcomes for the Cree community. For one thing, it has had the possibility to maintain Cree written culture. Some say that we use merely an oral tradition to pass stories and histories from generation to generation but that might not be the case anymore.

Our histories have been passed only orally but yet there is some people of the Cree community who say otherwise. Let's take Winona Stevenson for example, who says;

> "The origin of the Cree syllabary has long been credited to the ingenuity of the Rev. James Evans of the Wesleyan Methodist church. According to missionary records and other non-Indian documented accounts, Evans arrived among the muskego-wininiwak, Swampy Cree People, of Norway House in August of 1840 and by mid-November printed three hundred copies of the hymn "Jesus my all to Heaven has gone" in Cree syllabics.1 A remarkable feat for anyone who had only been among Cree people a few short months and who continued relying on interpreters for the duration of his time in Cree country."[2]

For over 160 years, this was thought to be true[3] by settler recollection but it seems that nobody had considered asking a Cree person what they thought. It's not the first time that settlers do not ask the people that were here to partake in the history making. This has gone on since colonization exists. As usual this was disregarded since this would change the narrative. And it is widely understood that who controls the narrative controls history?

Yet anthropologist David Mandelbaum, even he was in favour of the James Evans story, asked Chief Fine Day of the Sweetgrass First Nation what was the origin story of the Cree syllabary.

2. Stevenson, W. (2000). Calling Badger and the symbols of the spirit language: The Cree origins of the syllabic system. Oral History Forum, 19–20, 19–24.
3. David Mandelbaum, The Plains Cree: An Ethnographic, Historical, and Comparative Study (Regina: Canadian Plains Research Centre, 1987 reprint), 180.

Chief Fine Day, of the Sweetgrass First Nation in Saskatchewan said that it came from the spirit world when a Wood Cree named Calling Badger resurrected and brought back a writing system. This writing system was a gift of the Fourth world and calling badger had learned many things while on his trip in the fourth world.

> "Calling Badger told the people of the things he was shown that prophesized events in the future, then he pulled out some pieces of birch bark with symbols on them. These symbols, he told the people were to be to write down the spirit languages, and for the Cree people to use to communicate among themselves."[4]

Fortunately, this was not the only similar incident because anthropologist Verne Dusenbury was told a similar story by Plains Cree Raining Bird from Rocky Boy reservation in Montana.

> "the spirits came to one good man and gave him some songs. When he mastered them, they taught him how to make a type of ink and then showed him how to write on white birch bark."[5]

Based on what Stevenson explains, in Cree oral traditions the colonizers learned the syllabary from the Cree and not the other around. The simple fact that Evans learned Cree and a writing form on only few months just makes you ask more questions than a final formal answer.

Depending on which discourse, you believe we can say at least that the syllabary is a spiritual written language since based on Calling badger and Raining Bird it come from the spirit to be transmitted to the Cree to have the capacity to share our stories.

We are playing with the machine. Through play we are also building a relationship. In Cree culture children are as important as Elders since children pass on the knowledge through play. The children build long-lasting relationships, resolving issues with imagination.

4. Wes Fineday, "The Story of Calling Badger," CBC radio, Morningside (ad.)
5. Verne Dusenbury, The Montana Cree: A Study in Religious Persistence (Norman: University of Oklahoma Press, 1998 reprint), 267.

To better summarize the above I have cited an essay by Cree artist, writer, and scholar Archer Pechawis:

> "In nēhiyaw nisitohtamowin relationship is paramount. Nēhiyawēwin (the Plains Cree language) divides everything into two primary categories: animate and inanimate. One is not "better" than the other, they are merely different states of being. These categories are flexible: certain toys are inanimate until a child is playing with them, during which time they are animate."[6]

In the end will a Cree syllabic monospace font help imbue Cree coding with Cree ethics? We will never know if we don't try. We need to use the means necessary to find the answer. If we were to summarize Cree ethics in one phrase, it would be that we need to use love, not fear, in the process of making the machine kin. Sharing, as a method, might just be a good start.

Language and ceremony are key to determining our surroundings and our relationships. They allow us to better build a sense of community. We are subjected to take in teachings from our surroundings. A person is only in real relation with their surroundings when they are in ceremony. Ceremony is something that is sacred. It forever bonds.

Indigenous languages does not only help in determining our surroundings and our relationships but also helps symbolize cultural sovereignty as well to enable it. They facilitate the knowledge and values unique to indigenous cultures by carrying within the language the roots of who we are.

By using and utilizing our language cultural sovereignty is an inherent right to use our values, tradition and spirituality to protect our future.

6. Making Kin with the Machines Essay Competition Winner by Jason Edward Lewis, Noelani Arista, Archer Pechawis, and Suzanne Kite. https://jods.mitpress.mit.edu/pub/lewis-arista-pechawis-kite/release/1

Appendix

CREE DESIGN MANIFESTO
Don't give me tobacco, I am a designer, not an elder.
by Sébastien Aubin
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I grew up in a somewhat anti-establishment family. We did not play by the rules, yet we learned the rules to have the capacity to change them, which was better than breaking them. Change in a positive way has always been drilled into me. Positive change has the capacity of binding ideas together. In the long run, everyone can profit from positive change.

Change is necessary and the way things have been cannot be the way they continue. We as Indigenous people need to stand up. Not just to the establishment but also to the…

As I was writing, a bald eagle passed by my window. This is my starting point. It was important to see that the eagle was struggling, since today the wind is blowing at 40km/hr. To compensate for the wind, the eagle sways and dips to all sides. Yet it seemed to have a purpose, a goal and that goal was to move forward, even under struggle.

The eagle was flying westward, against the wind. Usually they are elegant, but in this instance it was reminding me that we all go through challenges. It was March 20th, 2021.

Also on this day, we were plagued with a pandemic that now has been going on for more than a year. In 2010–2011, when I was a scabby (apprentice) for 2 medicine man, I was made aware of this forthcoming plague. It would travel by wind and move faster than a bush fire. It would touch people from all walks of life. I was told to be ready and prepared. Being ready and prepared meant I had to move to the bush and learn the traditional ways of healing. Now that both medicine men have passed, I have completed their instruction. My traditional ways are within me and I have moved to the bush.

I write this on a laptop because I am technologically-inclined.

I must use the computer to do my work and to pay my bills.

Today, my goal is to write a design manifesto: a how-to method of what to do and what not to do. I might also sway and dip like the eagle in the wind and utter random thoughts that will only make sense to me. Either way, this must happen now. Please note, the eagle probably has other intentions for me, and for us at this point … but this is my rendition. Maybe now would be a good time to put some tobacco. Sit still, I will return.

Oh great creator…

It's not because you are Indigenous that you should limit yourself to only working for the Indigenous community, but you obviously have a responsibility towards your community. That responsibility is something unworldly and can and will define you. It will define you in ways that you will learn with time. It will never be easy but keep in mind that we all have responsibilities/ We have ties to our community. I am obviously still learning.

This is not just for Indigenous designers, experienced or just starting out, it is for all people, from all walks of design life. As designers, we do work for different kinds of clients. The clients could be lawyers, artists, restaurateurs, etc. Our design practice is rooted in love, and in relations past and present.

Note that I am not trying to define Indigenous graphic design. I am offering an explanation as to how we can be approached as designers. Most importantly our design can affect our community. Non-indigenous folks in need of our service must approach us with respect.

While reading this manifesto, I would like for you to connect with your inner child. Take a moment in complete silence and simply take a nice breath, open your eyes and smile and see your environment as a playing ground. Go play with no set rules so that your spirit listens and ignores your mind.

I am basing this text on the time my grandfather pulled a napkin out of his pocket and began to unfold it. He took great care while unfolding this napkin, as if the napkin was holding something sacred. Once completely unfolded, there seemed to be a grin on the side of my grandfather's mouth. It lasted only for a moment, since now he had the napkin unfolded and it was imperative that he find pen and paper to draw whatever was on the napkin onto a piece of paper. Creator forbid that something like water or a snotty-nosed kid, me, would touch or ruin the napkin yet he put me in charge of keeping an eye on the napkin while he looked frantically for pen and paper.

I tell you this, it was intense, and my whole 8-year-old mind, body and spirit were focused on this napkin. Usually, a napkin is something you disregard but this was something special. As if the creator himself had used it as a wipe and gave it to my grandfather for safe keeping. Yet, just like knowledge, moments are fleeting moment. This is what the delicate napkin represented.

My memory is from a time when you could not type notes into a hand-held device. If you needed to remember information, it was written down on something for later use. No, this was a regular dinner napkin. The ones where a single drop of water could make the ink disappear in a flash. In many instances, these napkins were as important, if not more, than birch bark scrolls. The only difference is that the latter did not make for a very good spit ball gun, straw spit or napkin.

Believe me, if there was straw beside the "napkin" when all of my little body was focused on the "napkin," which I was in charge of safe-keeping it, I did not see it.

Anyway, let us return to the reason why I started my manifesto, based on a napkin that was in my grandfather's pocket.

Well, the thing is that when I was completely focused on the napkin, I did not notice what was drawn on the napkin, nor should I, since I was only 8 years old. Yet what was on the napkin were the markings or the inner structure of what I could make out as a tipi.

My grandfather transferred the information, image, and writing that was on the napkin to a piece of looseleaf paper very quickly. He was loose in his rendering, completing only the strict minimum, so that the information left upon the creator's napkin was transferred to the fresh piece of paper. He put down his pencil, looked at what he had done and took a breath of relief. He got up to boil water for tea and brought back a box of tea cookies, the kind of cookies that little boys don't like, yet will eat if desperate. At this point, not one word was said. After the water was boiled, he placed a fresh tea bag in his cup, then went from the kitchen counter back to the table where he was drawing the tipi on the paper. He did not sit down in front of his fresh new drawing. He went to his office and came back with a ruler.

He sat on the kitchen chair, took a nice little sip of hot tea that was just hot enough not to burn his lips, and began adding little dots. They were made

with the finest of detail and measured out with the ruler. There seemed to have a total of fifteen dots. They were in a circular form, spaced out on the bottom. Thirteen dots were close together and the other two dots on the right and left of the tipi.

He then joined the dots together with a pencil, not a pen. I forgot to mention earlier that he got a pencil with the ruler from his office at the same time. Continue reading the story, howah!

Then he took his pen and drew over the lines to make the drawing official. He wrote words around the tipi that I could not make out.

He stood up showed the drawing to my granny, which she looked at from the corner of her eye just like Grandpa did after delicately opening the napkin, she grinned. I suppose it was the grin of approval. This made my grandfather smile. He took the drawing to his office. I did not see it again until much later on in my life.

He returned from the office wearing his favorite hat and jacket, holding his car keys. He told me that it is time to go to the racetracks. My grandfather took me frequently to the racetracks.

He kept quiet that evening at the tracks. He seemed humbled and light, light as in a huge weight or a burden had been lifted.

You might wonder what might have happened to that drawing. Well, I noticed many years later that the drawing upon that napkin was very similar to the drawings used for tipi teachings.

Please note that this is only a memory of a dream, yet it feels very real to me.

That being said, you now can understand that I come from a place of observation and teaching. The most important thing is to be still, quiet and take in a moment as a moment in ceremony.

A moment as ceremony.

As designers, the settlers need us more than we need them. We are at a point that our community is getting more and more self-sufficient. Obviously, this does not include everyone yet we do try as community builders to include

everyone. This task is not always easy, even almost impossible, yet the resilience we have towards our community makes us all a part of each other.

Here we have, in point form, the necessary tools for Cree based design: These are based on the Cree tipi teaching (and reformulated to reflect design)

OBEDIENCE
Obey your elder (this can be your inner voice or an actual elder from your community). Listen and be quiet sometimes. Listen, listen, Listen. And when you think you are done listening, do it some more.

RESPECT
Respect everything you see, don't see, hear, don't hear, don't smell, smell, feel, don't feel, etc. Just respect everything, never mind.

HUMILITY
We are dependent on commissions, but we can also take on self-initiated creative work. Allowing oneself to be able to deliver a design that reflects the needs of the commission. Understanding that we are building a relation with our creation. Our creation comes from somewhere. It can be modified and changed and criticized. If a settler criticizes your work, it is hard not to push back. I say push back so that they understand and respect your creation. In return, marking this a collaboration and a learning experience for both. You are not immune from any type criticism. Be open to it.

HAPPINESS
If possible, be happy with your design. Share your design. We never really finish a creation, we let it go. To let it go is to give it life. With creative enthusiasm in our design, the ancestors will see and feel happiness. Make others happy.

LOVE
We need to make harmonious design. Design that is harmonious with our surroundings. Being good and kind to our relations by using materials and tools that are renewable and not harmful to the earth. The materials we use need to be easily renewable. Use technology at a minimum.

FAITH
Believe in your design. Do not let anyone bring you down. Take criticism but be wary of critiques that originate from people who are not of your

community. Your design creation comes from outside you. From a place of continuation. Do not let go. Do not give up. Show resilience. Stand strong and face the wind. Do this every time you can. Your creation is you.

KINSHIP

Make your design kin. Expand the creative kin. The relationship you build by using design as a tool makes you in relation with your relations. You get it right.

CLEANLINESS

Make your design clean. Design cleanliness makes for a clean and clear mind. Clean design ensures everyone understands the message and that your design comes from a good place. If the expectation is to put a feather on it, well, that is up to you to take our traditions outside of the ceremony. Ceremony is sacred and has its place, in ceremony. Do not let settlers romanticize our culture. This makes us walk backwards, not forward.

THANKFULNESS

Learn to give thanks to the fact that you are present and can create. You are a creator and you have a privilege to share your creations. Be thankful of that, every day.

SHARING

You work with and for your community. Without sharing, you are nothing, secluded and neutral. You are creating for your community. Take ideas from your community but know that they can take it back. Without community you are nothing. Keep close ties with your relations.

STRENGTH

Have creative strength. Don't complain. See creation as fasting. Don't let go. Mistakes allow for us to grow. So make mistakes. Make a lot of them. Make mistakes for others, so they can learn from you.

GOOD DESIGN REARING

Take care of your design. Make sure the intentions of the design are for it to be well. That the intentions can grow outside of you and that the community can be relevant to their creation. It is a circle so watch out. They can come back to you.

HOPE
Forward design thinking, or feeling, allows for our relations to grow and in return we grow. Hope that your intentions will be fruitful, not only to you but to all our relations.
We must look forward to moving toward good intentions.

ULTIMATE PROTECTION
Protect your intention. Your intentions of what you do and who you do it for. Protect yourself. In doing so you protect your creations and you protect your relations. You have a responsibility to protect your community.

CONTROL FLAPS
Let the air out. Things become frustrating. Go for a walk. Look at the sky. Let out your thoughts. When ready, get back to it. Easy or accessible creative thoughts do not happen. Look at your screen or defend your intentions against a settler who wants more "Indian".

CONCLUSION - POLES
Our creation is what ties all relations together. The scene and the unseen reactions, every time one is concluded you have made a bond to that creative energy, to that creative source. It is humbling how that bond is strong and always growing.

I hope that our women will stay strong since they are our ultimate protectors and they will help our communities as a whole.

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