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UNPLUGGED CRAFTIVISM: A STORY OF HUMANS AND ENVIRONMENTAL EDUCATION

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Abstract: This is a written account of a keynote presentation given at the Council of Outdoor Educators of Ontario, annual conference in Canada. The conference themes included revival of the hand-made and Folk Schools. This article outlines the dramatic effects and hand-made props used to present an "unplugged" presentation that was simultaneously humourous and educational. The presentation began by drawing upon research from the field of anthropology that links the historical development of the brain with early flint-knapping skills. Following the introduction a rationale for understanding the importance of fibre and edge technology was conveyed. An exploration of hand skills was further explored by examining some materials and the design aspects involved in making clothing. The later part of the article describes the child developmental ideas that correspond with Waldorf Handwork programs and outlines the origin of two of North America's largest Folk Schools. Short narrations occur throughout the paper and are used to emphasize the way making things with our hands link human's environmental survival to human development and education. The paper concludes with three short stories that emphasize the importance of using our hands in conjunction with our minds to make the stuff of life we need to live.

Keywords: craft making; environmental education; brain development; handwork; folk schools; Waldorf Education

The following is a description of the keynote presentation given at the annual conference of *The Council of Outdoor Educators of Ontario* (COEO) in 2016. The conference theme was *Unplugged: Folk School Traditions and the Hand-made*. Common presentation methods such as data projectors, microphones, or the reading aloud of a research paper were not desired or expected by the conference attendees who were a mix of academics and educators. Instead, I drew upon my experience as a storyteller. The result was a performance piece made up of a mosaic of stories, research data, and costumes and props (e.g. mostly hand-made). I prepared by condensing my ideas down onto cue-cards and practicing orally while visualizing the dramatization I would use to encourage audience participation. This article includes both expanded sections and sections condensed for brevity, from my presentation. Elaborations on my actions are noted in [ ].

My goal for the presentation was to convey the importance of both the process and product of the hand-made, in contrast to the manufactured within global-based economies. For this publication I chose the title *Unplugged Craftivism: A Story of Humans and Environmental Education,* but my working title for the keynote was *Not Naked and Afraid,*[1] *but Naked and Crafty*. It was a struggle to overcome my initial unease with the degree to which I would both literally and figuratively be exposing myself. My plan included stripping down to a skin-tight spandex body suit and elaborating on my graduate research that claims *craft* experiences are more critical to a student's environmental education than today's curricula emphasis on *Eco Art* or *IT.*

Presentation

Many of you, while talking about edible plants or starting a fire with a bow drill, may have had a camper or student ask if you know Bear Gryllis or are Survivorman. Maybe one of your colleagues had suggested you try out for *Survivor* when it first appeared on air, or go on today's reality TV series *Naked and Afraid (*Garfinkle, D., Renfroe, Rankin, Contis, & Boyle, 2013). You may consider such comments compliments—an indication that you are one with nature. Yet you may also be well aware that your experience level is far from adequate in offering you the skills required to survive for long out-of-doors, especially with any degree of comfort.

Such statements can also inspire us to imagine we are a part of a fairytale, one where you live happily ever after in the wilderness. Isn't this what we want from our outdoor education profession? Imagine being outside all day, carving wood, gathering plants, cooking around the campfire under the sunshine with no need to do any

paperwork back in some office, or worrying about upcoming budgetary constraint meetings—those other realities of our modern industrial world. Let's explore these ideas, but let's not call what we do, *Naked and Afraid;* isn't it more like *Naked and Crafty?*

For those of you who have seen the television series *Naked and Afraid*, you will be aware that the first thing that happens is that the contestants are blind-folded and taken to an unknown wilderness location. [At this point in my presentation I started to undress to my skin-tone body suit.] Just before they meet their survival partner they take off their clothes—that's the naked part. Later, some cameraman will have the job of blurring out all their private parts in the film footage before it goes to air. Unfortunately, I'm not that technologically savvy, so I am going to use a spandex suit to do all my smudging out. As I'm an outdoor educator, I am immediately going to start to do a few things: I am going to remember the 3-5 survival rules.

First, I need to think, will I run out of air in 3-5 minutes? I don't think that is of concern here. Next, I know I have 3-5 hours to moderate my body temperature. If it is summer, I would seek shelter to keep myself out of the scorching sun. Maybe I would find a nice reed or cattail patch, to make a sun visor and protect my eyes [I put on a visor made out of cattails, which I had placed earlier on a table.]

Have you ever noticed that all the *Naked and Afraid* shows take place in warm tropical regions? As a Canadian I know that nighttime temperatures, even in the summer, can get dangerously cold. It is autumn now, so I know winter is approaching. Remembering my survival rules means I will immediately begin seeking a way to keep my body temperature stable.

Does anybody know where I can find something to keep me warm? Do you see any fibres I can weave into some clothing? Perhaps a Canadian version of a fig leaf because I am modest, despite my love of skinny dipping. Now, cold weather is coming and if I want to be warm tonight I need everyone to help me out and engage in that ancient experience of finding and harvesting your own craft making materials. [I continued to speak in an informal dialogue to engage the audience.] Remember there are no big box stores like Michael's, Walmart, or Home Depot around here.

Finding suitable material on the land so that you can shape it into whatever you envision—the craft that will fulfill your needs—is probably the most endangered outdoor experience in the modern world. Here it is—my Canadian equivalent to a fig leaf. [I pick up a sheer piece of fabric I have sewed leaf shapes on. The fabric is knotted like a toga

so I can quickly throw it over one shoulder and wear it. One red maple leaf is strategically placed where Adam placed his fig leaf.]

How many of you have ever walked out into the forest looking for material suitable to gather with plans of shaping it into something useful–meaning something you can actually use—not just to frame and display on a wall? [I mimicked searching around.] Not too many of you. Why is it that so many of our making experiences, if we have them at all, begin with a visit to a store to purchase materials? Harvesting experiences are the very rootstock of being human, where our real craftsmanship begins.

What do you think was the first material ever picked up and altered, shaped by our own hands, fashioned into a new tool, a new form? What was the first craft? Why did we make it? Is anyone thinking a stick or a rock? Something that would help us dig into the earth to pull up a tuber to munch on? Or throw at something we wanted to eat? Maybe we strived to figure out how to combine both stick and rock together, to make a useful tool. To understand what this tool might have looked like, we need a good anthropologist, or the ability to go way back in time to meet the very first outdoor educator.

I met my first anthropologist when I was quite young, and sharing this account with you will help you understand my fascination with crafts. When I was about eight or nine years old my father took me to Crawford Lake, Ontario, where a prehistoric Iroquois village had been discovered. There were plans to reconstruct it and build a visitor centre. Because my two sisters were shopaholics and had little interest in the outdoors, my father took just me. He also told me to bring the collection of arrowheads he had found when he was a child and that I was allowed to keep in my bedroom. He told me the anthropologists present would tell us about the arrowheads. At the site, I watched the anthropologist place our arrowhead collection in a neat row according to estimated age. [I started to hold up a few of my arrowheads.]

To my young mind, the anthropologists got it all wrong. The arrowheads did not belong in a row according to their age as if they were going to school. The neatest arrowhead in the box was clearly the largest one—look at it. [I held up my large flint-knapped arrowhead that looked like it belonged on a spearhead.] See, it still has a bloodstain on it! What could be more cool? Maybe the blood was from a saber tooth tiger!!!

But that anthropologist didn't seem interested in the size of this large arrowhead. They hardly noticed even my small little arrowhead. They kept looking at this deformed arrowhead, turning it over and over in their hand. It just looks like a little warped axe head. I couldn't figure out what this one was used for, and the anthropologist never explain their fascination, they simply hinted around that we had a very good collection, and that if there came a day we didn't want it that they would be interested in it. But there was no way I was giving up my arrowhead collection!

Decades later, when I was a graduate student, I read the book, *The Axe Maker's Gift* (Burke & Ornstein, 1997). [I held up the book.] This book gave me my first clue as to what that anthropologist was thinking about, and to who were the first outdoor educators on earth.

Let me help you imagine walking through a savanna landscape in what is now Africa, and meeting one of these educators a long time ago. [I don a mask of an early human. See *Figure 1.*]

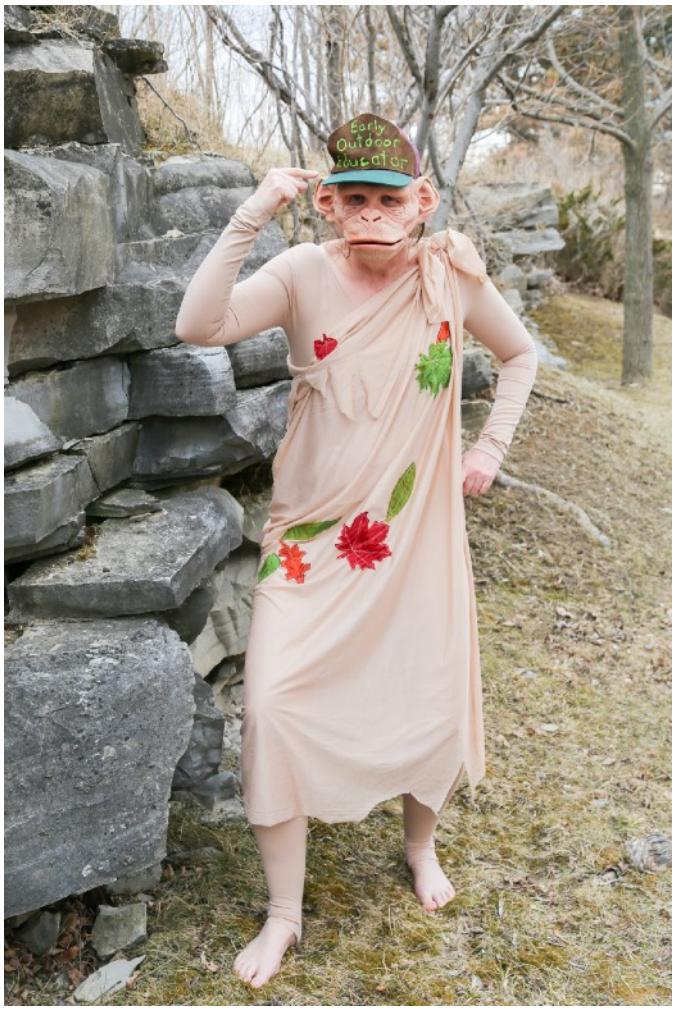

Figure 1. Mask and outfit

Now I know you are thinking the first outdoor educator looks pretty ugly and probably scared away all their young students. But I figure they were aware of their looks and actively tried to build up the muscles in their prefrontal lobes, so their faces would look prettier. Check out my big eyes and imagine walking beside me a long time ago. I'm not saying a lot, mostly looking around, sniffing the air occasionally, absorbing everything with all my sensory ability. [I wandered around the room, sniffing, looking, picking up various rocks I had previously placed on tables.] I am using my big eyes to try and find important material. I am also trying to get the young whipper-snapper beside me to notice the same things I do—the important things. Can you distinguish the subtle features in all the grayness? [I start holding up various gray rocks.] Can you tell your granite from your marble? Your marble from your chert? Your flint from your limestone? All these gray rocks look pretty much alike, pretty blah and gray—don't they? Remember your ability to survive was dependent on your ability to notice small details! To live, you had to be aware of subtle novelty and minute observations in your landscape. Can you tell what material is better to shape, to make things with, like a rock tool, an arrowhead?

Are you willing to travel a great distance to find superior quality crafting supplies? Remember there are no stores to buy premade arrowheads or discount sales on fire-by-friction kits. There are also no cars to prevent you from walking. Many of you will have joined the latest fitness craze and now practice bipedal motion. Once you learn to move with just your feet, you free up your hands [I wiggled and waved my fingers] so they can play a bigger part in your surviving and "working out," or should I say growing your prettiness, your prefrontal cortex muscle. [I pointed to my forehead.]

The first rule of craft making is knowing where to find the material you need to live—the stuff of life, as Indigenous author Lee Maracle refers to it (Maracle, 1996). Now let's say you are capable of knowing how to recognize and find a source of flint. Then what? Don't expect this outdoor educator [I pointed to myself] to tell you "this is step one, this is step two, this is step three" until you are holding an arrowhead. It takes a long time to grow a prefrontal lobe muscle. We have to do something over and over again to learn—to make this gray muscle matter grow [I pointed to my missing prefrontal lobe area]. In fact, if you were my offspring, or any other young student by my side, I would want you to notice and pay attention to what I am doing! Maybe imitate me. If I decide to give you the arrowhead, will you automatically know how to use it? Will you find a nice straight stick to use as a shaft, twist some fibre, and tie things together with a good knot so the two materials will stay attached? Maybe, if I don't have your attention, it is because I can't really talk to you and say "Hey! Listen Up, Pay Attention! This is important stuff to learn," because language has not been invented yet.

The first outdoor educator probably wondered how to get young people's attention so they could learn how to twist cordage and attach the spearhead to a stick. Our first craft-making lesson probably looked something like this. [I took a 9cm thick diameter rope made out of several layers of paper towel (see *Figure 2*) and encouraged an audience member to stand and hold the completed end of the rope. I began to twist the other end and make increasingly animated sounds in rhythm with my motion to draw attention to the direction of my twisting.]

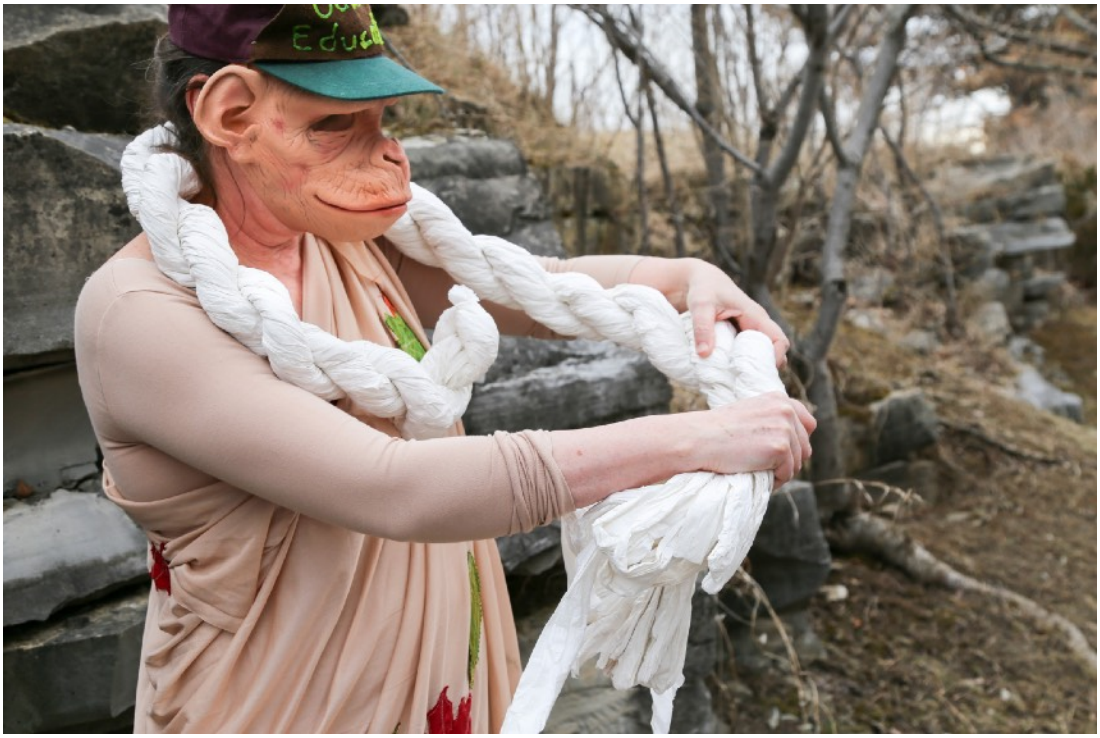

Figure 2. Twisting rope

Unh, Unh, Ahhhhhhh

Unh, Unh, Ahhhhhhh [Unh- I twisted strand in one direction, Ahhhh- I twisted two strands together in opposite direction]

[I took off my mask once I sensed people recognized the importance of the direction of the cordage I was twisting. I continued to hold the rope and my mask as I speak.]

Some anthropologists suspect that it was our desire to pass on hand skills—our thinking ability—to our offspring that resulted in our development of language (Burke & Ornstein, 1997). Did my grunting and groaning help you notice the important details—

like the way I was twisting the fiber? The twist's direction is the important detail I wanted you to notice—to think about.

Unh, Unh, Ahhhhhh [I repeated my rope making actions.]

The original outdoor educators had enough pre-frontal cortex to allow them to complete the more than one hundred sequential steps involved in flint-knapping a useful spearhead shape. Flint-knapping was demanding, cognitive work. It has taken some anthropologist years of practice to be able to replicate the well-knapped arrowheads of our ancestors in the past. Teaching, or the passing on of such learned knowledge to young people, is similarly challenging work today.

Role modeling and telling the story of how a rock can become part of a spear that can take down a mammoth is not a simple task. Nor is how to tie the fancy knot so your stick stays attached to your stone point. Who wants the knot to slip off when it is flying through the air? You need the stick and sharp stone to stay together so your spear can pierce the hide of a charging saber tooth tiger and you can live to tell the tale around the campfire the next day. [Pretend throwing a long spear.]

Flint-knapping involves hundreds of sequential steps. It combines accurately using your eyes and hands in coordinated efforts to reduce a rock down to something you can imagine as being helpful and efficient in your efforts to eat. This exercise of imagining is a pretty important skill required by our offspring to survive. You would go to great lengths, whooping and hollering until you got your student's attention, and they started concentrating on the important stuff. In short—started growing their own prefrontal cortex, and started making things.

It was only after reading and thinking about the link between flint-knapping, language development, and my own childhood experience, that I understood how impressive this little deformed looking arrowhead was. Its maker was imagining, thinking about a different shape, perhaps they were aiming for something that would work like a drill and spiral into wood, or a scoop to carve out a bowl. I have no idea how to begin to knap out such little notches without breaking them totally off in the process. It was only after reading about the anthropologist's struggle to understand how arrowheads were made that I also saw the importance of not being distracted by the big and glamourous things that my young mind was fascinated by [I held up only the large and deformed arrowheads (See *Figure 3*)].

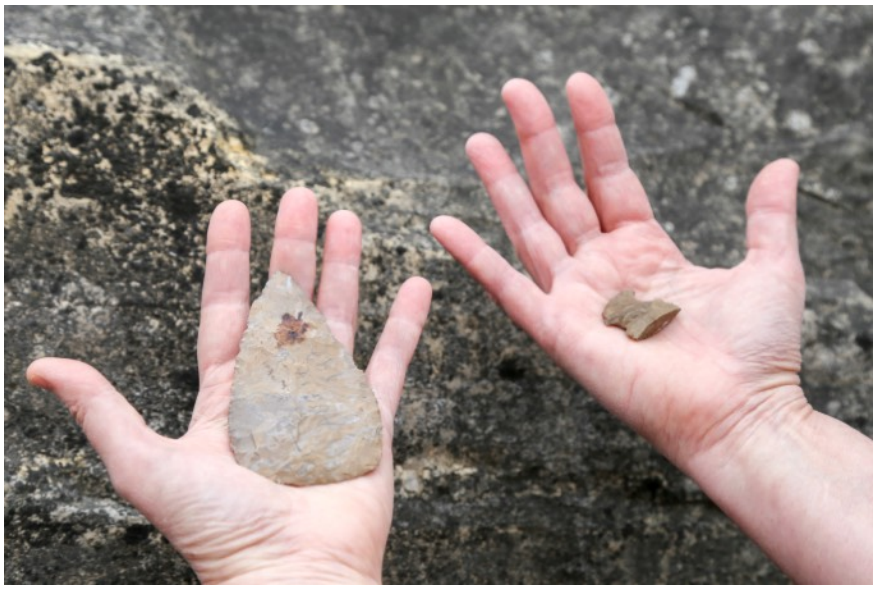

Figure 3. Arrowheads

A decade after reading about the cognitive demands and the origins of language associated with flint-knapping, I was chatting with another anthropologist (Ben Dor, 2012). I was at the Ancestral Health Symposium, at Harvard University. Imagine being surrounded by medical doctors and fitness buffs who all thought eating cultivated agricultural foods, such as grains, was the cause of many of our modern health issues. This conference had a lot of learned people justifying the caveman diet.

Does anyone know what percentage of your brain is fat? Sixty percent! It is the fattest organ in your body (Gedgaudas, 2017)! And you're probably correct if you think your brain got fatter, or should I say bigger, because of its association with handiwork development. [I pointed to my prefrontal lobe.] Think, or should I say imagine—how can you use rocks and sticks to hunt mammoths? (Napier, 1980). The answer is with spears and efficient atlatls [I started miming throwing a spear in a wooden atlatl (a device similar to dog owners use of a "Chuckit" to throw a ball.)]

When we first got a fatty brain we were able to figure out that by extending our arm's reach, we improved the thrust behind what we threw. This atlatl tool allowed us to stand far back from our potentially aggressive target—to follow the safety protocol of the time. Throwing a spear was one our earliest technological inventions, our first tinkering project that dabbled with the concept of flight. [I pretended to soar a spear through the air.] Mammoths are a very energy-dense food source. [I placed a small stuffed mammoth on a table and pretend to hunt it with an atlatl.] This is just a baby mammoth. They have lots of protein and fat, especially the parents. Please remember, I want to

look good to increase my chance of mating so I am always exercising my prefrontal cortex, trying to get it to bulge out (Lundborg, 2014). Right now in history my brain size resides somewhere between this size [I pointed to my own head] and this guy's size. [I held up my mask.]

But along comes climate change, also known as the ice age. Mammoths become scarce. If I can't keep up a high content of fat in my diet I may starve and become extinct. The solution is to start looking for another source of fat I can hunt. The problem is all those little deer are a bit too fast and limber for me to take down with my atlatl. Atlatls work great at a distance for targets like mammoths that hang out in the open savannahs, but they are less effective at hitting quick-moving deer that prefer to hide in dense bushes. (See *Figure 4*.)

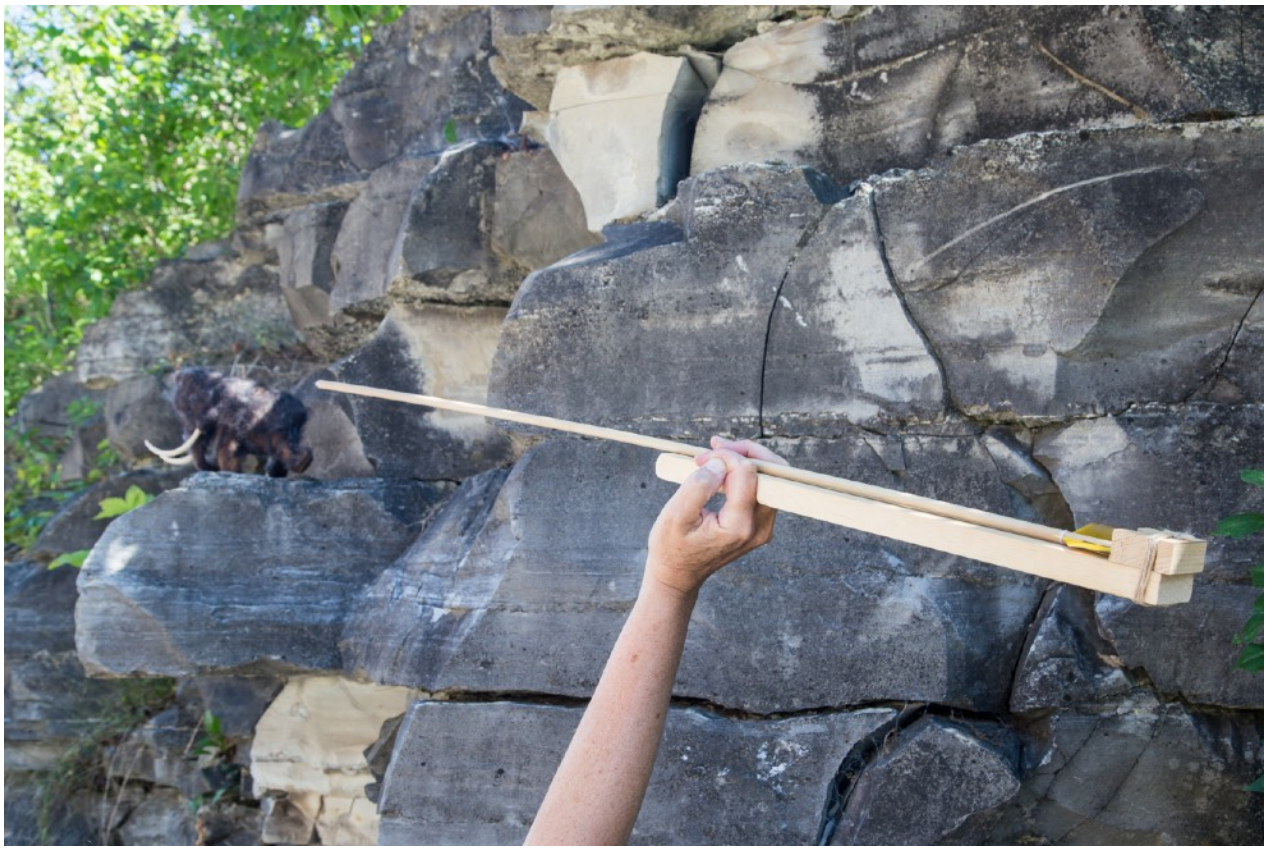

Figure 4. Atlatl and Mammoth

I need something with more speed and finesse that will allow me to sneak up close, like this. [I retrieved a toy bow and arrow that shoots marshmallows from my basket.]

The anthropologist I heard present at the Ancestral Health Symposium showed a graph that linked the growth of human brain size to our ability to maintain our access to fatty animals (Ben Dor, 2012). Instead of X's he marked his chart with pictures of our changing animal food sources. He talked about the necessary shift from hunting mammoths to deer in order to maintain adequate fat in our diet, and Surprise!—the shift corresponded to an increase in our brain size. He described an archeological cave that linked this early period of food transitioning, increase brain growth, and findings of early remnants of bows and arrows. Now, was learning to make a bow and arrows an invention or a brain exercise routine? [I pointed to my prefrontal lobe.] Figuring out how to make these hunting tools [I held up bow and arrow] allowed me to maintain a healthy dietary fat content, despite the disappearance of mammoths.

Now as I think like a crafty outdoor educator and not an anthropologist, I begin to question this man's conclusions. He thought it was the cognitive demands required to track deer that led to our brain growth. I agree that tracking an animal is very demanding work, especially compared to planting seeds in a row for agricultural purposes, but knowing how to make a bow and arrow is also very demanding cognitive work. Why do people today often devalue craft making skills and emphasize other things like cave art? Think about all the cognitive demands required to make a bow and arrow: you need way-finding skills to know where to go to harvest the best material; you need an eye for straight arrow shafts, and the knowhow to gather strong bendy wood for the bow; you need sequential thinking to make the arrowhead, cognitive trial-and-error to knot everything together; and you need super fine sensory awareness in those finger tips to fletch on delicate feathers. I bet the person who got A+ in flint-knapping was the one who also figured out that feathers if attached in a particular manner, could make things fly straight. Imagine old timers determining [I pointed again to my prefrontal cortex and parts of the bow and arrow] how to transfer energy from your bent piece of hardwood into your light straight arrow, carefully fletched with feathers, so it would fly straight and hit your moving target with accuracy. You have to pull in the opposite direction to get things to fly in the direction you want. And you did all this with a simple string you twisted yourself. Back then they must have had games to practice hitting targets. Mastery back then still meant, repeat to remember, remember to repeat (Medina, 2008) and constant learning from your mistakes. This was all ingenious stuff, just as stimulating as tracking I would say. Weren't all outdoor educators called, Einsteins-of-the-Savannah, back in the day?

The ability to touch our thumbs to all of our fingertips was, and still is, bloody amazing. [I danced both thumbs between all my fingertips.]

Needless to say, a lively conversation with this second anthropologist focused upon whether it was the rigor of craftwork or tracking that resulted in our brain development (Ben Dor, 2012). Other anthropologists consider the development of watercraft and clothing another hallmark in our development beyond stone tools (Davidson, 2013). Such enlightening engagement is why I love being called an outdoor educator. [I picked up and kissed the forehead of the mask.]

Let's now leave behind the anthropologists and go on to question the other skills and subject areas humans needed to explore as their civilization moved from basic survival, as in *Naked and Afraid*, towards industrially made food and electronic items—things like GPS devices that allow us to navigate ourselves out into space towards the moon.

Many times when I start one of my presentations on craft-making I begin with a question: What two material elements have humans constantly been in a quest to find and refine in order to develop their civilization? [I coaxed and prodded the audience, by touching the stones and rope left out on the tables, until they holler out the answers. I elaborated upon the key points listed below.]

Edges: From stones we made our first **edges,** which aid digging into earth and accessing food from plants and flesh. We learned to "work rock" by also heating, melting, and reforming it into things like copper and iron tools, axes and saw blades, and eventually we built bulldozers and explosive bombs to move and rip up ever larger amounts of earth.

Fibre: With **fibre** we moved from simple twisted strands of string to more complex under and over weaving in our clothes. We learned which materials [I hold up a stuff spider and silk fabric] can be worked fine into things like this, and which materials can be felted or maybe glued together into thick insulative material for our shelter walls, things like plywood and particle chip boards. Engineers can provide all kinds of statistics about these material qualities and their structural integrity, especially when used in high-rise towers.

Let's explore some of the basic materials that all of us are presently wearing, whether handmade or machine processed:

Leather: is puffed out animal skin. [I held up a leather vest.] When the space in the skin tissue is minimal, not well dried and filled with air pockets, we call it rawhide, and take advantage of the stiffer qualities. [I held up a snowshoe.] Thick skin, which is well puffed

out in a tanning process, retains its flexibility, so is considered a superior product for durability and warmth, especially if the fur is left on. The weakness of leather is that if it becomes wet in the rain it can stiffen and lose some of its flexibility. Most of us wear leather shoes because it is hard to improve on the flexibility and durability of skin. We like the feel of a permeable layer. Doesn't skin on skin feel great? [I rubbed up to someone's bare arm/shoulder and winked.]

Fabric: Most of us are wearing some form of fabric that is either woven or knitted together strands of fibre. The strands used typically come from either plants, like cotton or flax, or animals, like sheep's wool. Increasingly we are using strands made from byproducts of the petroleum industry or recycled pop bottles. Likewise, we are learning about the negative effects of synthetic micro-beads or the plastic dust they erode into.

Woven Fabric: is made from strands worked in two directions. [I intertwined my fingers.] Most of us recognize this under and over technique—a weave based upon a vertical and horizontal axis—a primary school weaving activity. Most of our jeans are made this way. [I held up a pair of pants.] If we are lucky our wardrobe is full of colour because we have learned the magic of dipping something into a dye pot. Imagine dunking a cloth into a pot with some green indigo plant material and removing a totally different colour, like indigo blue.

Woven fabric is comfortable to wear when it is designed to be loose and roomy, to drape well around moving appendages. In the past we made shirts with many small gathers and called them smocks. But smocking required a lot of fabric and stitching, so smocks were burdensome to both make and wear. Someone in our past tried to invent something more practical, something that would stretch and move with ease like our body could—whoever it was, imagined knitting.

Knitting: is just a continuation of our early love of playing with the oldest toy in the world—a stick. But knitting involves two-hand coordination, moving two sticks in coordinated rhythm to make interlocking loops with that rope we already invented. It is all pretty ingenious. [I gestured with wooden knitting needles.] The founder of Waldorf education, Rudolf Steiner, said "Thinking is cosmic knitting," (Mitchell & Livingston, 2007, p. 31) and made *handwork* a mandatory school subject. I will return to this idea later.

Knitting is about using two sticks to make stretchy, elastic fabric that is more comfortable to wear than woven fabric. Knitting is ingenious, but also labour intensive. People use to hand knit fine stockings. Can you imagine knitting a T-shirt by hand?

Making the kajillions of required stitches for one shirt? T-shirts are pervasive today only because the industrial revolution capitalized on the creation of power looms and eventually the knitting machine. But as educators I ask you: At some point in your life don't you think every person who wears clothes should have to experience making clothes? Teachers should be asking at what grade level a machine should replace hands-on learning, and if programming a 3D printer really results in a replicated pair of cozy wool knit socks? What would it take to make weaving a shirt, or knitting a hat by hand, a fundamental core experience in school curriculum today? If learning such skills once existed in our past schooling, why were they eliminated? And is the present trend for makerspaces a call for the return to hands-on learning?

Let's leave behind the notion of the way fiber gives us material like leather, cloth and stretchy sportswear, and focus on design.

Design: Most painting and drawing classes give you the opportunity to practice envisioning proportion in two dimensions. Adding a third dimension requires more complexity and higher-level thinking. Don't ever let a painter belittle you because you are making a "simple" craft versus art. Making an item that is both beautiful and also functional requires much more than two-dimensional thinking (Paul, 2012).

Let's examine one little craft that protects one small part of our body. Because my feet are bare and cold, I am going to suggest the lowly sock.

Socks: Socks are simultaneously comfortable and allow bipedal motion. Our ancestors quickly learned that woven fabric could not be stitched into a pair of socks because wrinkles and seams give our tootsies blisters. And wrapping long strips of woven cloth around our foot always became a droopy burdensome mess. Early sock inventors probably started by imagining a tube, with a closed end for the toes. Thank goodness for the enlightened soul from our past that figured out that if we balanced four sticks together we could knit in a spiral, the round, and create a stretchy knitted tube. [I held up a partially knitted sock.] Next we struggled to figure out how to put a 90-degree bend in our tube so we could get it on past our ankle. [I gestured a sock shape with a lot of hand and foot action.] This was the time for real high level-thinking, another incredibly ingenious moment in craft history that unfortunately goes unrecognized [I held up knitting with a turned sock heel.] If you have heard that trench foot can stop an army dead in its tracks, then you probably agree that the person who invented how-to-turn-a-heel deserves the Nobel peace prize because they have brought more comfort, to more people than any sergeant or general ever has or will. [I pumped my fist in the air and

then put on a pair of hand-knit socks.] And where in your own education did you learn to turn a heel?

If you happened to go to a Waldorf school where handwork is thought to be a fundamental subject as important as English and Math then you would have learned how to knit a pair of socks in grade . . . ? Any guesses? [I looked to the audience for answers.] Five. Because many of you are educators in the public school system, let's do a brief review of the expectations of the Handwork curriculum in a Waldorf school. (See *Figure 5.*) First, I should emphasize that most material handled in a Waldorf school is natural, versus plastic.

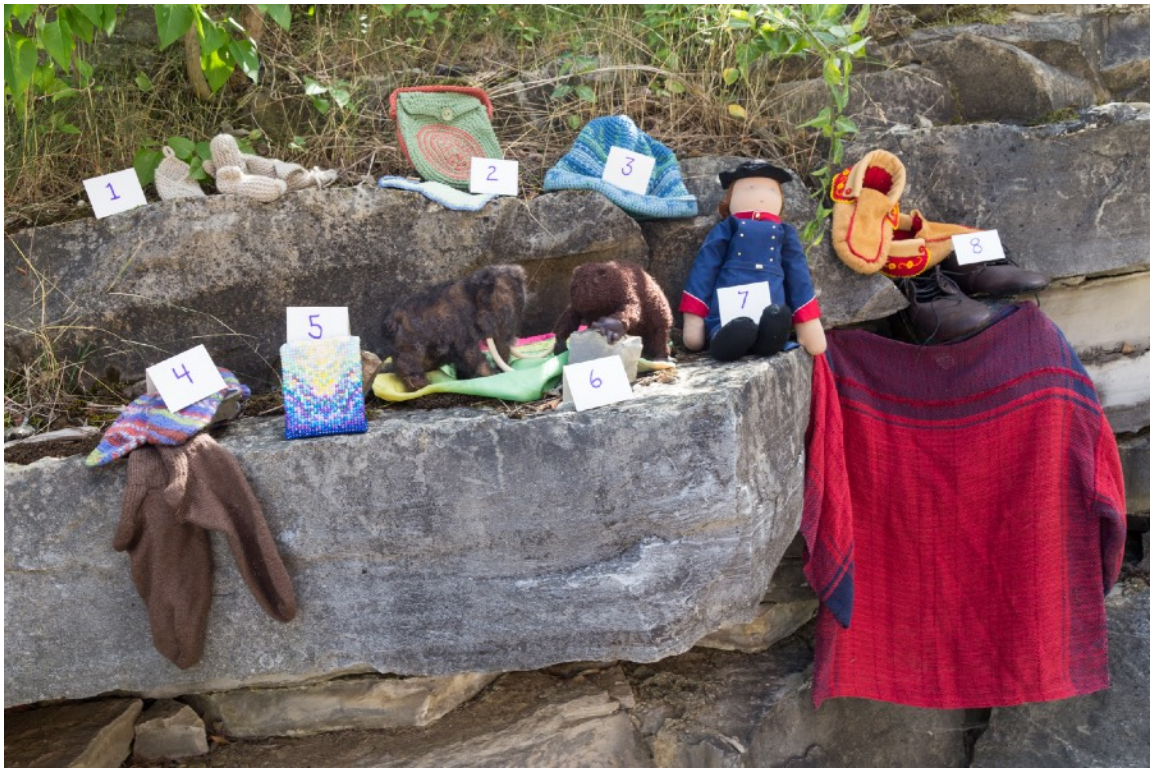

Figure 5. Sample Waldorf Handwork Projects

Grade one: Knitting a square and forming it into a 3D shaped animal. [I held up various examples. See *Figure 6*.]

Grade two: Mastering a crochet needle which involves one-hand dominance, and is something deemed a good precursor to handwriting and also the natural extension of childhood playing with a stick in the soil to shifting playing with a stick and yarn. [I moved a crochet hook like a pen, and held up a crocheted pencil case.]

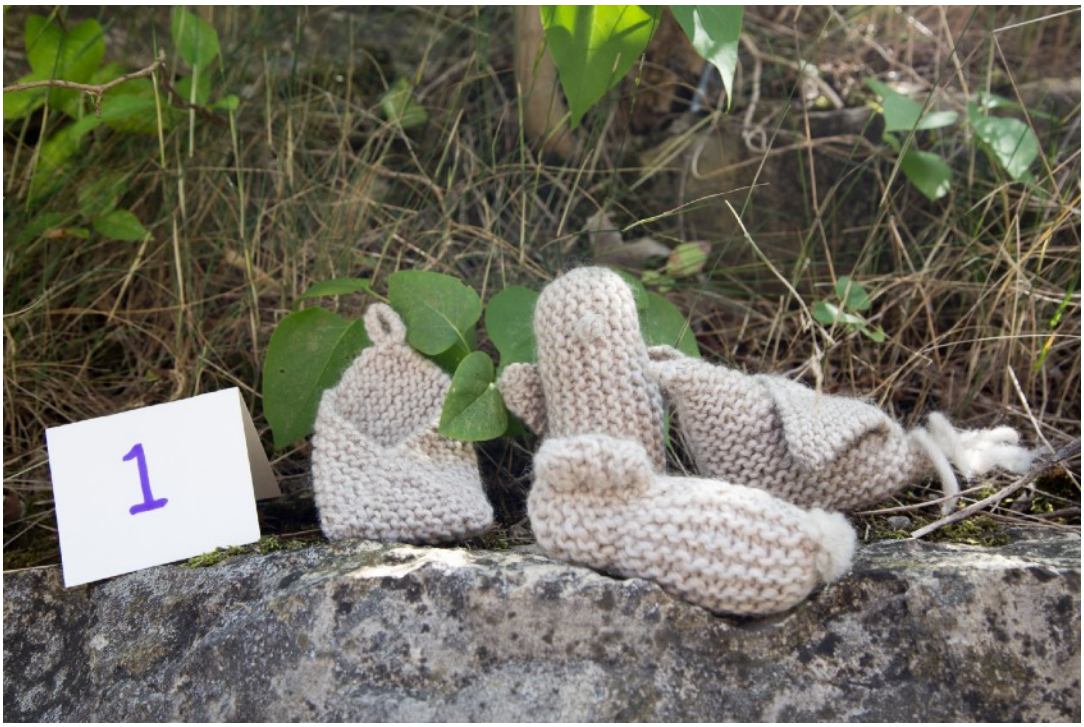

Figure 6. Grade one Handwork

Grade three: Crochet a hat involving replicating the spiral shape at the top of your head. [I held up a hat.]

Grades four and five: Knit socks and cross-stitch a symmetrical design. [I held up a completed sock and a cross-stitched pouch.] Cross-stitching is thought to strengthen the connection between the right and left brain hemispheres.

Grade six: The making and developing of a 3D animal that you identify with in a special way. It needs to be realistic, not a Disney version of a simplistic cartoon with big eyes. You need to study its movements so it does not have a static stationary stance. My baby mammoth is an example. [I held up a toy mammoth and beaver.] Most adults learn to sew and knit by following patterns and would be challenged to make their own proportional patterns. Yet under the tutelage of an instructor educated to recognize the value of handwork, this creative task is done well by grade 6 students.

Grade seven: involves making dolls. Students reflect upon the changing proportions of their own bodies. Often they are encouraged to make a doll of a person they admire or have studied by reading biographies like Joan of Arc.

Grade eight: might introduce a student to the industrial revolution and allow them to use a sewing machine to make a shirt or outfit they will wear to their grade 8 graduation. (Mitchell & Livingston, 2007; Martin, 1999).

If handwork or craftwork, the making of a beautiful useful item, was a required curriculum subject in public school, what would you teach others to make? And if you work at an outdoor education center, what experiences would you provide others for improving their making abilities? Are you capable of making your own snowshoes, canoes, and toboggans? [I held up some snowshoes and emphasized the beauty and complexity in their weave. See *Figure 7.*] At what age should we ensure students get to handle and work with the materials of our fields and forest? Such as birch bark and cattails?

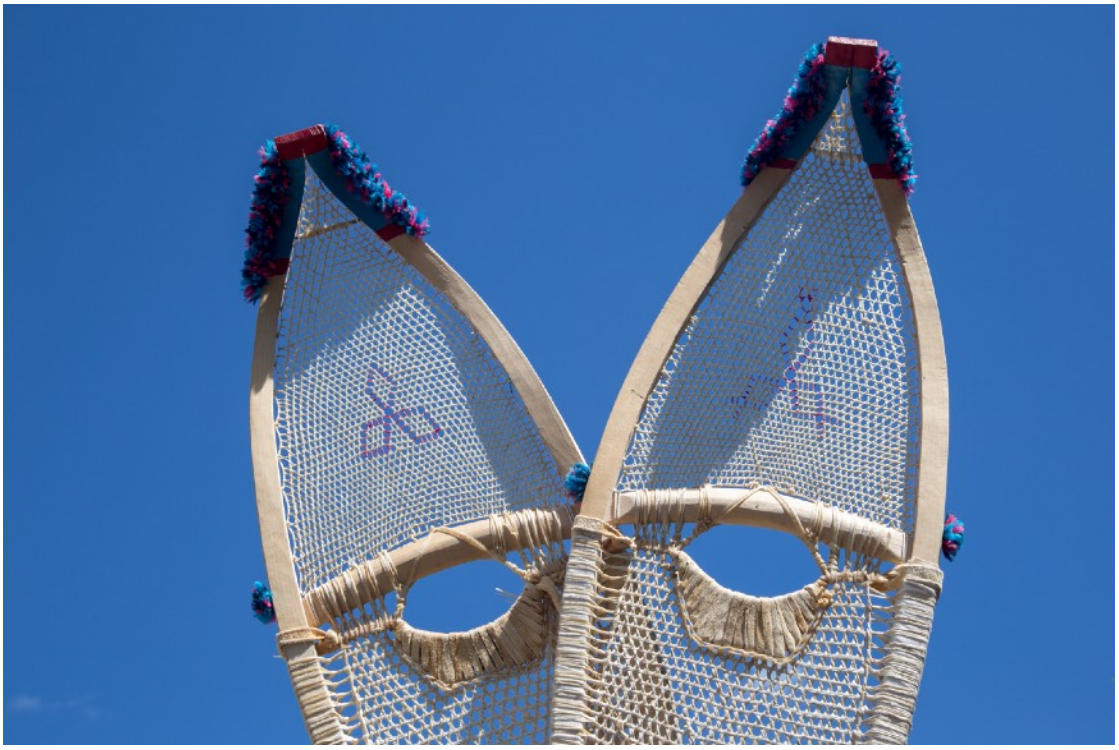

Figure 7. Snowshoes

Most of my outdoor education has been focused on learning how to harvest and make all the things I need to live well in the North woods. While in university, I set myself a goal to learn how to make all the things I needed to go camping. I hope that if you were given enough time, you would know how to harvest your own material and clothe yourself so you were not *Naked and Afraid* when out of doors.

I think it is time to dress myself. [I held up a pair of jeans and Gortex rain pants.] Because all outdoor educators travel with a rain suit today I should point out the difference of how these rain pants, the haut couture fashion of our outdoor profession, incorporate pleats and tucks to allow my knees to bend with ease. We have still not discovered a way to make a stretchy waterproof fabric. Gortex is a woven fabric with a breathable, waterproof coating, while my jeans are woven and can be skinny and tight only because the spandex incorporated into their woven strands makes them stretchy. [I put on the jeans.]

[I held up two shirts, one is a T-shirt, the other is hand-made. See *Figure 8.*] Mmmmm? Which should I put on? I think I will choose the hand-made, despite the folk school logo on the T-shirt. This shirt was hand-woven at the Campbell Folk School. [I put on the woven shirt.]

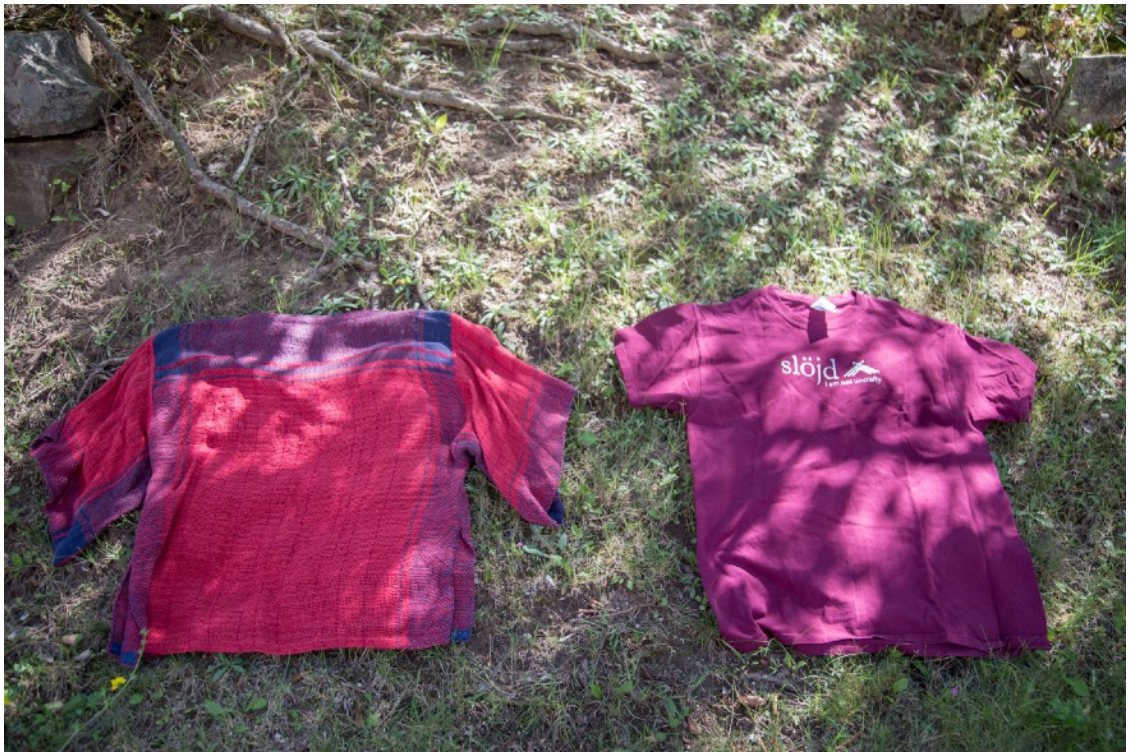

Figure 8. Woven and knitted shirts

I have been fortunate enough to have attended the two biggest folk schools in North America. I would encourage you all to take a course if possible. The Campbell Folk School is in North Carolina, and was founded in 1925, the oldest Folk School in North America. It was designed by a well-to-do couple who were trying to find a way to do humanitarian work in the poorer regions of the Appalachia. John Campbell studied local agricultural practices, and his wife studied ancient ballads and handicrafts. After a

trip to Denmark, where they studied the "schools for life," also known as Folk Schools, they wondered if the collaborative and non-grading methods would work with the country people of Appalachia.

One day they heard the owner of a country store complain about the way the locals were always carving up his wooden bench outside of his store because they had nothing better to do. To discourage them he had taken to hammering nails into the wood so carvers would dull or chip their knife blades. Hearing this concern, the couple decided to offer a carving workshop. They posted signs hoping locals would get curious and show up for the initial meeting. It worked (Campbell Folk School, 2018). Eventually the items made were collected and sold in New York to city folk, nostalgic for the country life they had left behind. Such "cottage" industries began to offer a new source of income for many poor Appalachian people. The carved moose and ducks that adorn many northern outfitter stores are an offshoot of the success of this first Folk School and the revival in all things folksy and Northwoodsy.

My North House folk school T-shirt came from the second Folk School I attended. It is located on the shores of Lake Superior, south of Thunder Bay. It was started in 1997 by a Danish man who was well aware of the Folk School tradition. He had heard of a local waterfront piece of property that was abandoned and might be sold. As a way to promote local struggling artists and the Bed and Breakfast industry in the area, he formed a small group that made a pitch to the local politicians, to exchange the land for a minimal price so they could build on the site's ability for local artisans to host more workshops. The politicians liked the idea of bringing in tourists year-round. Today, there are numerous beautiful wooden buildings, a yurt, wood-fire oven, and sailboats at the school (North House Folk School, 2018). As it is more northern than the Campbell Folk school it offers courses in

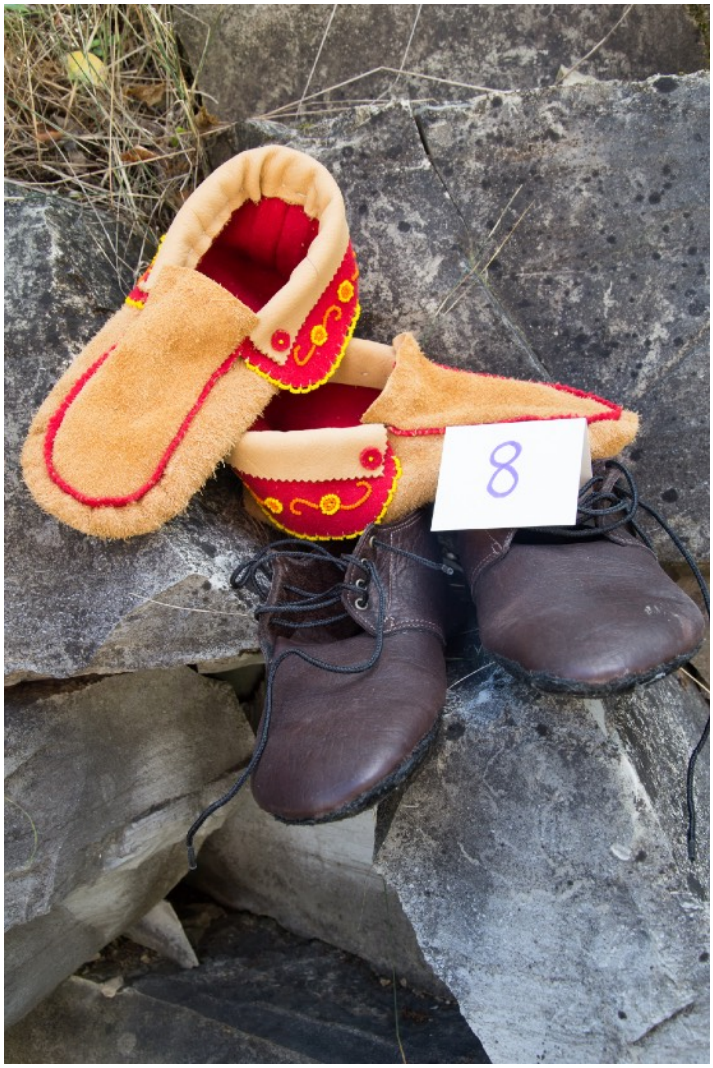

Figure 9. Handmade shoes

snowshoe making, toboggan building, and many Scandinavian crafts. It is another worthwhile place to continue your education. I made these shoes there. [I put on my shoes. See *Figure 9*.]

I'm nearly dressed and no longer looking naked and afraid, but more like a real outdoor educator that is Crafty and Unafraid. I would like to end with three of my favourite craft stories.

My first story comes from Bill Coperthwaite, I interviewed him as part of my PhD on Craftmaking (MacEachren, 2001). He later authored the book *A Handmade Life, (*Coperthwaite, 2003) [I held up the book.] He travelled the world looking for places and stories where two cultures intersected and mixed craft making techniques. He shared an oral story he knew of the time of original contact. An Inuit man made a trade of furs for three knives and a needle. The next day he went back to wave down the boat and gesture to the traders he wanted to return the knives in exchange for more needles. Most of us would think a knife is more important to survival, but to the Inuit the needle is actually a miniature knife, a tiny edge that is key to making clothing suitable for life in a cold climate. I point this out as a way of recognizing how many crafts were historically devalued because of their association with woman's work.

My second story comes from this book [I held up *From the Land.]* Don't you love the title? It is about Dene crafts and design (Thompson, 1994). I will paraphrase the opening story: A young wife was abandoned by her community due to a comment she made about hating to sew. A friend hid a small piece of sinew for her to find before she left. Sinew is the fibre used as thread that comes from an animal's backbone. From this little piece of sinew the abandoned women snared a small bird and obtained food and another larger piece of sinew. From each succeeding animal she snared, she increased the size of her sinew, which gave her the opportunity to snare even larger animals. Years later, when the community met up with this woman, they hardly recognized her amidst all the beautiful things she had made from captured animals. I love the way this story emphasizes the importance of understanding the role of fibre in our lives. The question is not which came first, the chicken or the egg, but is the edge or fibre more important to human survival and knowledge?

I will read my final story to you. It comes from *The Wayfinders, Why Ancient Wisdom Matters in the Modern World* (Davis, 2009)*.*

> During the 1940s and 1950s, a dark period in the history of the country, the Canadian government, in order to establish sovereignty in

> the Arctic, essentially forced the Inuit into settlements, in some cases moving entire populations hundreds of kilometers from their homes. There was one old man who refused to go. Fearful for his life, his family took away all of his tools and weapons, thinking this would oblige him to leave the land. Instead, in the midst of a winter storm, he stepped out of their igloo, defecated, and honed the feces into a frozen blade, which he sharpened with a spray of saliva. With his knife, forged by the cold from human waste, he killed a dog. Using its rib cage as a sled and its hide to harness another dog, he disappeared into the darkness. (p. 206)

[I paused for effect and slowly shook my head in wonder.] Holy Crap A-Roo!

That is such an amazing story. Imagine maintaining one's freedom because you have the skill to use your hands with your own waste product in combination with a conceptual image from your prefrontal lobe. Indigenous people, and we all are indigenous to some place, but in this case the Inuit, are truly master storytellers, craftspeople, and survivalists. This leaves me with one final message to end on.

Go forth, outdoor educators! Go forth with your beautiful prefrontal lobes! Spread the message be not naked and afraid, but be naked and crafty. And never forget, when you work with both your mind and hands, you can accomplish the most amazing things like making all the "stuff of life" you need to survive and live well in this incredible world.

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ENDNOTES

[1] Naked and Afraid is an American reality series based upon a man and a woman surviving for 21 consecutive days in a wilderness setting. Their clothes are removed and they are given only one survival item each.