

A Pedagogy Of Production: Craft, Technology And Outdoor Education

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Abstract

In this paper I discuss issues concerning pedagogical practice and inquiry in Outdoor Education raised by recognition that the human body inhabits a 'technological lifeworld'. The intent is to challenge certain assumptions regarding interpretations of 'experience', the 'environment' and 'the body' in Outdoor Education practice. The theory and practice of Outdoor Education recognises that knowing becomes embodied through action. This process is often aided by pre-action focussing and post-action reflection. I argue that the stated educational goals of many Outdoor Education programs are made vulnerable due to the 'hidden work' of technologies encountered and inattention to the significance of technology in experience. The approach employed in this paper is to relate a brief overview of philosophical inquiry into technology and the body to the discussion of two exhibits (a spoon and a three-legged stool), both objects crafted by secondary school students as a part of their outdoor and environmental education. I conclude that human and environmental well being cannot be separated in the 'technological lifeworld' that humans are destined to inhabit, and that Outdoor Education must sustain a broad range of technologically mediated experiences of the environment through, with and in the body.

Cormock's Predicament

In his book *Arctic Dreams: Imagination and desire in a northern landscape* (1987), Barry Lopez writes of the influence of the arctic landscape on both the indigenous and the European imagination. Of particular interest are the accounts of technological approaches the different cultures developed in response to arctic existence. He contrasts the long term occupation of the indigenous peoples with the short term exploratory and expeditionary experience of the Europeans. I was particularly struck by the story of the indigenous Comock and his family from Quebec's Ungava Peninsula region who, facing starvation in 1902, set off across the sea ice for a distant island in the search of food. One night during their journey the sea ice opened beneath their camp and they lost nearly all of their possessions - hunting tools, knives, stone lamp for melting water, food and extra clothing. With only their sled, a few dogs, a snow block cutting knife for making shelter and flint stones for creating a spark, their situation was perilous. Lopez (1987, pp. 197-198) continues:

They ate their dogs. The dogs they kept ate the other dogs, which were killed for them. Comock got his family to the island. He fashioned, from inappropriate materials, new hunting weapons. He created shelter and warmth. He hunted successfully. He reconstructed his entire material culture, almost from scratch, by improvising and, where necessary,

inventing. He survived. His family survived. His dogs survived and multiplied.

On the surface this seems to be a relatively straight forward story of human ingenuity, adaptation and survival. Yet deeper questions emerge the moment we consider that technology has more than just utility value. Despite the patriarchal tone adopted by Lopez (as surely all family members played a crucial role) it reads as a remarkable story about the seemingly inseparable organic/technological basis of their culture. We might guess at the functionalism of some of their objects - the use of seal intestine as waterproof clothing, the selection of caribou cow skins in the late-Fall when their condition was most suitable for certain items of clothing, or the multitude of uses of carved ivory and wood as tent line tensioners, needles and so on, and of whalebone ribs as tent frames. All that they gathered, transformed and used occurred in their 'near to hand' environment. For these people technology, culture and land were as one.

The culmination of the story of Comock and his family is equally thought provoking. For several years on the island they collected rare pieces of driftwood and bone and saved bearded-seal skins. Eventually they had enough to fashion an *umiak*, an open skinned boat that could be rowed and sailed. That summer, seven years after their arrival, they sailed for home. On their journey they were spotted by Robert Flaherty, a European who was exploring the coastline. He recognised the design of the *umiak* (a framed, skinned open boat most often

become in the contemporary condition of Being, and so laden with a functionalism and symbolism of the post-industrial world that the 'former tool has turned its master to a slave' (Csikszentmihalyi and Rochberg-Halton, 1981, p. 53).

Technology plays an important role in the symbolism of all cultures. A sense of the nature of this symbolic work of technology is contained in the original Ancient Greek meaning of the word, symbol (*sym-ballein* - meaning to "join" or "throw together"). According to Csikszentmihalyi and Rochberg-Halton the phrase came to designate a coin that two friends break in half, each with the hope of reuniting' at a future meeting (1981, pp. 40-41). Symbolism brings people together. But the opposite - *dia-ballein* (diabolic; to throw people apart) can equally apply to the psychic work of technology. The symbolic work of technology can draw people together into community, or destroy community by blasting it apart into fragmented, isolated individuals.

E.F. Schumacher wrote 'The technology of mass production is inherently violent, ecologically damaging, self-defeating in terms of non-renewable resources, and stultifying for the human person' (1973, p. 145). Schumacher believed that modern technology actively worked against, or eliminated '...skilful, productive work of human hands, in touch with real materials' (1973, p. 141), and that human and environmental well-being were preserved when people worked as 'actual producers', fully engaged in the *meaning* of their local production.

More recently Neil Postman depicted the rise of 'technocracy', where tools are no longer integrated into culture, but where '...they attack the culture and bid to become the culture.' (1993, p. 28). Consequently '...traditions, social mores, myth, politics, ritual, and religion have to fight for their lives (1993, p. 28). Technocracy works both overtly and 'invisibly' to subordinate the 'traditions of the social and symbolic worlds' (1993, p. 45). Later still, argues Postman, technocracy may evolve into 'technopoly', a 'totalitarian technocracy', where the state uses, and is used by, technology to de-democratise, indoctrinate and control its people. With the application of Frederick Taylor's scientific principles of management to industrial mass production in the United States, where workers become technical components of a production process conducted by distant experts, Postman outlines the emergence of the modern techno-system (Postman, 1993, pp. 51-52).

How is it that we have allowed the techno-system to reach a point that it utterly dominates the lives of those of us living in post-industrial societies? Don Idhe (1983) argues that we 'rarely thematize technology as such as an existential element' (1983, pp. 2-3). His concern is that we fail to engage in philosophical inquiry into the non-neutrality of technologies (Idhe, 1990) and the mediation of

human experience through those technologies, or *technics* (Idhe 1983). So 'technologically textured' have our lives become argued Idhe that we should replace the term ecosystem with 'techno-system' (Idhe, 1990, p.1). For Idhe, and many others, this more accurately depicts the world we have come to inhabit.

Payne provides a summary of 'the philosophy' technology and post-modern times' and its influence upon environment, education and experience (Payne, 1996). Within it he draws upon the work of a broad range of strident critics of 'high' technology. Payne paraphrases Andrew Freenburg (1991), suggesting '...the roots of the varied contemporary 'crises' we now experience can be traced to values embodied in the designs of technologies (Payne, 1996, p.83). Payne's own work deploys a critical hermeneutic phenomenology to expose examples where educational programs promote an environmental ethic which remains unfulfilled in practice as the embodied values in the technologies deployed are contradictory to the stated philosophical aims of the educational experience (Payne, 1996,1997). In particular, he dismantles the ecological claims of some forms of outdoor recreation and Outdoor Education practices that claim environmental outcomes despite employing mass produced adventure recreation technologies.

Human skill has been replaced by tending machines (Postman, 1993) and the bodily work of production has been further removed to that of tending computer screens and digital read outs. Zuboff (1998) studied the communities of two pulp mills as they made the transition to computer automated production. Prior to automation Zuboff argued, the "operators had many ways of using their bodies to achieve precise knowledge' and that their 'capacity 'to know' was lodged in sentience and displayed in action" (1988, pp. 58-59). For many production workers and manual labourers 'Work was the exertion that could be known by its material results' (1988, p.74). As information technology further restructures how our body experiences work, 'absorption, immediacy, and organic responsiveness are superseded by distance, coolness and remoteness' (1988, p.75). Zuboff takes up Marx's arguments that technological change and 'modernisation' most often de-democratise the worker and centres power and knowledge in the managerial class. It is not drawing too long a bow to assume parallels exist in the work of education.

We are reminded daily, by employers, politicians, journalists and teachers that we are thrust forward into the next great progressive wave of technological advancement - the world of information technology and the global cyber-community. Nowhere is this more apparent than in educational work places, which appear to be under increasing pressure to strive for a 'technological utopia'. In the state of Victoria the government provides every teacher in the state school system

objects...there's next to no craft involved. Any human labour that goes directly into the fabrication of such things is likely to be uncreative, while the creative activity, the design, is done on computer and offers no experience of bodily engagement with materiality.

Schumacher cautions '...that it is rather more difficult to recapture directness and simplicity than to advance in the direction of ever more sophistication and complexity.' (Schumacher, 1973, p. 146) and that '...insight does not come easily to people who have allowed themselves to become alienated from real productive work.' We are fooled if we think it will be easy (or even possible at all) to re-learn the embodied knowledge of crafts which are currently being lost to history.

The late Australian master craftsman and instrument maker Fred Morgan earned a reputation as the finest maker of wooden recorder flutes in the world. To Morgan "the recorder is an instrument in which to go the last 1 to 5 per cent is really very, very difficult...fraught with risk to the work you have done so far..." (Bannister, 1999, p. 13). The final '...voicing process demanded intuition, an acute ear, and the skill and patience to work to tolerances of 1/25th of a millimetre.' (Bannister, 1999). The phenomenal ability of people to be attuned to tools, materials, environment and their condition - what Zuboff called 'the body's virtuosity at work' (Zuboff, 1988, p. 13) - is all but lost to most of us, and given less and less significance in our schools. This virtuosity dwells in performance and the continual asking or questioning of the raw materials, the self, and the functional and symbolic (community) meaning found in the act of material creating.

A. Pedagogy of Production in Outdoor Education

Pedagogical questions of the utmost importance concerning the non-neutrality, intentionally, functionalism and the symbolic and diabolic work of all forms of technology encountered in educational practice, should be raised and examined. The short-term outcome of such questioning is significant, but what remains of even greater significance is preservation of this physical act of questioning. It conveys an approach, which involves an experiential process, a practical engagement of the body with tools and technologies in order to appraise something of their essence, and something of the world through and with their essence. To question, in this sense, is always to act - to trial, touch, experiment with the cutting edge of a tool, to listen and respond in work to one's sense of the transaction between body, technology and material world.

The central pedagogical issue is not so much to reach a moral conclusion on the status of various tools, technologies or techniques. Rather, it is to consider the loss of pedagogical possibility as historically older technologies, tools and techniques becoming 'extinct' and with them the range of human experiential knowledge. It is a loss of an experiential heritage that cannot be sustained by relics and artefacts residing behind glass cases in museums (or worse still - on digitalised 'memory' banks). This loss is continually compounded by the fact that there is a narrowing of possibility in the newer technologies of the industrial complex and techno-system. If we believe Postman, this narrowing is a deliberate and calculated rejection of the past, in order that we embrace a techno-Utopian vision of the future where our options and potential become increasingly limited.

By way of contrast, when we say something is 'well crafted' we immediately evoke images of carefully and skilfully applied technique and the less obvious quality of virtuosity which the maker has in some way implanted into the object. When someone is seen practicing their craft it refers to a way of Being centred in becoming through making with care. This transaction almost always requires the use of tools and techniques, which always shape the user's Being - functionally, morally, and symbolically. When craft is performed with care and virtuosity it is a form of applied ecology (Fry, 1992). It coalesces in a healthy body, technologically engaged in-and-with a healthy community and environment.

As a form of applied ecology it is potentially truer to environmental claims promoted by many Outdoor Education programs. Zabe MacEachren describes the crafting process in education as 'the practice of making an item which encourages relationships with the world that reaffirm our sense of body, extended earth body, and interconnection or limitations existing between the two' (MacEachren, 2000, p. 190). Craft teaches our dependence upon the natural material world directly and practically - not as an abstraction. She outlines eight 'Guideposts' to the process of using the crafting process in environmental education (MacEachren, 2000, p. 190).

1. Origin: What informs us whether we should proceed to make something or not.
2. Seeking: The experience of travelling on the land seeking suitable crafting material.
3. Harvesting: The method and acknowledgment involved in the movement of actual taking, of another life form, in order to obtain crafting material.
4. Resonance of Motion: The perception of the repetitive moments involved in making something.
5. Making: The engagement with forming and shaping craft.
6. Utility/Use: The distinguishing factors, which reside between balancing beauty and utility.

The top roughed out the maker settles down with a variety of hand tools, made friendly by many years of use and users. An old farrier's rasp, a newer rasp with a grandfather's handle, a beautiful old spokeshave – also a grandfathers, and antique drawknife from an op shop in the mallee and a box of assorted sandpaper – mostly well worn. Some makers pursue a flat mirror finish, others seek a smooth feel but are less worried about undulations in the surface, some value the weathered grey and green of lichen, and still others are comfortable to leave the chainsaw scars as evidence of the process. The makers are all thinking.

Three is an easy number of legs. They can be a matching set of three, or a pair and a contrasting single or three individual statements: The trees have designed the legs for their first life as branches, we need only find, measure and cut them. The legs are very individual and vary in as many ways as the tops. Their role is simple but their selection can involve the maker for hours, or days...Should the bark stay or go? Should they be straight or bendy? How bendy? Can they have knots or branches? How tall? How thick? Will they suit the top?

We measure in human dimensions – a tall leg is from the point of the elbow to the tip of the little finger of the maker. The legs selected and prepared must now be fitted. We use a classic rustic joint – a round mortice and tenon. (Really a drill hole and the leg shaved to fit snugly, but we enjoy knowing the real name – the 'woodworkers' name for the joint).

The position and angle of the legs is a critical and complex decision as it is so central to the 'image' of the maker – we talk, we hold the legs in place, we try different options. We must balance function with aesthetics, my experience with the makers image all the while being mindful of the timbers' features and faults.

Suddenly an object has emerged – greater than the sum of its parts – a stool. It almost always takes the maker by surprise. Overflowing with pride the maker selects the right place on the uneven floor of the shed, positions the stool carefully and slowly lowers their weight, almost

disbelievingly onto the stool. The courage to create has been rewarded.

A recipe steeped in history – natural ingredients mixed, the mixture warmed and the wax finish is ready. The application of the finish is inexplicably exciting. The colours are made richer, the contrasting timbers become evident, the stool smells like furniture. The application of the finish is consent to caress the stool.

The stool is finished, the process complete and a transition begins to occur in the maker. It is difficult to own the extent of the creative process and as a result of this the maker becomes dismissive. The components of the stool and the design, so closely held during the making are now allowed to speak for themselves.

"It's just a stool..."

Conclusion – Hands On Our Future

Metaphorically, our culture already faces Comock's predicament. The rate of change of 'modern' or 'high' technology and the global reach of 'techno-systems' has so shifted us from being able to acknowledge our organic links with the world, and so many of our 'traditional' technologies and techniques have disappeared, that we find ourselves stranded upon our own distant island. For most of us the time has already arrived when we might look at a tool or object from our culture – like a froe, a marlingspike, or a riffler – and ask, 'I wonder what it could mean'. Worse yet, we have become so immersed, so indebted to the invisible *technics* of our time that the question is not asked, or is rejected as foolish – as bespeaking of some-one completely *out of touch* with modern times.

According to Fry, 'The more of the world we see through systems technology the less is known to our being – the body is emptied of spirit and the mind drained of life (Fry, 1992, p. 268). The virtual world of the techno-system is a sleight of hand and mind. Not because it is without positive potential for being and health of the environment (clearly it can assist greatly in many causes), but because it campaigns against a broader technological experience of-and-with the world. The techno-system has made and used us, it's makers and users. In 1958, Max Weber was already warning us.

No one knows who will live in this cage in the future, or whether at the end of this tremendous development entirely new prophets will arise, or there will be a great rebirth of old ideas and ideals, or, if neither, mechanised petrification, embellished

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